

Source: T1
Title: CR's to TS 34.123-1 v5.3.0 related to RRC other packages and TDD test cases
Agenda item: 5.1.3
Document for: Approval

This document contains 22 CRs to TS 34.123-1 v5.3.0. These CRs have been agreed by T1 and are put forward to TSG T for approval.

NOTE: TS 34.123-1 R99, Rel-4 and Rel-5 are all merged into the Rel-5 specification. This means that test cases for the three releases are included in TS 34.123-1 Rel-5 and therefore this is the only release being maintained.

CR related to corrections to RRC package 3 and 4 test cases:

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	480	-	Rel-5	Corrections to Package 3 RRC test cases (clause 8.1)	F	5.3.0	5.4.0	T1-030527	TEI	R99, Rel-4, Rel-5
34.123-1	481	-	Rel-5	Corrections to Package 4 RRC test cases (clause 8.2)	F	5.3.0	5.4.0	T1-030528	TEI	R99, Rel-4, Rel-5
34.123-1	485	-	Rel-5	Removal of package 4 and low priority redundant RRC Reconfiguration failure cases	F	5.3.0	5.4.0	T1-030546	TEI	R99, Rel-4, Rel-5
34.123-1	487	-	Rel-5	Correction to package 4 RRC test case 8.2.1.4 according to 25.331 CR 1820	F	5.3.0	5.4.0	T1-030548	TEI	R99, Rel-4, Rel-5
34.123-1	489	-	Rel-5	Corrections to Package 3 RRC test cases (clause 8.3)	F	5.3.0	5.4.0	T1-030560	TEI	R99, Rel-4, Rel-5
34.123-1	493	-	Rel-5	Correction of package 4 RRC test cases 8.4.1.42 and 8.4.1.43 according to 25.331 CR1838	F	5.3.0	5.4.0	T1-030634	TEI	R99, Rel-4, Rel-5
34.123-1	498	-	Rel-5	Corrections to Package 3 RRC test cases (clause 8.4) (revision to T1-030561)	F	5.3.0	5.4.0	T1-030663	TEI	R99, Rel-4, Rel-5
34.123-1	517	-	Rel-5	URA identity for transition from CELL_FACH to URA_PCH	F	5.3.0	5.4.0	T1-030712	TEI	R99, Rel-4, Rel-5

CR related to corrections to RRC low priority test cases:

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	490	-	Rel-5	Corrections to low priority RRC test cases (clause 8.2)	F	5.3.0	5.4.0	T1-030562	TEI	R99, Rel-4, Rel-5
34.123-1	491	-	Rel-5	Corrections to low priority RRC test cases (clause 8.3)	F	5.3.0	5.4.0	T1-030563	TEI	R99, Rel-4, Rel-5
34.123-1	510	-	Rel-5	Corrections to low priority RRC test cases (clause 8.1) [revision to T1-030478]	F	5.3.0	5.4.0	T1-030702	TEI	R99, Rel-4, Rel-5
34.123-1	512	-	Rel-5	Removal of low-priority RRC test case 8.4.1.20 and 8.4.1.21	F	5.3.0	5.4.0	T1-030705	TEI	R99, Rel-4, Rel-5
34.123-1	513	-	Rel-5	Corrections to low priority test case 8.4.1.9 (Measurement)	F	5.3.0	5.4.0	T1-030706	TEI	R99, Rel-4, Rel-5

34.123-1	514	-	Rel-5	Corrections to low priority test case 8.1.6.3.	F	5.3.0	5.4.0	T1-030707	TEI	R99, Rel-4, Rel-5
34.123-1	515	-	Rel-5	Corrections to low priority test case 8.1.9a	F	5.3.0	5.4.0	T1-030708	TEI	R99, Rel-4, Rel-5

CR related to new RRC test cases:

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	521	-	Rel-5	New RRC test cases for Inter-RAT cell reselection (PS) from UTRAN	B	5.3.0	5.4.0	T1-030719	TEI	R99, Rel-4, Rel-5
34.123-1	522	-	Rel-5	New RRC test cases for Inter-RAT cell change order from UTRAN	B	5.3.0	5.4.0	T1-030720	TEI	R99, Rel-4, Rel-5
34.123-1	525	-	Rel-5	New test cases for radio link failure [revision to T1-030565, T1-030725]	F	5.3.0	5.4.0	T1-030727	TEI	R99, Rel-4, Rel-5

CR related to corrections to TDD test cases:

Spec	CR	Rev	Release	Subject	Cat	Version Current	Version New	Doc-2nd-Level	Work item	Releases affected
34.123-1	472	-	Rel-5	Measurement Control and Report: Inter-frequency measurement for transitions (TDD)	F	5.3.0	5.4.0	T1-030510	TEI	R99, Rel-4, Rel-5
34.123-1	473	-	Rel-5	Corrections of Measurement Control and Report: Intra-frequency measurement for transitions (TDD)	F	5.3.0	5.4.0	T1-030511	TEI	R99, Rel-4, Rel-5
34.123-1	474	-	Rel-5	Update of Broadcast of system information test for TDD mode	F	5.3.0	5.4.0	T1-030512	TEI	R99, Rel-4, Rel-5
34.123-1	476	-	Rel-5	Measurement Control and Report: Traffic volume measurement for transitions, TDD update	F	5.3.0	5.4.0	T1-030514	TEI	R99, Rel-4, Rel-5

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1 CR 472** ⌘ rev **-** ⌘ Current version: **5.3.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Measurement Control and Report: Inter-frequency measurement for transitions (TDD)		
Source:	⌘ Siemens AG		
Work item code:	⌘ TEI	Date:	⌘ 01/05/2003
Category:	⌘ F	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ Measurement Control and Report: Inter-frequency measurement for transitions for TDD UEs must be tested.		
Summary of change:	⌘ Inclusion of the following new test cases: <ul style="list-style-type: none"> - 8.4.1.2A Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_DCH state (TDD) - 8.4.1.4A Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_FACH state (TDD) - 8.4.1.6A Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state (TDD) - 8.4.1.8A Measurement Control and Report: Inter-frequency measurement for transition from CELL_FACH to CELL_DCH state (TDD) Also the test cases already included for Measurement Control and Report: Inter-frequency measurement for transitions are specified for FDD only.		
Consequences if not approved:	⌘ TDD UEs could be not tested properly		

Clauses affected:	⌘						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="width: 20px; text-align: center;"> </td> <td style="width: 20px; text-align: center;"> </td> </tr> </table> Other core specifications	Y	N			⌘	
Y	N						
	Test specifications	⌘					

Other comments: ⌘

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.4.1.2 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_DCH state ([FDD](#))

8.4.1.2.1 Definition

8.4.1.2.2 Conformance requirement

Upon transition from idle mode to CELL_DCH state, the UE shall:

1> stop monitoring the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 12 (or System Information Block type 11).

Upon reception of a MEASUREMENT CONTROL message the UE shall:

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> for measurement types "inter-frequency measurement":

3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and a compressed mode pattern sequence with an appropriate measurement purpose is simultaneously activated by the IE "DPCH compressed mode status info"; or

3> if the IE "Inter-frequency cell info list" for that measurement identity is empty; or

3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:

4> if the measurement is valid in the current RRC state of the UE:

5> begin measurements according to the stored control information for this measurement identity.

If the IE "Reporting Cell Status" is not received for inter-frequency measurement, the UE shall:

1> exclude the IE "Cell Measured Results" for any cell in MEASUREMENT REPORT.

Reference

3GPP TS 25.331 clauses 8.4.1.3, 8.4.1.8.2 and 8.6.7.9

8.4.1.2.3 Test Purpose

1. To confirm that the UE stops monitoring the list of cells assigned in the IE "inter-frequency cell info" in System Information Block type 11 messages, after it enters CELL_DCH state from idle mode.
2. To confirm that the UE starts to perform inter-frequency measurement and related reporting activities, when it receives a MEASUREMENT CONTROL message with the "DPCH compress mode status info" IE indicating that a stored compressed mode pattern sequence be simultaneously activated.
3. To confirm that the UE excludes the IE "cell measured results" for any cells in the MEASUREMENT REPORT messages, after it receives a MEASUREMENT CONTROL message with "Reporting cell status" IE omitted.

Note that this test case is only applicable in case the UE requires compressed mode to perform inter-frequency measurements.

8.4.1.2.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active..

UE: "Registered idle mode on CS" (state 2) or "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Related ICS/IXIT statements

- Compressed mode required yes/no

Test Procedure

Table 8.4.1.2-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.4.1.2-1

Parameter	Unit	Cell 1	Cell 4
UTRA RF Channel Number		Ch. 1	Ch. 2
CPICH Ec	dBm/ 3.84 MHz	-60	-75

The UE is initially in idle mode and has selected cell 1 for camping.

SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute procedure P3 (for CS service) or P5 (for PS service). The RRC CONNECTION SETUP message used in procedure P3 or P5 should contain IE "DPCH compressed mode info", activating the transmission pattern gap sequence with TGPSI=1 only if UE requires compressed mode. Next SS and UE shall execute procedure P7 (for CS service) or P9 (for PS service). Then SS and UE shall execute procedure P11 (for CS service) or P13 (for PS service). The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings for cells listed in the IE "inter-frequency cell info list" in System Information Block Type 11.

If UE requires compressed mode, SS sends PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH, specifying that compressed mode sequence pattern with TGPSI=1 be deactivated. The UE shall reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH if UE configures according to the PHYSICAL CHANNEL RECONFIGURATION message.

SS sends MEASUREMENT CONTROL message on the downlink DCCH. In this message, SS requests UE to perform inter-frequency measurement with periodic reporting of CPICH RSCP values for cell 4. If UE requires compressed mode, IE "DPCH compressed status info" IE to activate the transmission gap pattern sequence with TGPSI = 1 is included in this message.

The UE shall start inter-frequency measurement and reporting for cell 4's CPICH RSCP values. It shall report this measurement result by transmitting MEASUREMENT REPORT messages on uplink DCCH periodically at 16 seconds interval.

SS sends MEASUREMENT CONTROL message on the downlink DCCH omitting the IE "Reporting cell status". The UE shall send MEASUREMENT REPORT messages on the uplink DCCH, with the IE "Cell measured results" excluded in these messages. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is idle mode and camped onto cell 1. System Information Block Type 11 to be transmitted is different from the default settings (see specific message contents)
2		↔	SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	SS prompts the operator to make an outgoing call.
3		↔	SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5			Void	
6				SS checks to see that no MEASUREMENT REPORT messages are received. If compressed mode is not required (refer ICS/IXIT), then goto step 9.
7		←	PHYSICAL CHANNEL RECONFIGURATION	Existing compressed mode sequence pattern is deactivated in this message.
8		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall remain in CELL_DCH state.
9		←	MEASUREMENT CONTROL	SS requests UE to start inter-frequency measurement for cell 4, and performing periodic reporting for cell 4's CPICH RSCP. See specific message content below.
10		→	MEASUREMENT REPORT	UE shall report cell 4's CPICH RSCP reading periodically.
11		←	MEASUREMENT CONTROL	SS changes the reporting criteria of cell 4 to 'event 2c'. "Reporting cell status" IE in this message is omitted.
12		→	MEASUREMENT REPORT	SS monitors the uplink DCCH to make sure that only 1 such message is received almost immediately after step 11. This message shall not contain IE "Inter-frequency cell measured results"
13		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

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 11 (Step 1)

Information Element	Value/remark
<p>SIB12 indicator</p> <p>FACH measurement occasion info</p> <p>Measurement control system information</p> <ul style="list-style-type: none"> -Use of HCS -Cell selection and reselection quality measure - Intra-frequency measurement system information - Intra-frequency measurement identity - Intra-frequency cell info list - CHOICE intra-frequency cell removal - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code - Primary CPICH Tx power - TX Diversity indicator - Cell Selection and Re-selection info - Cells for measurement - Intra-frequency measurement quantity - Intra-frequency reporting quantity for RACH reporting - Maximum number of reported cells on RACH - Reporting information for state CELL_DCH - Inter-frequency measurement system information - Inter-frequency cell info list - CHOICE inter-frequency cell removal - New inter-frequency cells - Inter-frequency cell id - Frequency info - CHOICE mode - UARFCN uplink (Nu) - UARFCN downlink (Nd) - Cell info - Cell individual offset - Reference time difference to cell - Read SFN Indicator - CHOICE mode - Primary CPICH Info - Primary Scrambling Code - Primary CPICH TX power - TX Diversity Indicator - Cell selection and re-selection info -Cells for measurement - Inter-RAT measurement system information - Traffic volume measurement system information 	<p>FALSE</p> <p>Not Present</p> <p>Not used</p> <p>CPICH Ec/No</p> <p>Not present</p> <p>Not Present</p> <p>1</p> <p>Not Present</p> <p>Not present</p> <p>TRUE</p> <p>FDD</p> <p>Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4 of TS 34.108</p> <p>Not present</p> <p>FALSE</p> <p>Not present</p> <p>Not present</p> <p>Not present</p> <p>Not present</p> <p>Not present</p> <p>Not present</p> <p>Not present</p> <p>Not present</p> <p>4</p> <p>FDD</p> <p>Not present</p> <p>Reference to table 6.1.2 of TS34.108 for Cell 4</p> <p>Not Present</p> <p>Not Present</p> <p>FALSE</p> <p>FDD</p> <p>Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS 34.108</p> <p>Not Present</p> <p>FALSE</p> <p>Not present</p> <p>For neighbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.</p> <p>Not Present</p> <p>Not Present</p> <p>Not Present</p>

RRC CONNECTION SETUP (Step 2)

If UE do not require compressed mode, use the message found in TS 34.108 clause 9.

If UE requires compressed mode, use the message found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Initialise
- Timing Indication	Not Present
- CFN-targetSFN frame offset	
- Downlink DPCH power control information	Single TPC
- DPC mode	FDD
- CHOICE Mode	0
- Power offset $P_{Pilot-DPCH}$	Not Present
- DL rate matching restriction information	Refer to the parameter set in TS 34.108
- Spreading factor	Flexible
- Fixed or flexible position	FALSE
- TFCl existence	Refer to the parameter set in TS 34.108
- Number of bits for Pilot bits (SF=128, 256)	
- DPCH compressed mode info	1
- TGPSI	Activate
- TGPS Status Flag	(Current CFN + (256 – TTI/10msec))mod 256
- TGCFN	
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	Undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL or DL only depending the on UE capability
- Downlink compressed mode method	SF/2 (or Not present depending on the UE capability)
- Uplink compressed mode method	SF/2 or Not present depending on the UE capability
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIR2After2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	0
Downlink information for each radio link list	
- Downlink information for each radio link	FDD
- CHOICE mode	
- Primary CPICH info	Reference to 34.108
- Primary scrambling code	Not Present
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	
- Downlink DPCH info for each RL	
- Primary CPICH usage for channel estimation	Primary CPICH can be used
- DPCH frame offset	Set to value: Default DPCH Offset value mod 38400
- Secondary CPICH info	Not Present
- DL Channelisation code	
- Secondary scrambling code	1
- Spreading factor	Reference to 34.108
- Code number	0
- Scrambling code change	No code change
- TPC combination index	0
- SSDT Cell identity	Not present
- Closed loop timing adjustment mode	Not present

SCCPCH information for FACH	Not present
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PHYSICAL CHANNEL RECONFIGURATION (Step 7)

Use the same message sub-type in Annex A titled "Non speech in CS" or "Speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS", with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Maintain
- Downlink DPCH power control information	
- DPC mode	0 (single)
- CHOICE mode	FDD
- Power offset $P_{Pilot-DPCH}$	0
- DL rate matching restriction information	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or Flexible Position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCI existence	Reference to TS34.108 clause 6.10 Parameter Set
- Number of bits for Pilot bits (SF=128,256)	Reference to TS34.108 clause 6.10 Parameter Set
- DPCH compressed mode info	
- Transmission gap pattern sequence	
- TGPSI	1
- TPGS status Flag	Deactivate
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	Not Present
- TX Diversity mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	0
Downlink information per radio link list	Not Present

MEASUREMENT CONTROL (Step 9)

If UE requires compressed mode,

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical reporting
- Periodical Reporting / Event Trigger Reporting Mode	
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 4
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cell within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds
DPCH compressed mode status info	
TGPS reconfiguration CFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$

If UE do not require compressed mode,

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical reporting
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Inter-frequency measurement
CHOICE measurement type	No inter-frequency cells removed
- Inter-frequency cell info list	4
- CHOICE inter-frequency cell removal	UARFCN of the uplink frequency for cell 4
- New inter-frequency info list	UARFCN of the downlink frequency for cell 4
- Inter-frequency cell id	0 dB
- Frequency info	Not Present
- UARFCN uplink (Nu)	FALSE
- UARFCN downlink (Nd)	FDD
- Cell info	Set to same code as used for cell 4
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN Indicator	FDD
- CHOICE mode	Set to same code as used for cell 4
- Primary CPICH Info	Not Present
- Primary Scrambling Code	FALSE
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	4
- Cells for measurement	Inter-frequency reporting criteria
- Inter-frequency cell id	0
- Inter-frequency measurement quantity	CPICH RSCP
- CHOICE reporting criteria	
- Filter Coefficient	
- Measurement quantity for frequency quality estimate	
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	
- CHOICE reported cell	Report cell within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- Inter-frequency set update	Not present
- CHOICE report criteria	Periodic reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 10)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured 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 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Additional Measured results	Check to see if it is absent
Event Results	Check to see if it is absent

MEASUREMENT CONTROL (Step 11)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Set up
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Event Trigger
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Inter-frequency measurement
CHOICE measurement type	No inter-frequency cells removed
- Inter-frequency cell info list	4
- CHOICE inter-frequency cell removal	UARFCN of the uplink frequency for cell 4
- New inter-frequency info list	UARFCN of the downlink frequency for cell 4
- Inter-frequency cell id	0 dB
- Frequency info	Not Present
- UARFCN uplink (Nu)	FALSE
- UARFCN downlink (Nd)	FDD
- Cell info	Set to same code as used for cell 4
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN Indicator	FDD
- CHOICE mode	Set to same code as used for cell 4
- Primary CPICH Info	Not Present
- Primary Scrambling Code	FALSE
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not Present
- Inter-frequency measurement quantity	Inter-frequency reporting criteria
- CHOICE reporting criteria	0
- Filter Coefficient	CPICH RSCP
- Measurement quantity for frequency quality estimate	
- Inter-frequency reporting quantity	FALSE
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not Present
- Measurement validity	Not present
- Inter-frequency set update	On with no reporting
-UE Autonomous update mode	Not Present
-Non autonomous update mode	Inter-frequency measurement reporting criteria
- CHOICE report criteria	
- Parameters required for each event	2c
- Inter-frequency event identity	Not Present
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	0.5 dB
- Time to trigger	0 milliseconds
- Reporting cell status	Not Present
- Parameters required for each non-used frequency	
- Threshold non used frequency	-85 dBm
- W non used frequency	0
DPCH compressed mode status info	Not Present

MEASUREMENT REPORT (Step 12)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured 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 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Additional Measured Results	Check to see if it is absent
Event Results	
- CHOICE event result	Check to see if this IE is set to "Intra-frequency measurement event results"
- Inter-frequency event identity	Check to see if this IE is set to "2c"
- Inter-frequency cells	
- Frequency info	
- UARFCN (uplink)	Check to see if set to the UARFCN of the uplink frequency for cell 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- Non frequency related measurement event results	
- CHOICE Mode	Check to see if set to "FDD"
- Primary CPICH info	
- Primary Scrambling Code	Check to see if set to the same code as cell 4

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 RSCP of cell 4.

If UE requires compressed mode, after step 7, UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.

After step 9 the UE shall transmit MEASUREMENT REPORT messages on uplink DCCH, reporting cell 4's CPICH RSCP value at periodic time interval of 16 seconds in "inter-frequency cell measurement results" IE.

After step 11 the UE shall transmit only 1 MEASUREMENT REPORT message on the uplink DCCH. In this message, IE "inter-frequency cell measured results" shall be absent

[8.4.1.2A Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_DCH state \(TDD\)](#)

[8.4.1.2A.1 Definition](#)

[8.4.1.2A.2 Conformance requirement](#)

[Upon transition from idle mode to CELL_DCH state, the UE shall:](#)

[1> stop monitoring the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 12 \(or System Information Block type 11\).](#)

[Upon reception of a MEASUREMENT CONTROL message the UE shall:](#)

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> for measurement types "inter-frequency measurement":

3> if the IE "Inter-frequency cell info list" for that measurement identity is empty; or

3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements;

4> if the measurement is valid in the current RRC state of the UE:

5> begin measurements according to the stored control information for this measurement identity.

If the IE "Reporting Cell Status" is not received for inter-frequency measurement, the UE shall:

1> exclude the IE "Cell Measured Results" for any cell in MEASUREMENT REPORT.

Reference

3GPP TS 25.331 clauses 8.4.1.3, 8.4.1.8.2 and 8.6.7.9

8.4.1.2A.3 Test Purpose

1. To confirm that the UE stops monitoring the list of cells assigned in the IE "inter-frequency cell info" in System Information Block type 11 messages, after it enters CELL_DCH state from idle mode.
2. To confirm that the UE excludes the IE "cell measured results" for any cells in the MEASUREMENT REPORT messages, after it receives a MEASUREMENT CONTROL message with "Reporting cell status" IE omitted.

8.4.1.2A.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active..

UE: "Registered idle mode on CS" (state 2) or "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.4.1.2A-1 illustrates the downlink power to be applied for the 2 cells.

Table 8.4.1.2A-1

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	<u>Cell 4</u>
UTRA RE Channel Number		Ch. 1	Ch. 2
PCCPCH RSCP	dBm	-60	-75

The UE is initially in idle mode and has selected cell 1 for camping.

SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute procedure P3 (for CS service) or P5 (for PS service). Next SS and UE shall execute procedure P7 (for CS service) or P9 (for PS service). Then SS and UE shall execute procedure P11 (for CS service) or P13 (for PS service). The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings for cells listed in the IE "inter-frequency cell info list" in System Information Block Type 11.

SS sends MEASUREMENT CONTROL message on the downlink DCCH. In this message, SS requests UE to perform inter-frequency measurement with periodic reporting of PCCPCH RSCP values for cell 4.

The UE shall start inter-frequency measurement and reporting for cell 4's PCCPCH RSCP values. It shall report this measurement result by transmitting MEASUREMENT REPORT messages on uplink DCCH periodically at 16 seconds interval.

SS sends MEASUREMENT CONTROL message on the downlink DCCH omitting the IE "Reporting cell status". The UE shall send MEASUREMENT REPORT messages on the uplink DCCH, with the IE "Cell measured results" excluded in these messages. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comment</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>		←	<u>System Information Block type 11</u>	<u>The UE is idle mode and camped onto cell 1. System Information Block Type 11 to be transmitted is different from the default settings (see specific message contents)</u>
<u>2</u>		↔	<u>SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.</u>	<u>SS prompts the operator to make an outgoing call.</u>
<u>3</u>		↔	<u>SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.</u>	
<u>4</u>		↔	<u>SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.</u>	
<u>5</u>			<u>Void</u>	
<u>6</u>				<u>SS checks to see that no MEASUREMENT REPORT messages are received.</u>
<u>7</u>		←	<u>MEASUREMENT CONTROL</u>	<u>SS requests UE to start inter-frequency measurement for cell 4, and performing periodic reporting for cell 4's PCCPCH RSCP. See specific message content below.</u>
<u>8</u>		→	<u>MEASUREMENT REPORT</u>	<u>UE shall report cell 4's PCCPCH RSCP reading periodically.</u>
<u>9</u>		←	<u>MEASUREMENT CONTROL</u>	<u>SS changes the reporting criteria of cell 4 to 'event 2c'. "Reporting cell status" IE in this message is omitted.</u>
<u>12</u>		→	<u>MEASUREMENT REPORT</u>	<u>SS monitors the uplink DCCH to make sure that only 1 such message is received almost immediately after step 11. This message shall not contain IE "Inter-frequency cell measured results"</u>
<u>13</u>		↔	<u>CALL C.3</u>	<u>If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.</u>

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 11 (Step 1)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
-Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity for RACH reporting	Not present
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	Not present
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to table 6.1.4 of TS34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	
- PCCPCH	Refer to clause titled "Default settings for cell No.4 (TDD)" in clause 6.1.4 of TS 34.108
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info	Not present For neighbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.
-Cells for measurement	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

RRC CONNECTION SETUP (Step 2)

UE will use the message found in TS 34.108 clause 9.

MEASUREMENT CONTROL (Step 7)

<u>Information Element</u>	<u>Value/Remark</u>
<u>Measurement Identity</u>	<u>1</u>
<u>Measurement Command</u>	<u>Setup</u>
<u>Measurement Reporting Mode</u>	
- <u>Measurement Reporting Transfer Mode</u>	<u>Acknowledged Mode RLC</u>
- <u>Periodic Reporting / Event Trigger Reporting Mode</u>	<u>Periodical reporting</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>CHOICE inter-frequency cell removal</u>	<u>No inter-frequency cells removed</u>
- <u>New inter-frequency info list</u>	
- <u>Inter-frequency cell id</u>	<u>4</u>
- <u>Frequency info</u>	
- <u>UARFCN (Nt)</u>	<u>UARFCN of the frequency for cell 4</u>
- <u>Cell info</u>	
- <u>Cell individual offset</u>	<u>0 dB</u>
- <u>Reference time difference to cell</u>	<u>Not Present</u>
- <u>Read SFN Indicator</u>	<u>FALSE</u>
- <u>CHOICE mode</u>	<u>TDD</u>
- <u>Primary CCPCH Info</u>	<u>Set to same as used for cell 4</u>
- <u>Inter-frequency cell id</u>	<u>4</u>
- <u>Inter-frequency measurement quantity</u>	
- <u>CHOICE reporting criteria</u>	<u>Inter-frequency reporting criteria</u>
- <u>Filter Coefficient</u>	<u>0</u>
- <u>Measurement quantity for frequency quality estimate</u>	<u>PCCPCH RSCP</u>
- <u>Inter-frequency reporting quantity</u>	
- <u>UTRA Carrier RSSI</u>	<u>FALSE</u>
- <u>Frequency quality estimate</u>	<u>FALSE</u>
- <u>Non frequency related cell reporting quantities</u>	
- <u>Cell synchronisation information reporting indicator</u>	<u>FALSE</u>
- <u>Cell Identity reporting indicator</u>	<u>FALSE</u>
- <u>CHOICE mode</u>	<u>TDD</u>
- <u>Timeslot ISCP reporting indicator</u>	<u>FALSE</u>
- <u>Proposed TGSN Reporting required</u>	<u>FALSE</u>
- <u>Primary CCPCH RSCP reporting indicator</u>	<u>TRUE</u>
- <u>Pathloss reporting indicator</u>	<u>FALSE</u>
- <u>Reporting cell status</u>	
- <u>CHOICE reported cell</u>	<u>Report cell within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency</u>
- <u>Maximum number of reported cells</u>	<u>2</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>16 seconds</u>
<u>DPCH compressed mode status info</u>	<u>Not Present</u>

MEASUREMENT REPORT (Step 8)

Information Element	Value/remark
<u>Measurement identity</u>	<u>Check to see if set to 1</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</u>	<u>Check to see if set to the UARFCN of the frequency for cell 4</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 it is absent</u>
- <u>Cell synchronisation information</u>	<u>Check to see if it is absent</u>
- <u>Primary CCPCH Info</u>	<u>Check to see if set to the same for cell 4</u>
- <u>Timeslot ISCP reporting indicator</u>	<u>Check to see if it is absent</u>
- <u>Proposed TGSN Reporting required</u>	<u>Check to see if it is absent</u>
- <u>Primary CCPCH RSCP reporting indicator</u>	<u>Check to see if it is present</u>
- <u>Pathloss</u>	<u>Check to see if it is absent</u>
<u>Measured Results on RACH</u>	<u>Check to see if it is absent</u>
<u>Additional Measured results</u>	<u>Check to see if it is absent</u>
<u>Event Results</u>	<u>Check to see if it is absent</u>

MEASUREMENT CONTROL (Step 9)

Information Element	Value/remark
<u>Measurement Identity</u>	1
<u>Measurement Command</u>	Set up
<u>Measurement Reporting Mode</u>	
- <u>Measurement Reporting Transfer Mode</u>	Acknowledged Mode RLC
- <u>Periodic Reporting / Event Trigger Reporting Mode</u>	Event Trigger
<u>Additional measurements list</u>	Not Present
<u>CHOICE measurement type</u>	Inter-frequency measurement
- <u>Inter-frequency cell info list</u>	
- <u>CHOICE inter-frequency cell removal</u>	No inter-frequency cells removed
- <u>New inter-frequency info list</u>	
- <u>Inter-frequency cell id</u>	4
- <u>Frequency info</u>	
- <u>UARFCN uplink (Nt)</u>	UARFCN of the frequency for cell 4
- <u>Cell info</u>	
- <u>Cell individual offset</u>	0 dB
- <u>Reference time difference to cell</u>	Not Present
- <u>Read SFN Indicator</u>	FALSE
- <u>CHOICE mode</u>	TDD
- <u>Primary CCPCH Info</u>	Set to same as used for cell 4
- <u>Cells for measurement</u>	Not Present
- <u>Inter-frequency measurement quantity</u>	
- <u>CHOICE reporting criteria</u>	Inter-frequency reporting criteria
- <u>Filter Coefficient</u>	0
- <u>Measurement quantity for frequency quality</u>	PCCPCH RSCP
<u>estimate</u>	
- <u>Inter-frequency reporting quantity</u>	
- <u>UTRA Carrier RSSI</u>	FALSE
- <u>Frequency quality estimate</u>	FALSE
- <u>Non frequency related cell reporting quantities</u>	
- <u>Cell synchronisation information reporting</u>	FALSE
<u>indicator</u>	
- <u>Cell Identity reporting indicator</u>	FALSE
- <u>Timeslot ISCP reporting indicator</u>	FALSE
- <u>Proposed TGSN Reporting required</u>	FALSE
- <u>Primary CCPCH RSCP reporting indicator</u>	TRUE
- <u>Pathloss reporting indicator</u>	FALSE
- <u>Reporting cell status</u>	Not Present
- <u>Measurement validity</u>	Not present
- <u>Inter-frequency set update</u>	
- <u>UE Autonomous update mode</u>	On with no reporting
- <u>Non autonomous update mode</u>	Not Present
- <u>CHOICE report criteria</u>	Inter-frequency measurement reporting criteria
- <u>Parameters required for each event</u>	
- <u>Inter-frequency event identity</u>	2c
- <u>Threshold used frequency</u>	Not Present
- <u>W used frequency</u>	Not Present
- <u>Hysteresis</u>	0.5 dB
- <u>Time to trigger</u>	0 milliseconds
- <u>Reporting cell status</u>	Not Present
- <u>Parameters required for each non-used</u>	
<u>frequency</u>	
- <u>Threshold non used frequency</u>	-85 dBm
- <u>W non used frequency</u>	0
<u>DPCH compressed mode status info</u>	Not Present

MEASUREMENT REPORT (Step 10)

Information Element	Value/remark
<u>Measurement identity</u>	<u>Check to see if set to 1</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</u>	<u>Check to see if set to the UARFCN of the frequency for cell 4</u>
- <u>UTRA carrier RSSI</u>	<u>Check to see if it is absent</u>
- <u>Inter-frequency cell measurement results</u>	<u>Check to see if it is absent</u>
<u>Measured Results on RACH</u>	<u>Check to see if it is absent</u>
<u>Additional Measured Results</u>	<u>Check to see if it is absent</u>
<u>Event Results</u>	
- <u>CHOICE event result</u>	<u>Check to see if this IE is set to "Intra-frequency measurement event results"</u>
- <u>Inter-frequency event identity</u>	<u>Check to see if this IE is set to "2c"</u>
- <u>Inter-frequency cells</u>	
- <u>Frequency info</u>	
- <u>UARFCN</u>	<u>Check to see if set to the UARFCN of the frequency for cell 4</u>
- <u>Non frequency related measurement event results</u>	
- <u>CHOICE Mode</u>	<u>Check to see if set to "TDD"</u>
- <u>Primary CCPCCH info</u>	<u>Check to see if set to the same as cell 4</u>

8.4.1.2A.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to the measurement of PCCPCH RSCP of cell 4.

After step 7 the UE shall transmit MEASUREMENT REPORT messages on uplink DCCH, reporting cell 4's CPICH RSCP value at periodic time interval of 16 seconds in "inter-frequency cell measurement results" IE.

After step 9 the UE shall transmit only 1 MEASUREMENT REPORT message on the uplink DCCH. In this message, IE "inter-frequency cell measured results" shall be absent.

<NEXT SUBSECTION>

8.4.1.4 Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_FACH state (FDD)

8.4.1.4.1 Definition

8.4.1.4.2 Conformance requirement

Upon transition from idle mode to CELL_FACH state, the UE shall:

- 1> begin or continue monitoring cells listed in the IE "inter-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11);

Reference

3GPP TS 25.331, clause 8.4.1.9.2

8.4.1.4.3 Test Purpose

1. To confirm that the UE begins to monitor the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 11 or 12 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.

8.4.1.4.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.4.1.4-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.4-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially at idle mode and has selected cell 1 for camping. The System Information Block type 11 messages are modified with respect to the default settings to prevent reporting of "Cell synchronisation information" and also to include cell 4 into the "inter-frequency cell list" IE.

SS prompts the operator to make an outgoing call of a supported traffic class. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings for inter-frequency cells belonging to the monitored set. SS re-adjusts its downlink power settings according to columns marked "T1" in table 8.4.1.4-1. This is expected to trigger a cell reselection in the UE. The UE shall send CELL UPDATE message to cell 4 in order to report this event. Upon receiving this message, SS replies with the CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH. UE shall then reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is in idle mode in cell 1. System Information Block type 11 to be transmitted is different from the default settings (see specific message contents)
2		↔	SS executes procedure P6 (clause 7.4.4.4.2) specified in TS 34.108.	
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	

Step	Direction		Message	Comment
	UE	SS		
4	↔		SS executes procedure P6 (clause 7.4.4.4.2) specified in TS 34.108.	
5	→		Void	
6				SS checks to see that no MEASUREMENT REPORT messages are received.
7				SS reconfigures the downlink transmission power, according to columns "T1" of table 8.4.1.4-1.
8	→		CELL UPDATE	UE shall detect that cell 4 has become stronger than cell 1. It sends this message after re-selecting to cell 4
9	←		CELL UPDATE CONFIRM	Use message content.
10	→		UTRAN MOBILITY INFORMATION CONFIRM	

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 11 (Step 1)

Information Element	Value/remark
SIB12 Indicator	FALSE
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	4
- Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present
	Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to 25.101
	Reference to table 6.1.2 of TS 34.108 for Cell 4
- UARFCN downlink (Nd)	
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS 34.108
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and re-selection info	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	FDD
- Qqualmin, Qrxlevmin	-20dB, -115dBm
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

CELL UPDATE (Step 8)

Information Element	Value/remark
U-RNTI	Check to see if set to same U-RNTI assigned during the execution of procedure P6.
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 (Step 9)

Use the message sub-type in default message content defined in Annex A, with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 10)

Only the message type is checked.

8.4.1.4.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to any measurement quantities for cell 4.

After step 7 the UE shall reselect to cell 4 and transmit a CELL UPDATE message on the uplink CCCH of cell 4.

After step 9, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on uplink DCCH AM RLC.

8.4.1.4A Measurement Control and Report: Inter-frequency measurement for transition from idle mode to CELL_FACH state (TDD)

8.4.1.4A.1 Definition

8.4.1.4A.2 Conformance requirement

Upon transition from idle mode to CELL_FACH state, the UE shall:

- 1> begin or continue monitoring cells listed in the IE "inter-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11);

Reference

3GPP TS 25.331, clause 8.4.1.9.2

8.4.1.4A.3 Test Purpose

1. To confirm that the UE begins to monitor the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 11 or 12 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.

8.4.1.4A.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 4 are active.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.4.1.4A-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.4A-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
PCCPCH RSCP	dBm	-60	-75	-75	-60

The UE is initially at idle mode and has selected cell 1 for camping. The System Information Block type 11 messages are modified with respect to the default settings to prevent reporting of "Cell synchronisation information" and also to include cell 4 into the "inter-frequency cell list" IE.

SS prompts the operator to make an outgoing call of a supported traffic class. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14. The UE shall not transmit any MEASUREMENT REPORT messages, which pertain to measurement readings for inter-frequency cells belonging to the monitored set. SS re-adjusts its downlink power settings according to columns marked "T1" in table 8.4.1.4A-1. This is expected to trigger a cell reselection in the UE. The UE shall send CELL UPDATE message to cell 4 in order to report this event. Upon receiving this message, SS replies with the CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH. UE shall then reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is in idle mode in cell 1. System Information Block type 11 to be transmitted is different from the default settings (see specific message contents)
2		↔	SS executes procedure P6 (clause 7.4.4.4.2) specified in TS 34.108.	
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P6 (clause 7.4.4.4.2) specified in TS 34.108.	
5		→	Void	
6				SS checks to see that no MEASUREMENT REPORT messages are received.
7				SS reconfigures the downlink transmission power, according to columns "T1" of table 8.4.1.4A-1.
8		→	CELL UPDATE	UE shall detect that cell 4 has become stronger than cell 1. It sends this message after re-selecting to cell 4
9		←	CELL UPDATE CONFIRM	Use message content.
10		→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

All messages indicated below shall use the same content as described in TS 34.108 clause 9, with the following exceptions:

System Information Block type 11 (Step 1)

<u>Information Element</u>	<u>Value/remark</u>
<u>SIB12 Indicator</u>	<u>FALSE</u>
<u>FACH measurement occasion info</u>	
- <u>FACH Measurement occasion cycle length coefficient</u>	<u>2</u>
- <u>Inter-frequency FDD measurement indicator</u>	<u>FALSE</u>
- <u>Inter-frequency TDD measurement indicator</u>	<u>TRUE</u>
- <u>Inter-RAT measurement indicators</u>	<u>Not Present</u>
<u>Measurement control system information</u>	
- <u>Intra-frequency measurement system information</u>	<u>Not Present</u>
- <u>Inter-frequency measurement system information</u>	
- <u>Inter-frequency cell info list</u>	
- <u>CHOICE inter-frequency cell removal</u>	<u>No inter-frequency cells removed</u>
- <u>New inter-frequency cells</u>	
- <u>Inter-frequency cell id</u>	<u>4</u>
- <u>Frequency info</u>	
- <u>CHOICE mode</u>	<u>TDD</u>
- <u>UARFCN (Nt)</u>	<u>Reference to table 6.1.4 of TS 34.108 for Cell 4</u>
- <u>Cell info</u>	
- <u>Cell individual offset</u>	<u>Not Present</u>
- <u>Reference time difference to cell</u>	<u>Not Present</u>
- <u>Read SFN Indicator</u>	<u>FALSE</u>
- <u>CHOICE mode</u>	<u>TDD</u>
- <u>Primary CCPCCH Info</u>	<u>Refer to clause titled "Default settings for cell No.4 (TDD)" in clause 6.1.4 of TS 34.108</u>
- <u>Cell selection and re-selection info</u>	
- <u>Qoffset_{s,n}</u>	<u>0 dB</u>
- <u>Maximum allowed UL TX power</u>	<u>0 dBm</u>
- <u>HCS neighbouring cell information</u>	<u>Not Present</u>
- <u>CHOICE Mode</u>	<u>TDD</u>
- <u>Qrxlevmin</u>	<u>-103 dBm</u>
- <u>Inter-RAT measurement system information</u>	<u>Not Present</u>
- <u>Traffic volume measurement system information</u>	<u>Not Present</u>

CELL UPDATE (Step 8)

<u>Information Element</u>	<u>Value/remark</u>
<u>U-RNTI</u>	<u>Check to see if set to same U-RNTI assigned during the execution of procedure P6.</u>
<u>Cell update cause</u>	<u>Check to see if it is set to "Cell Reselection"</u>
<u>Protocol error info</u>	<u>Check to see if it is absent or set to FALSE</u>
<u>Measured results on RACH</u>	<u>Check to see if it is absent</u>
<u>Protocol error information</u>	<u>Check to see if it is absent</u>

CELL UPDATE CONFIRM (Step 9)

Use the message sub-type in default message content defined in Annex A, with the following exceptions.

<u>Information Element</u>	<u>Value/Remarks</u>
<u>New C-RNTI</u>	<u>'1010 1010 1010 1010'</u>

UTRAN MOBILITY INFORMATION CONFIRM (Step 10)

Only the message type is checked.

8.4.1.4A.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages pertaining to any measurement quantities for cell 4.

After step 7 the UE shall reselect to cell 4 and transmit a CELL UPDATE message on the uplink CCCH of cell 4.

After step 9, the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on uplink DCCH AM RLC.

<NEXT SUBSECTION>

8.4.1.6 Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state (FDD)

8.4.1.6.1 Definition

8.4.1.6.2 Conformance requirement

Upon transition from CELL_DCH to CELL_FACH/ CELL_PCH/URA_PCH state, the UE shall:

- 1> stop the inter-frequency type measurement reporting assigned in a MEASUREMENT CONTROL message;
- 1> begin monitoring cells listed in the IE "inter-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11);
- 1> in CELL_FACH state:
 - 2> perform measurements on other frequencies according to the IE "FACH measurement occasion info".

Reference

3GPP TS 25.331, clause 8.4.1.6.2

8.4.1.6.3 Test Purpose

1. To confirm that UE ceases inter-frequency type measurement reporting assigned in MEASUREMENT CONTROL message when moving from CELL_DCH state to CELL_FACH.
2. To confirm that the UE begins to monitor the cells listed in "inter-frequency cell info" received in System Information Block type 11 or 12 messages, following a state transition from CELL_DCH state to CELL_FACH state.

8.4.1.6.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 2 are active.

UE: PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statements

- Compressed mode required yes/no

Test Procedure

Table 8.4.1.6-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.6-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/ 3.84 MHz	-60	-75	-75	-60

The UE is initially in CELL_DCH state. The System Information Block type 12 message is modified with respect to the default settings, so that no measurement tasks are required of the UE. If UE requires compressed mode, SS transmits PHYSICAL CHANNEL RECONFIGURATION message. In this message, IE "DPCH compressed mode info" is present, which indicates that the UE shall apply the given parameters for compressed mode operations. The UE shall return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to acknowledge that compressed mode mechanism can be exercised.

SS sends a MEASUREMENT CONTROL message to the UE, including cell 4 into the IE "inter-frequency cell info". The IE "CHOICE reporting criteria" in this message is set to "periodic reporting criteria". SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing IE "inter-frequency cell measurement results" to report cell 4's CPICH RSCP value. SS transmits PHYSICAL CHANNEL RECONFIGURATION message and reconfigures common physical channels. The UE shall move to CELL_FACH state and then return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS.

SS modifies the contents of Master Information Block (MIB) and System Information Block (SIB) type 12. In SIB 12, cell 4 is added to the cells listed in the "inter-frequency cell info" IE. SS transmit SYSTEM INFORMATION CHANGE INDICATION message to UE. SS waits for 8 seconds to detect any uplink MEASUREMENT REPORT messages. SS verifies that no MEASUREMENT REPORT message(s) are received as a result of inter-frequency measurements. SS then reconfigures the downlink transmission power settings of cell 1 and cell 4 according to the values stated in columns "T1" of table 8.4.1.6-1. SS waits for the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 4, specifying the "cell update cause" IE as "cell re-selection". SS replies with CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH to complete the cell update procedure. The UE shall reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 12	PS-DCCH+DTCH_DCH (state 6-10) in cell 1. System Information Block type 12 is modified with respect to the default settings. All measurement and reporting activities are disabled in this message.
2			Void	If compressed mode is not required (refer ICS/IXIT), goto step 8.
3			Void	
4			Void	
5			Void	
6		←	PHYSICAL CHANNEL RECONFIGURATION	SS instructs UE to begin compressed mode operation.
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall remain in CELL_DCH state.
8		←	MEASUREMENT CONTROL	SS indicates that the CPICH RSCP of cell 4 shall be monitored and reported. SS waits for 8 seconds for the reception of MEASUREMENT REPORT message.
9		→	MEASUREMENT REPORT	UE shall transmit this message to report cell 4's CPICH RSCP value.
10		←	PHYSICAL CHANNEL RECONFIGURATION	SS configures common physical channels.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall moves to CELL_FACH state.
12		←	Master Information Block, System Information Block type 12	SS modifies MIB and SIB 12. Cell 4 is included in the IE "inter-frequency cell info"
13		←	SYSTEM INFORMATION CHANGE INDICATION	SS waits for 8 seconds to verify that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
14				SS changes the power settings for cell 1 and cell 4 according to columns marked "T1" of table 8.4.1.6-1, and then waits for the UE to re-select to a new cell.
15		→	CELL UPDATE	UE shall perform cell re-selection and transmit this message on the new cell.
16		←	CELL UPDATE CONFIRM	See message content.
17		→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Content

System Information Block Type 12 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

RRC CONNECTION SETUP (Step 4)

Use the same message sub-type found in Clause 9 of TS 34.108, which is entitled "Transition to CELL_DCH"

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type found in Annex A, which is entitled "(Packet to CELL_DCH from CELL_DCH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE Mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL or DL only depending on UE capability
- Downlink compressed mode method	SF/2
- Uplink compressed mode method	SF/2 or Not present depending on UE capability
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical Reporting
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Inter-frequency measurement
CHOICE measurement type	No inter-frequency cells removed
- Inter-frequency cell info list	4
- CHOICE inter-frequency cell removal	UARFCN of the uplink frequency for cell 4
- New inter-frequency info list	UARFCN of the downlink frequency for cell 4
- Inter-frequency cell id	0 dB
- Frequency info	Not Present
- UARFCN uplink (Nu)	FALSE
- UARFCN downlink (Nd)	FDD
- Cell info	Set to same code as used for cell 4
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN Indicator	FDD
- CHOICE Mode	Set to same code as used for cell 4
- Primary CPICH Info	Not Present
- Primary Scrambling Code	FALSE
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	4
- Cells for measurement	Inter-frequency reporting criteria
- Inter-frequency cell id	0
- Inter-frequency measurement quantity	CPICH RSCP
- CHOICE reporting criteria	estimate
- Filter Coefficient	- Inter-frequency reporting quantity
- Measurement quantity for frequency quality	- UTRA Carrier RSSI
estimate	- Frequency quality estimate
- Inter-frequency reporting quantity	- Non frequency related cell reporting quantities
- UTRA Carrier RSSI	- Cell synchronisation information reporting
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	FALSE
- Cell synchronisation information reporting	FALSE
indicator	FALSE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Report cells within active and/or monitored set on used
- CHOICE reported cell	frequency or within active and/or monitored set on non-
	used frequency
- Maximum number of reported cells	2
- Measurement validity	CELL_DCH
- UE state	Not Present
- Inter-frequency set update	Periodic reporting criteria
- CHOICE report criteria	Infinity
- Amount of reporting	8 seconds
- Reporting interval	Not Present
DPCH compressed mode status info	

MEASUREMENT REPORT (Step 9)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured 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 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	Check to see if it is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

If UE do not require compressed mode, use the same message sub-type found in TS 34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)".

If UE requires compressed mode, use the same message sub-type found in TS34.108 clause 9, which is entitled "(Packet to CELL_FACH 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	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	Not Present
- TX Diversity Mode	None
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present

Master Information Block (Step 12)

Information Element	Value/Remarks
MIB value tag	2

System Information Block type 12 (Step 12)

Information Element	Value/remark
Measurement control system information - Use of HCS - Cell_selection_and_reselection_quality_measure - Intra-frequency measurement system information - Inter-frequency measurement system information - Inter-frequency cell info list - CHOICE Inter-frequency cell removal - New inter-frequency cells - Inter-frequency cell id - Frequency info - CHOICE mode - UARFCN uplink (Nu) - UARFCN downlink (Nd) - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE Mode - Primary CPICH info - Primary scrambling code - Primary CPICH Tx power - TX diversity indicator - Cell selection and re-selection info - Inter-RAT measurement system information - Traffic volume measurement system information	Not used CPICH_Ec/No Not Present Not Present 4 FDD Not present Absence of this IE is equivalent to apply the default duplex distance defined for the operating frequency according to TS 25.101 Reference to table 6.1.2 of TS 34.108 for Cell 4 Not Present Not Present FALSE FDD Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4 of TS 34.108 Not Present FALSE Not Present Not Present Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 13)

Information Element	Value/Remarks
BCCH modification info - MIB Value tag	2

CELL UPDATE (Step 15)

Information Element	Value/remark
U-RNTI Cell update cause Protocol error info Measured results on RACH Protocol error information	Check to see if same to value assigned in P3 or P5 Check to see if it is 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

CELL UPDATE CONFIRM (Step 16)

Use the same message sub-type found in Annex A, with the following exceptions.

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 17)

Only the message type is checked.

8.4.1.6.5 Test Requirement

If UE requires compressed mode, after step 6, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8 the UE shall transmit MEASUREMENT REPORT message to report cell 4's RSCP value in the IE "inter-frequency cell measured results".

After step 10, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 11 the UE shall stop sending MEASUREMENT REPORT messages, which contain inter-frequency measured results for cell 4's CPICH RSCP value.

After step 14 the UE shall transmit CELL UPDATE message on the uplink CCCH of cell 4, and the "cell update cause" IE shall be set to "cell reselection".

After step 16, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

8.4.1.6A Measurement Control and Report: Inter-frequency measurement for transition from CELL_DCH to CELL_FACH state (TDD)

8.4.1.6A.1 Definition

8.4.1.6A.2 Conformance requirement

Upon transition from CELL_DCH to CELL_FACH/ CELL_PCH/URA_PCH state, the UE shall:

- 1> stop the inter-frequency type measurement reporting assigned in a MEASUREMENT CONTROL message;
- 1> begin monitoring cells listed in the IE "inter-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11);
- 1> in CELL_FACH state:
 - 2> perform measurements on other frequencies according to the IE "FACH measurement occasion info".

Reference

3GPP TS 25.331, clause 8.4.1.6.2

8.4.1.6A.3 Test Purpose

1. To confirm that UE ceases inter-frequency type measurement reporting assigned in MEASUREMENT CONTROL message when moving from CELL_DCH state to CELL_FACH.
2. To confirm that the UE begins to monitor the cells listed in "inter-frequency cell info" received in System Information Block type 11 or 12 messages, following a state transition from CELL_DCH state to CELL_FACH state.

8.4.1.6A.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 and cell 2 are active.

UE: PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.4.1.6A-1 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while columns marked "T1" are to be applied subsequently. The exact instants on which these values shall be applied are described in the texts in this clause.

Table 8.4.1.6A-1

Parameter	Unit	Cell 1		Cell 4	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
PCCPCH RSCP	dBm	-60	-75	-75	-60

The UE is initially in CELL_DCH state. The System Information Block type 12 message is modified with respect to the default settings, so that no measurement tasks are required of the UE.

SS sends a MEASUREMENT CONTROL message to the UE, including cell 4 into the IE "inter-frequency cell info". The IE "CHOICE reporting criteria" in this message is set to "periodic reporting criteria". SS waits for 8 seconds to allow the periodic timer to expire. The UE shall send a MEASUREMENT REPORT message containing IE "inter-frequency cell measurement results" to report cell 4's PCCPCH RSCP value. SS transmits PHYSICAL CHANNEL RECONFIGURATION message and reconfigures common physical channels. The UE shall move to CELL_FACH state and then return a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS.

SS modifies the contents of Master Information Block (MIB) and System Information Block (SIB) type 12. In SIB 12, cell 4 is added to the cells listed in the "inter-frequency cell info" IE. SS transmits SYSTEM INFORMATION CHANGE INDICATION message to UE. SS waits for 8 seconds to detect any uplink MEASUREMENT REPORT messages. SS verifies that no MEASUREMENT REPORT message(s) are received as a result of inter-frequency measurements. SS then reconfigures the downlink transmission power settings of cell 1 and cell 4 according to the values stated in columns "T1" of table 8.4.1.6A-1. SS waits for the UE to perform cell re-selection. The UE shall transmit a CELL UPDATE message on the uplink CCCH of cell 4, specifying the "cell update cause" IE as "cell re-selection". SS replies with CELL UPDATE CONFIRM message, which includes IE "New C-RNTI", on the downlink DCCH to complete the cell update procedure. The UE shall reply with a UTRAN MOBILITY INFORMATION CONFIRM message.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected Sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comment</u>
	<u>UE</u>	<u>SS</u>		
1		←	<u>System Information Block type 12</u>	PS-DCCH+DTCH_DCH (state 6-10) in cell 1. <u>System Information Block type 12 is modified with respect to the default settings. All measurement and reporting activities are disabled in this message.</u>
2		←	<u>MEASUREMENT CONTROL</u>	SS indicates that the PCCPCH RSCP of cell 4 shall be <u>monitored and reported. SS waits for 8 seconds for the reception of MEASUREMENT REPORT message.</u>
3		→	<u>MEASUREMENT REPORT</u>	UE shall transmit this <u>message to report cell 4's PCCPCH RSCP value.</u>
4		←	<u>PHYSICAL CHANNEL RECONFIGURATION</u>	SS configures <u>common physical channels.</u>
5		→	<u>PHYSICAL CHANNEL RECONFIGURATION COMPLETE</u>	UE shall moves to <u>CELL_FACH state.</u>
6		←	<u>Master Information Block, System Information Block type 12</u>	SS modifies MIB and SIB 12. <u>Cell 4 is included in the IE "inter-frequency cell info"</u>
7		←	<u>SYSTEM INFORMATION CHANGE INDICATION</u>	SS waits for 8 seconds to <u>verify that no MEASUREMENT REPORT messages are detected on the uplink DCCH.</u>
8				SS changes the power <u>settings for cell 1 and cell 4 according to columns marked "T1" of table 8.4.1.6A-1, and then waits for the UE to re-select to a new cell.</u>
9		→	<u>CELL UPDATE</u>	UE shall perform cell re- <u>selection and transmit this message on the new cell.</u>
10		←	<u>CELL UPDATE CONFIRM</u>	<u>See message content.</u>
11		→	<u>UTRAN MOBILITY INFORMATION CONFIRM</u>	

Specific Message Content

System Information Block Type 12 (Step 1)

<u>Information Element</u>	<u>Value/remark</u>
<u>FACH measurement occasion info</u>	
- <u>FACH Measurement occasion cycle length coefficient</u>	2
- <u>Inter-frequency FDD measurement indicator</u>	FALSE
- <u>Inter-frequency TDD measurement indicator</u>	FALSE
- <u>Inter-RAT measurement indicators</u>	Not Present
<u>Measurement control system information</u>	
- <u>Intra-frequency measurement system information</u>	Not Present
- <u>Inter-frequency measurement system information</u>	Not Present
- <u>Inter-RAT measurement system information</u>	Not Present
- <u>Traffic volume measurement system information</u>	Not Present

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
<u>Measurement Identity</u>	15
<u>Measurement Command</u>	Setup
<u>Measurement Reporting Mode</u>	Acknowledged Mode RLC
- <u>Measurement Reporting Transfer Mode</u>	Periodical Reporting
- <u>Periodic Reporting / Event Trigger Reporting Mode</u>	Not Present
<u>Additional measurements list</u>	Inter-frequency measurement
<u>CHOICE measurement type</u>	No inter-frequency cells removed
- <u>Inter-frequency cell info list</u>	4
- <u>CHOICE inter-frequency cell removal</u>	UARFCN of the frequency for cell 4
- <u>New inter-frequency info list</u>	0 dB
- <u>Inter-frequency cell id</u>	Not Present
- <u>Frequency info</u>	FALSE
- <u>UARFCN (Nt)</u>	TDD
- <u>Cell info</u>	Set to same as used for cell 4
- <u>Cell individual offset</u>	4
- <u>Reference time difference to cell</u>	Inter-frequency reporting criteria
- <u>Read SFN Indicator</u>	0
- <u>CHOICE Mode</u>	PCCPCH RSCP
- <u>Primary CCPCH Info</u>	FALSE
- <u>Cells for measurement</u>	FALSE
- <u>Inter-frequency cell id</u>	FALSE
- <u>Inter-frequency measurement quantity</u>	FALSE
- <u>CHOICE reporting criteria</u>	FALSE
- <u>Filter Coefficient</u>	FALSE
- <u>Measurement quantity for frequency quality estimate</u>	FALSE
- <u>Inter-frequency reporting quantity</u>	FALSE
- <u>UTRA Carrier RSSI</u>	FALSE
- <u>Frequency quality estimate</u>	FALSE
- <u>Non frequency related cell reporting quantities</u>	FALSE
- <u>Cell synchronisation information reporting indicator</u>	FALSE
- <u>Cell Identity reporting indicator</u>	FALSE
- <u>Timeslot ISCP reporting indicator</u>	FALSE
- <u>Proposed TGSN Reporting required</u>	FALSE
- <u>Primary CCPCH RSCP reporting indicator</u>	TRUE
- <u>Pathloss reporting indicator</u>	FALSE
- <u>Reporting cell status</u>	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- <u>CHOICE reported cell</u>	2
- <u>Maximum number of reported cells</u>	CELL_DCH
- <u>Measurement validity</u>	Not Present
- <u>UE state</u>	Periodic reporting criteria
- <u>Inter-frequency set update</u>	Infinity
- <u>CHOICE report criteria</u>	8 seconds
- <u>Amount of reporting</u>	Not Present
- <u>Reporting interval</u>	Not Present
<u>DPCH compressed mode status info</u>	Not Present

MEASUREMENT REPORT (Step 3)

<u>Information Element</u>	<u>Value/remark</u>
<u>Measurement identity</u>	<u>Check to see if set to 15</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 4</u>
- <u>UARFCN (downlink)</u>	<u>Check to see if set to the UARFCN of the downlink frequency for cell 4</u>
- <u>UTRA carrier RSSI</u>	<u>Check to see if it is absent</u>
- <u>Inter-frequency cell measurement results</u>	<u>Check to see if it is absent</u>
- <u>Cell measured results</u>	<u>Check to see if set to the same for cell 4</u>
- <u>Cell Identity</u>	<u>Check to see if it is present</u>
- <u>Cell synchronisation information</u>	<u>Check to see if it is absent</u>
- <u>Primary CCPCH Info</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>Measured Results on RACH</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 4)

If UE do not require compressed mode, use the same message sub-type found in TS 34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)".

Master Information Block (Step 12)

<u>Information Element</u>	<u>Value/Remarks</u>
<u>MIB value tag</u>	<u>2</u>

System Information Block type 12 (Step 6)

<u>Information Element</u>	<u>Value/remark</u>
<u>Measurement control system information</u>	
- <u>Use of HCS</u>	<u>Not used</u>
- <u>Intra-frequency measurement system information</u>	<u>Not Present</u>
- <u>Inter-frequency measurement system information</u>	
- <u>Inter-frequency cell info list</u>	
- <u>CHOICE Inter-frequency cell removal</u>	<u>Not Present</u>
- <u>New inter-frequency cells</u>	
- <u>Inter-frequency cell id</u>	<u>4</u>
- <u>Frequency info</u>	
- <u>CHOICE mode</u>	<u>TDD</u>
- <u>UARFCN (Nt)</u>	<u>Reference to table 6.1.4 of TS 34.108 for Cell 4</u>
- <u>Cell info</u>	
- <u>Cell individual offset</u>	<u>Not Present</u>
- <u>Reference time difference to cell</u>	<u>Not Present</u>
- <u>Read SFN indicator</u>	<u>FALSE</u>
- <u>CHOICE Mode</u>	<u>TDD</u>
- <u>Primary CCPCH info</u>	<u>Refer to clause titled "Default settings for cell No.4 (TDD)" in clause 6.1.4 of TS 34.108</u>
- <u>Cell selection and re-selection info</u>	<u>Not Present</u>
- <u>Inter-RAT measurement system information</u>	<u>Not Present</u>
- <u>Traffic volume measurement system information</u>	<u>Not Present</u>

SYSTEM INFORMATION CHANGE INDICATION (Step 7)

<u>Information Element</u>	<u>Value/Remarks</u>
<u>BCCH modification info</u> <u>- MIB Value tag</u>	<u>2</u>

CELL UPDATE (Step 9)

<u>Information Element</u>	<u>Value/remark</u>
<u>U-RNTI</u>	<u>Check to see if same to value assigned in P3 or P5</u>
<u>Cell update cause</u>	<u>Check to see if it is set to "Cell Reselection"</u>
<u>Protocol error info</u>	<u>Check to see if it is absent or set to FALSE</u>
<u>Measured results on RACH</u>	<u>Check to see if it is absent</u>
<u>Protocol error information</u>	<u>Check to see if it is absent</u>

CELL UPDATE CONFIRM (Step 10)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions.

<u>Information Element</u>	<u>Value/Remarks</u>
<u>New C-RNTI</u>	<u>'1010 1010 1010 1010'</u>

UTRAN MOBILITY INFORMATION CONFIRM (Step 11)

Only the message type is checked.

8.4.1.6A.5 Test Requirement

After step 2 the UE shall transmit MEASUREMENT REPORT message to report cell 4's RSCP value in the IE "inter-frequency cell measured results".

After step 4, the UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 5 the UE shall stop sending MEASUREMENT REPORT messages, which contain inter-frequency measured results for cell 4's PCCPCH RSCP value.

After step 8 the UE shall transmit CELL UPDATE message on the uplink CCCH of cell 4, and the "cell update cause" IE shall be set to "cell reselection".

After step 10, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

<NEXT SUBSECTION>

8.4.1.8 Measurement Control and Report: Inter-frequency measurement for transition from CELL_FACH to CELL_DCH state (FDD)

8.4.1.8.1 Definition

8.4.1.8.2 Conformance requirement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

- 1> stop monitoring the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 12 (or System Information Block type 11);
- 1> retrieve each set of measurement control information of measurement type "inter-frequency" stored in the variable MEASUREMENT_IDENTITY; and
- 1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH":
 - 2> resume the measurement reporting.

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is included, the UE shall for each transmission gap pattern sequence perform the following consistency checks:

- 1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires UL compressed mode for measurements on any of the cells to be measured according to UE variable CELL_INFO_LIST, and CHOICE 'UL/DL mode' indicates 'DL only':
 - 2> set the variable INVALID_CONFIGURATION to TRUE.
- 1> if UE, according to its measurement capabilities, and for the measurement purpose indicated by IE "TGMP", requires DL compressed mode for measurements on any of the cells to be measured according to UE variable CELL_INFO_LIST, and CHOICE 'UL/DL mode' indicates 'UL only':
 - 2> set the variable INVALID_CONFIGURATION to TRUE.
- 1> if UE already has an active transmission gap pattern sequence that, according to IE "TGMP", has the same measurement purpose, and both patterns will be active after the new configuration has been taken into use:
 - 2> set the variable INVALID_CONFIGURATION to TRUE.

If variable INVALID_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

- 1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "TGPS Status Flag"):
 - 2> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time" received in this message, when the new configuration received in this message is taken into use.
- 1> update each pattern sequence to the variable TGPS_IDENTITY according to the IE "TGPSI";
- 1> update into the variable TGPS_IDENTITY the configuration information defined by IE group "transmission gap pattern sequence configuration parameters";
- 1> after the new configuration has been taken into use:
 - 2> activate the stored pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" is set to "activate" at the time indicated by IE "TGCFN"; and
 - 2> begin the inter-frequency corresponding to the pattern sequence measurement purpose of each activated pattern sequence;
 - 2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":
 - 3> start the concerned pattern sequence immediately at that CFN.
- 1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified in TS 25.331 subclause 8.2.11.2.

Reference

3GPP TS 25.331 clause 8.4.1.7.2, 8.4.1.3

8.4.1.8.3 Test Purpose

- 1. To confirm that the UE stops monitoring the list of cells assigned in the IE "inter-frequency cell info" in System Information Block type 11 or 12 when it transits from CELL_FACH state to CELL_DCH state.

2. To confirm that the UE resumes inter-frequency measurements and reporting stored for which the measurement control information has IE "measurement validity" assigned to the value "CELL_DCH", after it re-enters CELL_DCH state from CELL_FACH state.
3. 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.

8.4.1.8.4 Method of test

Initial Condition

System Simulator: 3 cells – Cells 1, cell 4 and cell 5 are active.

UE: PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statements

- Compressed mode required yes/no

In case the UE supports both PS and CS CN domains, this test shall be run twice, once starting from the initial condition CS-DCCH+DTCH_DCH, and once starting from the initial condition PS-DCCH+DTCH_DCH.

Test Procedure

Table 8.4.1.8-1 illustrates the downlink power to be applied for the 3 cells in this test.

Table 8.4.1.8-1

Para-meter	Unit	Cell 1	Cell 4	Cell 5
UTRA RF Channel Number		Ch. 1	Ch. 2	Ch. 2
CPICH Ec	dBm/3.84 MHz	-60	-75	-75

Test procedure when the initial condition is that the UE is connected to the PS domain:

The UE is in CELL_DCH state in cell 1 (step 1). SS transmits MEASUREMENT CONTROL message to add cell 5 into the IE "inter-frequency cell info" (step 2). If UE requires compressed mode, SS checks that no MEASUREMENT REPORT messages are detected on the uplink DCCH after it has transmitted the MEASUREMENT CONTROL message. (step 3). SS checks that the UE sends a MEASUREMENT REPORT message on the uplink DCCH only if UE does not require compressed mode.

SS sends a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH to move the UE to CELL_FACH state (step 4). The UE shall reconfigure itself to receive and transmit using the common physical channels assigned, and send PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH (step 5). SS modifies the content of Master Information Block and System Information Block type 12 messages, such that cell 4 is added in the list of cells assigned in the IE "inter-frequency cell info" (step 6). SS transmits SYSTEM INFORMATION CHANGE INDICATION message to UE. Once again, SS verifies that the UE does not transmit MEASUREMENT REPORT messages in the uplink direction (step 7).

SS sends PHYSICAL CHANNEL RECONFIGURATION message, and configures dedicated physical. If UE requires compressed mode, in this message, SS commands the UE to start applying compressed mode mechanism for DPCH. The UE shall move to CELL_DCH state and then reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 9). SS waits for 10 seconds. The UE shall transmit 1 MEASUREMENT REPORT message, containing the selected frequency quality estimate (in this case CPICH RSCP) of cell 4. The UE shall also report the triggering of event '2c' in the IE "Event results" of MEASUREMENT REPORT message (step 10).

SS transmits a MEASUREMENT CONTROL message on the downlink DCCH using AM-RLC (step 11). The UE shall transmit MEASUREMENT REPORT messages at 2 seconds interval (step 12).

If UE requires compressed mode, SS transmits a PHYSICAL CHANNEL RECONFIGURATION message and deactivates the compressed mode pattern sequence with "TGPSI" IE set to 1 (step 13). The UE shall respond by sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and also stop the periodic reporting activities (step 14).

Following this if UE requires compressed mode, SS sends a MEASUREMENT CONTROL message and re-activates the compressed mode pattern sequence by using the "DPCH compressed mode status" IE (step 15). SS confirms that the UE has reconfigured itself to start measurement reporting again. The SS shall receive MEASUREMENT REPORT messages continuously at 2 seconds interval (step 16). The SS then sends a MEASUREMENT CONTROL ordering the UE to release the measurement corresponding to identity 14, and to stop compressed mode (step 17). At reception of that message, the UE shall stop compressed mode and delete the measurement corresponding to that identity (step 18). The SS then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to order the UE to start compressed mode once again (step 19). The UE answers with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message, and starts compressed mode (step 20). SS checks then that it does not receive any MEASUREMENT REPORT message from the UE after that point (step 21).

Test procedure when the initial condition is that the UE is connected to the CS domain:

The UE is in CELL_DCH state in cell 1 (step 1). SS transmits MEASUREMENT CONTROL message to add cell 5 into the IE "inter-frequency cell info" (step 2). SS checks that the UE sends a MEASUREMENT REPORT messages on the uplink DCCH only if UE does not require compressed mode (step 3).

If the UE requires compressed mode, SS sends PHYSICAL CHANNEL RECONFIGURATION message (step 8). In that message, SS commands the UE to start applying compressed mode. The UE shall then reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 9). Following this, a UE requiring compressed mode shall transmit 1 MEASUREMENT REPORT message, containing the selected frequency quality estimate (in this case CPICH RSCP) of cell 5. The UE shall also report the triggering of event '2c' in the IE "Event results" of MEASUREMENT REPORT message (step 10).

SS transmits a MEASUREMENT CONTROL message on the downlink DCCH using AM-RLC (step 11). The UE shall transmit MEASUREMENT REPORT messages at 2 seconds interval (step 12).

If the UE requires compressed mode, SS transmits a PHYSICAL CHANNEL RECONFIGURATION message and deactivates the compressed mode pattern sequence with "TGPSI" IE set to 1 (step 13). The UE shall respond by sending PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and also stop the periodic reporting activities (step 14). Following this if the UE requires compressed mode, SS sends a MEASUREMENT CONTROL message and re-activates the compressed mode pattern sequence by using the "DPCH compressed mode status" IE (step 15). SS confirms that the UE has reconfigured itself to start measurement reporting again. The SS shall receive MEASUREMENT REPORT messages continuously at 2 seconds interval (step 16). The SS then sends a MEASUREMENT CONTROL ordering the UE to release the measurement corresponding to identity 14, and to stop compressed mode (step 17). At reception of that message, the UE shall stop compressed mode and delete the measurement corresponding to that identity (step 18). The SS then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to order the UE to start compressed mode once again (step 19). The UE answers with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message, and starts compressed mode (step 20). SS checks then that it does not receive any MEASUREMENT REPORT message from the UE after that point (step 21).

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				(Valid for both the PS and CS cases) The initial state of UE is in CELL_DCH state of cell 1.

Step	Direction		Message	Comment
	UE	SS		
2		←	MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS specifies inter-frequency measurement and reporting parameters for cell 5, with "measurement validity" IE present and "UE state" set to "CELL_DCH".
3		→	MEASUREMENT REPORT	(Valid for both the PS and CS cases) If compressed mode is not required (refer ICS/IXIT), SS checks that UE transmit this message, or else SS checks that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
4		←	PHYSICAL CHANNEL RECONFIGURATION	(Only in the PS case) SS moves the UE to CELL_FACH state.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Only in the PS case) UE shall move to CELL_FACH state.
6		←	Master Information Block System Information Block type 12	(Only in the PS case) SS modifies MIB and SIB 12 in order to include cell 4 into the list of cells in IE "inter-frequency cell info".
7		←	SYSTEM INFORMATION CHANGE INDICATION	(Only in the PS case) After SS transmits this message, SS confirms that there are no transmissions of MEASUREMENT REPORT message in the uplink direction.
8		←	PHYSICAL CHANNEL RECONFIGURATION	(Valid for both the PS and CS cases) For the CS case, this step only applies only if the UE requires compressed mode. See specific message content below.
9		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Valid for both the PS and CS cases) For the CS case, this step only applies only if the UE requires compressed mode. UE shall move to CELL_DCH state.
10		→	MEASUREMENT REPORT	(Valid for both the PS and CS cases) In the PS case, UE shall resume inter-frequency measurement task for cell 4 and report the measured CPICH RSCP value for cell 4. In the CS case, a UE requiring compressed mode shall start inter-frequency measurement task for cell 5 and report the measured CPICH RSCP value for cell 5. In the CS case, SS shall check that a UE not requiring compressed mode shall not send any MEASUREMENT REPORT.

Step	Direction		Message	Comment
	UE	SS		
11		←	MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS changes the reporting criteria for cell 5 to 'periodic reporting'
12		→	MEASUREMENT REPORT	(Valid for both the PS and CS cases) UE shall begin to transmit this message at 2 seconds interval. If compressed mode is not required (refer ICS/IXIT), the test ends here.
13		←	PHYSICAL CHANNEL RECONFIGURATION	(Valid for both the PS and CS cases) SS deactivates the currently used pattern sequence for compressed mode operation.
14		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Valid for both the PS and CS cases) UE stays in CELL_DCH state. SS verifies that no MEASUREMENT REPORT messages are received.
15		←	MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS activates the pattern sequence stored by the UE.
16		→	MEASUREMENT REPORT	(Valid for both the PS and CS cases) SS checks that MEASUREMENT REPORT messages are received at 2 seconds interval.
17		←	MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS orders the UE to release the measurement with identity 14, and to stop compressed mode
18				(Valid for both the PS and CS cases) SS checks that the UE has stopped compressed mode.
19		←	PHYSICAL CHANNEL RECONFIGURATION	(Valid for both the PS and CS cases) SS orders the UE to start compressed mode again.
20		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Valid for both the PS and CS cases) The UE transmits the response message and starts compressed mode
21				(Valid for both the PS and CS cases) SS checks that the UE does not send any MEASUREMENT REPORT

Specific Message Content

Unless explicitly stated, the messages below shall be used for both the CS case and the PS case.

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Event Trigger
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Inter-frequency measurement
CHOICE measurement type	No inter-frequency cells removed
- Inter-frequency cell info list	5
- CHOICE inter-frequency cell removal	UARFCN of the uplink frequency for cell 5
- New inter-frequency info list	UARFCN of the downlink frequency for cell 5
- Inter-frequency cell id	0 dB
- Frequency info	Not Present
- UARFCN uplink (Nu)	FALSE
- UARFCN downlink (Nd)	FDD
- Cell info	Set to same code as used for cell 5
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN Indicator	FDD
- CHOICE Mode	Set to same code as used for cell 5
- Primary CPICH Info	Not Present
- Primary Scrambling Code	FALSE
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not Present
- Inter-frequency measurement quantity	Inter-frequency reporting criteria
- CHOICE reporting criteria	0
- Filter Coefficient	CPICH RSCP
- Measurement quantity for frequency quality estimate	
- Inter-frequency reporting quantity	FALSE
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	On with no reporting
- UE autonomous update	Not Present
- Non autonomous update mode	Inter-frequency measurement reporting criteria
- CHOICE report criteria	
- Parameters required for each event	2c
- Inter-frequency event identity	Not Present
- Threshold used frequency	Not Present
- W used frequency	Not Present
- Hysteresis	1.0 dB
- Time to trigger	10 seconds
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Parameters required for each non-used frequency	
frequency	
- Threshold non used frequency	-85 dBm
- W non-used frequency	0.0
DPCH compressed mode status info	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the same message sub-type found in Annex A titled "(Packet to CELL_FACH from CELL_DCH in PS)".

Information Element	Value/Remark
- Downlink information for each radio link	
- Choice mode	FDD
- Primary CPICH info	
- Primary scrambling code	Scrambling code for cell 1. Ref. to the Default setting in TS34.108 clause 6.1 (FDD)
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- SCCPCH Information for FACH	Not Present

Master Information Block (Step 6)

Information Element	Value/Remark
Value Tag	2

System Information Block type 12 (Step 6)

Information Element	Value/remark
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	TRUE
- Inter-frequency TDD measurement indicator	FALSE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
-Use of HCS	Not used
-Cell selection and reselection quality measure	CPICH Ec/No
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE inter-frequency cells removal	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Refer to clause titled "Default settings for cell No.4 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not Present – use default values
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 8 for the PS case)

If UE do not require compressed mode, use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS)".

If UE requires compressed mode, use the same message sub-type found in Annex A, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS)", with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Downlink information common for all radio links <ul style="list-style-type: none"> - Downlink DPCH info common for all RL - CHOICE mode - DPCH compressed mode info - TGPSI - TGPS Status Flag - TGCFN - Transmission gap pattern sequence configuration parameters - TGMP - TGPRC - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITP - CHOICE UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method - Downlink frame type - DeltaSIR1 - DeltaSIRAfter1 - DeltaSIR2 - DeltaSIRAfter2 - N identify abort - T Reconfirm abort - TX Diversity Mode - SSDT information - Default DPCH Offset Value 	Not Present FDD 1 Activate (Current CFN+(256 – TTI/10msec)) mod 256 FDD Measurement Infinity 4 7 Not Present undefined 3 Not Present Mode 0 Mode 0 UL and DL UL only or DL only depending on UE capability SF/2 (or not sent, depending on the UE capability) SF/2 (or not sent, depending on UE capability) B 2.0 1.0 Not Present Not Present Not Present Not Present None Not Present 0

PHYSICAL CHANNEL RECONFIGURATION (Step 8 for the CS case)

Information Element	Value/Remark
Activation time	(256+CFN-(CFN MOD 8 + 8))MOD 256
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Uplink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	Set to scrambling code of cell 1
- Cell ID	Not present
- PDSCH with SHO DCH info	Not present
- PDSCH code mapping	Not present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	0
- Secondary CPICH info	Not present
- DL channelisation code	
- Secondary scrambling code	Not present
- Spreading factor	Reference to TS34.108 clause 6.10

<ul style="list-style-type: none"> - Code number - Scrambling code change - TPC combination index - SSdT cell identity - Closed loop timing adjustment mode 	Parameter Set Same as the code currently allocated to the UE Code change 0 Not present Not present
--	---

MEASUREMENT REPORT (Step 3 for both the PS and the CS case, and step 10 for the CS case)

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured 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 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	Check to see if it is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 5
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	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 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- Non frequency related measurement event results	
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 5

MEASUREMENT REPORT (Step 10 for the PS case)

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured 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 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- SFN-SFN observed time difference	Check to see if it is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
Measured Results on RACH	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 4
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 4
- Non frequency related measurement event results	
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 4

MEASUREMENT CONTROL (Step 11)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Set up
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical reporting
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Inter-frequency measurement
CHOICE measurement type	No inter-frequency cells removed
- Inter-frequency cell info list	5
- CHOICE inter-frequency cell removal	UARFCN of the uplink frequency for cell 5
- New inter-frequency info list	UARFCN of the downlink frequency for cell 5
- Inter-frequency cell id	0 dB
- Frequency info	Not Present
- UARFCN uplink (Nu)	FALSE
- UARFCN downlink (Nd)	FDD
- Cell info	Set to same code as used for cell 5
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN Indicator	FDD
- CHOICE Mode	Set to same code as used for cell 5
- Primary CPICH Info	Not Present
- Primary Scrambling Code	FALSE
- Primary CPICH TX power	FALSE
- TX Diversity Indicator	5
- Cells for measurement	Inter-frequency reporting criteria
- Inter-frequency cell id	0
- Inter-frequency measurement quantity	CPICH RSCP
- CHOICE reporting criteria	estimate
- Filter Coefficient	- Inter-frequency reporting quantity
- Measurement quantity for frequency quality	- UTRA Carrier RSSI
estimate	- Frequency quality estimate
- Inter-frequency reporting quantity	- Non frequency related cell reporting quantities
- UTRA Carrier RSSI	- Cell synchronisation information reporting
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	FALSE
- Cell synchronisation information reporting	FALSE
indicator	TRUE
- Cell Identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	TRUE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Reporting cell status	2
- CHOICE reported cell	Not Present
- Maximum number of reported cells	Not Present
- Measurement validity	Not Present
- Inter-frequency set update	Periodic reporting criteria
- CHOICE report criteria	Infinity
- Amount of reporting	2000 milliseconds
- Reporting interval	Not Present
DPCH compressed mode status info	

MEASUREMENT REPORT (Step 12, 16)

Information Element	Value/remark
Measurement identity	Check to see if set to 14
Measured 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 5
- UARFCN (downlink)	Check to see if set to the UARFCN of the downlink frequency for cell 5
- UTRA carrier RSSI	Check to see if it is absent
- Inter-frequency cell measurement results	Check to see if it is absent
- Cell measured results	
- Cell Identity	Check to see if is absent
- Cell synchronisation information	Check to see if it is absent
- Primary CPICH Info	
- Primary Scrambling Code	Check to see if set to the same code for cell 5
- CPICH Ec/No	Check to see if it is absent
- CPICH RSCP	Check to see if it is present
- Pathloss	Check to see if it is absent
- CFN-SFN observed time difference	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Event Results	Check to see if it is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 13)

Use the same message transmitted in step 8 with the following modifications:

Information Element	Value/Remark
Activation time	$(256 + \text{CFN} - (\text{CFN} \bmod 8 + 8)) \bmod 256$
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
>Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not Present
- Transmission gap pattern sequence configuration parameters	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 15)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Modify
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Not Present
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256

MEASUREMENT CONTROL (Step 17)

Information Element	Value/remark
Measurement Identity	14
Measurement Command	Release
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Not Present
DPCH compressed mode status info	
- TGPS reconfiguration CFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Flag	Deactivate
- TGCFN	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 19 for the PS case)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Uplink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 19 for the CS case)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod 256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Uplink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	Set to scrambling code of cell 1
- Cell ID	Not present
- PDSCH with SHO DCH info	Not present
- PDSCH code mapping	Not present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	0
- Secondary CPICH info	Not present
- DL channelisation code	
- Secondary scrambling code	Not present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	Same as the code currently allocated to the UE
- Scrambling code change	Code change

- TPC combination index	0
- SSDT cell identity	Not present
- Closed loop timing adjustment mode	Not present

8.4.1.8.5 Test Requirement

After step 2, if UE requires compressed mode the UE shall not send any MEASUREMENT REPORT messages on the uplink DCCH of cell 1. If UE do not require compressed mode, the UE shall send a MEASUREMENT REPORT message on the uplink DCCH of cell 1.

After step 4 and 8, UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8, the UE shall start compressed mode using the method specified in the PHYSICAL CHANNEL RECONFIGURATION message sent in step 8.

After step 9 the UE shall transmit a MEASUREMENT REPORT message, containing the IE "measured results" reporting cell 5's CPICH RSCP value in CS case and cell 4's CPICH RSCP value in the PS case. The UE shall also report the triggering of event '2c' by including IE "Event results" in the MEASUREMENT REPORT message.

After step 11 the UE shall send MEASUREMENT REPORT messages, containing cell 5's CPICH RSCP measured value in IE "Measured results" at 2 seconds interval. The "Event results" IE shall be omitted in these messages.

If UE requires compressed mode, after step 14, the UE shall not transmit any MEASUREMENT REPORT messages.

If UE requires compressed mode, after step 15, the UE shall start compressed mode and resume the transmission of MEASUREMENT REPORT messages with identical contents as in those received after step 11.

After step 17, the UE shall deactivate compressed mode.

After step 20, the UE shall not transmit any MEASUREMENT REPORT message to SS.

[8.4.1.8A Measurement Control and Report: Inter-frequency measurement for transition from CELL_FACH to CELL_DCH state \(TDD\)](#)

[8.4.1.8A.1 Definition](#)

[8.4.1.8A.2 Conformance requirement](#)

[Upon transition from CELL_FACH to CELL_DCH state, the UE shall:](#)

- [1> stop monitoring the list of cells assigned in the IE "inter-frequency cell info list" in System Information Block type 12 \(or System Information Block type 11\);](#)
- [1> retrieve each set of measurement control information of measurement type "inter-frequency" stored in the variable MEASUREMENT_IDENTITY; and](#)
- [1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH":](#)
 - [2> resume the measurement reporting.](#)

[Reference](#)

[3GPP TS 25.331 clause 8.4.1.7.2, 8.4.1.3](#)

8.4.1.8A.3 Test Purpose

1. To confirm that the UE stops monitoring the list of cells assigned in the IE "inter-frequency cell info" in System Information Block type 11 or 12 when it transits from CELL_FACH state to CELL_DCH state.
2. To confirm that the UE resumes inter-frequency measurements and reporting stored for which the measurement control information has IE "measurement validity" assigned to the value "CELL_DCH", after it re-enters CELL_DCH state from CELL_FACH state.

8.4.1.8A.4 Method of test

Initial Condition

System Simulator: 3 cells – Cells 1, cell 4 and cell 5 are active.

UE: PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

In case the UE supports both PS and CS CN domains, this test shall be run twice, once starting from the initial condition CS-DCCH+DTCH_DCH, and once starting from the initial condition PS-DCCH+DTCH_DCH.

Test Procedure

Table 8.4.1.8A-1 illustrates the downlink power to be applied for the 3 cells in this test.

Table 8.4.1.8A-1

<u>Para-meter</u>	<u>Unit</u>	<u>Cell 1</u>	<u>Cell 4</u>	<u>Cell 5</u>
<u>UTRA RF Channel Number</u>		<u>Ch. 1</u>	<u>Ch. 2</u>	<u>Ch. 2</u>
<u>PCCPCH RSCP</u>	<u>dBm</u>	<u>-60</u>	<u>-75</u>	<u>-75</u>

Test procedure when the initial condition is that the UE is connected to the PS domain or CS:

The UE is in CELL_DCH state in cell 1 (step 1). SS transmits MEASUREMENT CONTROL message to add cell 5 into the IE "inter-frequency cell info" (step 2). SS checks that UE transmit this message, or else SS checks that no MEASUREMENT REPORT messages are detected on the uplink DCCH (step 3).

SS sends a PHYSICAL CHANNEL RECONFIGURATION message on the downlink DCCH to move the UE to CELL_FACH state (step 4). The UE shall reconfigure itself to receive and transmit using the common physical channels assigned, and send PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH (step 5). SS modifies the content of Master Information Block and System Information Block type 12 messages, such that cell 4 is added in the list of cells assigned in the IE "inter-frequency cell info" (step 6). SS transmits SYSTEM INFORMATION CHANGE INDICATION message to UE. Once again, SS verifies that the UE does not transmit MEASUREMENT REPORT messages in the uplink direction (step 7).

SS sends PHYSICAL CHANNEL RECONFIGURATION message, and configures dedicated physical only in the PS case (step 8). The UE shall move to CELL_DCH state and then reply with PHYSICAL CHANNEL RECONFIGURATION COMPLETE message (step 9). SS waits for 10 seconds. The UE shall transmit 1 MEASUREMENT REPORT message, containing the selected frequency quality estimate (in this case PCCPCH RSCP) of cell 4. The UE shall also report the triggering of event '2c' in the IE "Event results" of MEASUREMENT REPORT message (step 10).

SS transmits a MEASUREMENT CONTROL message on the downlink DCCH using AM-RLC (step 10). The UE shall transmit MEASUREMENT REPORT messages at 2 seconds interval (step 12).

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				(Valid for both the PS and CS cases) The initial state of UE is in CELL_DCH state of cell 1.
2		←	MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS specifies inter-frequency measurement and reporting parameters for cell 5, with "measurement validity" IE present and "UE state" set to "CELL_DCH".
3		→	MEASUREMENT REPORT	(Valid for both the PS and CS cases) SS checks that UE transmit this message, or else SS checks that no MEASUREMENT REPORT messages are detected on the uplink DCCH.
4		←	PHYSICAL CHANNEL RECONFIGURATION	(Only in the PS case) SS moves the UE to CELL_FACH state.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Only in the PS case) UE shall move to CELL_FACH state.
6		←	Master Information Block System Information Block type 12	(Only in the PS case) SS modifies MIB and SIB 12 in order to include cell 4 into the list of cells in IE "inter-frequency cell info".
7		←	SYSTEM INFORMATION CHANGE INDICATION	(Only in the PS case) After SS transmits this message, SS confirms that there are no transmissions of MEASUREMENT REPORT message in the uplink direction.
8		←	PHYSICAL CHANNEL RECONFIGURATION	(Valid for both the PS and CS cases) For the CS case, this step only applies only if the UE requires compressed mode. See specific message content below.
9		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	(Valid only in the PS case) UE shall move to CELL_DCH state.
10		→	MEASUREMENT REPORT	(Valid for both the PS and CS cases) UE shall resume inter-frequency measurement task for cell 4 and report the measured PCCPCH RSCP value for cell 4.
11		←	MEASUREMENT CONTROL	(Valid for both the PS and CS cases) SS changes the reporting criteria for cell 5 to 'periodic reporting'

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comment</u>
	<u>UE</u>	<u>SS</u>		
<u>12</u>		→	<u>MEASUREMENT REPORT</u>	(Valid for both the PS and CS cases) UE shall begin to <u>transmit this message at 2 seconds interval.</u>

Specific Message Content

Unless explicitly stated, the messages below shall be used for both the CS case and the PS case.

MEASUREMENT CONTROL (Step 2)

<u>Information Element</u>	<u>Value/remark</u>
<u>Measurement Identity</u>	<u>14</u>
<u>Measurement Command</u>	<u>Setup</u>
<u>Measurement Reporting Mode</u>	
- <u>Measurement Reporting Transfer Mode</u>	<u>Acknowledged Mode RLC</u>
- <u>Periodic Reporting / Event Trigger Reporting Mode</u>	<u>Event Trigger</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>CHOICE inter-frequency cell removal</u>	<u>No inter-frequency cells removed</u>
- <u>New inter-frequency info list</u>	
- <u>Inter-frequency cell id</u>	<u>5</u>
- <u>Frequency info</u>	
- <u>UARFCN (Nt)</u>	<u>UARFCN of the frequency for cell 5</u>
- <u>Cell info</u>	
- <u>Cell individual offset</u>	<u>0 dB</u>
- <u>Reference time difference to cell</u>	<u>Not Present</u>
- <u>Read SFN Indicator</u>	<u>FALSE</u>
- <u>CHOICE Mode</u>	<u>TDD</u>
- <u>Primary CCPCH Info</u>	<u>Set to same code as used for cell 5</u>
- <u>Cells for measurement</u>	<u>Not Present</u>
- <u>Inter-frequency measurement quantity</u>	
- <u>CHOICE reporting criteria</u>	<u>Inter-frequency reporting criteria</u>
- <u>Filter Coefficient</u>	<u>0</u>
- <u>Measurement quantity for frequency quality estimate</u>	<u>PCCPCH RSCP</u>
- <u>Inter-frequency reporting quantity</u>	
- <u>UTRA Carrier RSSI</u>	<u>FALSE</u>
- <u>Frequency quality estimate</u>	<u>FALSE</u>
- <u>Non frequency related cell reporting quantities</u>	
- <u>Cell synchronisation information reporting indicator</u>	<u>FALSE</u>
- <u>Cell Identity reporting indicator</u>	<u>TRUE</u>
- <u>Timeslot ISCP reporting indicator</u>	<u>FALSE</u>
- <u>Proposed TGSN Reporting required</u>	<u>FALSE</u>
- <u>Primary CCPCH RSCP reporting indicator</u>	<u>TRUE</u>
- <u>Pathloss reporting indicator</u>	<u>FALSE</u>
- <u>Reporting cell status</u>	<u>Not present</u>
- <u>Measurement validity</u>	
- <u>UE State</u>	<u>CELL_DCH</u>
- <u>Inter-frequency set update</u>	
- <u>UE autonomous update</u>	<u>On with no reporting</u>
- <u>Non autonomous update mode</u>	<u>Not Present</u>
- <u>CHOICE report criteria</u>	<u>Inter-frequency measurement reporting criteria</u>
- <u>Parameters required for each event</u>	
- <u>Inter-frequency event identity</u>	<u>2c</u>
- <u>Threshold used frequency</u>	<u>Not Present</u>
- <u>W used frequency</u>	<u>Not Present</u>
- <u>Hysteresis</u>	<u>1.0 dB</u>
- <u>Time to trigger</u>	<u>10 seconds</u>
- <u>Reporting cell status</u>	
- <u>CHOICE reported cell</u>	<u>Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency</u>
- <u>Maximum number of reported cells</u>	<u>2</u>
- <u>Parameters required for each non-used frequency</u>	
- <u>Threshold non used frequency</u>	<u>-85 dBm</u>
- <u>W non-used frequency</u>	<u>0.0</u>
<u>DPCH compressed mode status info</u>	<u>Not Present</u>

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the same message sub-type found in TS 34.108 clause 9 titled "(Packet to CELL_FACH from CELL_DCH in PS)".

<u>Information Element</u>	<u>Value/Remark</u>
- Downlink information for each radio link	
- Choice mode	TDD
- Primary CCPCH info	For cell 1. Ref. to the Default setting in TS34.108 clause 6.1 (TDD)
- PDSCH with SHO DCH info	Not Present
- PDSCH code mapping	Not Present
- Downlink DPCH info for each RL	Not Present
- SCCPCH Information for FACH	Not Present

Master Information Block (Step 6)

<u>Information Element</u>	<u>Value/Remark</u>
Value Tag	2

System Information Block type 12 (Step 6)

<u>Information Element</u>	<u>Value/remark</u>
FACH measurement occasion info	
- FACH Measurement occasion cycle length coefficient	2
- Inter-frequency FDD measurement indicator	FALSE
- Inter-frequency TDD measurement indicator	TRUE
- Inter-RAT measurement indicators	Not Present
Measurement control system information	
-Use of HCS	Not used
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- CHOICE inter-frequency cells removal	Not Present
- New inter-frequency info list	
- Inter-frequency cell id	Set to id of cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE Mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.4 (TDD)" in clause 6.1.4
- Cell selection and Re-selection info	Not Present – use default values
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 8 only for the PS case)

UE will use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS)".

MEASUREMENT REPORT (Step 10)

<u>Information Element</u>	<u>Value/remark</u>
<u>Measurement identity</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</u>	<u>Check to see if set to the UARFCN of the frequency for cell 4</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 it is absent</u>
<u>- SFN-SFN observed time difference</u>	<u>Check to see if it is absent</u>
<u>- Cell synchronisation information</u>	<u>Check to see if it is absent</u>
<u>- Primary CCPCH Info</u>	<u>Check to see if set to the same code for cell 4</u>
<u>- PCCPCH RSCP</u>	<u>Check to see if it is present</u>
<u>- Pathloss</u>	<u>Check to see if it is absent</u>
<u>Measured Results on RACH</u>	<u>Check to see if it is absent</u>
<u>Event Results</u>	
<u>- CHOICE event result</u>	<u>Inter-frequency event results</u>
<u>- Inter-frequency event identity</u>	<u>Check to see if it's set to '2c'</u>
<u>- Inter-frequency cells</u>	
<u>- Frequency Info</u>	
<u>- UARFCN</u>	<u>Check to see if set to the UARFCN of the frequency for cell 4</u>
<u>- Non frequency related measurement event results</u>	
<u>- Primary CCPCH Info</u>	<u>Check to see if set to the same for cell 4</u>

MEASUREMENT CONTROL (Step 11)

Information Element	Value/remark
<u>Measurement Identity</u>	14
<u>Measurement Command</u>	Set up
<u>Measurement Reporting Mode</u>	Acknowledged Mode RLC
- <u>Measurement Reporting Transfer Mode</u>	Periodical reporting
- <u>Periodic Reporting / Event Trigger Reporting Mode</u>	Not Present
<u>Additional measurements list</u>	Inter-frequency measurement
<u>CHOICE measurement type</u>	No inter-frequency cells removed
- <u>Inter-frequency cell info list</u>	5
- <u>CHOICE inter-frequency cell removal</u>	UARFCN of the frequency for cell 5
- <u>New inter-frequency info list</u>	0 dB
- <u>Inter-frequency cell id</u>	Not Present
- <u>Frequency info</u>	FALSE
- <u>UARFCN uplink (Nt)</u>	TDD
- <u>Cell info</u>	Set to same as used for cell 5
- <u>Cell individual offset</u>	5
- <u>Reference time difference to cell</u>	Inter-frequency reporting criteria
- <u>Read SFN Indicator</u>	0
- <u>CHOICE Mode</u>	PCCPCH RSCP
- <u>Primary CCPCH Info</u>	FALSE
- <u>Cells for measurement</u>	FALSE
- <u>Inter-frequency cell id</u>	FALSE
- <u>Inter-frequency measurement quantity</u>	FALSE
- <u>CHOICE reporting criteria</u>	FALSE
- <u>Filter Coefficient</u>	FALSE
- <u>Measurement quantity for frequency quality estimate</u>	FALSE
- <u>Inter-frequency reporting quantity</u>	FALSE
- <u>UTRA Carrier RSSI</u>	FALSE
- <u>Frequency quality estimate</u>	FALSE
- <u>Non frequency related cell reporting quantities</u>	FALSE
- <u>Cell synchronisation information reporting indicator</u>	TRUE
- <u>Cell Identity reporting indicator</u>	TRUE
- <u>PCCPCH RSCP reporting indicator</u>	FALSE
- <u>Pathloss reporting indicator</u>	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- <u>Reporting cell status</u>	2
- <u>CHOICE reported cell</u>	Not Present
- <u>Maximum number of reported cells</u>	Not Present
- <u>Measurement validity</u>	Not Present
- <u>Inter-frequency set update</u>	Periodic reporting criteria
- <u>CHOICE report criteria</u>	Infinity
- <u>Amount of reporting</u>	2000 milliseconds
- <u>Reporting interval</u>	Not Present
<u>DPCH compressed mode status info</u>	Not Present

MEASUREMENT REPORT (Step 12)

Information Element	Value/remark
<u>Measurement identity</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</u>	<u>Check to see if set to the UARFCN of the frequency for cell 5</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 is absent</u>
- <u>Cell synchronisation information</u>	<u>Check to see if it is absent</u>
- <u>Primary CCPCH Info</u>	<u>Check to see if set to the same for cell 5</u>
- <u>PCCPCH RSCP</u>	<u>Check to see if it is present</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>Measured Results on RACH</u>	<u>Check to see if it is absent</u>
<u>Event Results</u>	<u>Check to see if it is absent</u>

8.4.1.8A.5 Test Requirement

After step 2., UE shall send a MEASUREMENT REPORT message on the uplink DCCH of cell 1.

After step 4 and 8, UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 9 the UE shall transmit a MEASUREMENT REPORT message, containing the IE "measured results" reporting cell 5's PCCPCH RSCP value in CS case and cell 4's PCCPCH RSCP value in the PS case. The UE shall also report the triggering of event '2c' by including IE "Event results" in the MEASUREMENT REPORT message.

After step 11 the UE shall send MEASUREMENT REPORT messages, containing cell 5's PCCPCH RSCP measured value in IE "Measured results" at 2 seconds interval. The "Event results" IE shall be omitted in these messages.

3GPP TSG-T-WG1#19
 Seoul, Korea, 12th-16th May 2003

T1-030511

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 473 ⌘ rev - ⌘ Current version: 5.3.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘	Corrections of Measurement Control and Report: Intra-frequency measurement for transitions (TDD)
Source:	⌘	Siemens AG
Work item code:	⌘	TEI
		Date: ⌘ 01/05/2003
Category:	⌘	F
		Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .
		Release: ⌘ Rel-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘	Some corrections needed for Measurement Control and Report: Intra-frequency measurement for transitions TDD.
Summary of change:	⌘	Corrections and updates of IEs for System Information Blocks and specific message contents. Some editorial corrections and references updated
Consequences if not approved:	⌘	TDD UEs could be not tested properly

Clauses affected:	⌘									
Other specs affected:	⌘	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="width: 20px; height: 15px;"></td> <td style="width: 20px; height: 15px;"></td> </tr> <tr> <td style="width: 20px; height: 15px;"></td> <td style="width: 20px; height: 15px;"></td> </tr> </table> Other core specifications	Y	N					⌘	
		Y	N							
Test specifications										
O&M Specifications										
Other comments:	⌘									

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.4.1.1A Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_DCH state (TDD)

8.4.1.1A.1 Definition

8.4.1.1A.2 Conformance requirement

The UE shall obey the following rules for different measurement types after transiting from idle mode to CELL_DCH state:

Upon transition from idle mode to CELL_DCH state, the UE shall:

- 1> if intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:
 - 2> begin measurement reporting.

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in subclause 8.6 in TS 25.331 unless otherwise specified below.

The UE shall:

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":
 - 2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
 - 2> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:
 - 3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:
 - 4> if the measurement is valid in the current RRC state of the UE:
 - 5> begin measurements according to the stored control information for this measurement identity.
 - 2> for any other measurement type:
 - 3> if the measurement is valid in the current RRC state of the UE:
 - 4> begin measurements according to the stored control information for this measurement identity.
 - 1> if the IE "measurement command" has the value "release":
 - 2> terminate the measurement associated with the identity given in the IE "measurement identity";
 - 2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.
 - 1> clear the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS;
 - 1> if the UE "Additional Measurement List" is present:
 - 2> if the received measurement configuration in this MEASUREMENT CONTROL message, or any measurement identities in the "Additional Measurement List" do not all have the same validity:
 - 3> set the variable CONFIGURATION_INCOMPLETE to TRUE.

1> and the procedure ends.

The purpose of the measurement reporting procedure is to transfer measurement results from the UE to UTRAN.

In CELL_DCH state, the UE shall:

- 1> transmit a MEASUREMENT REPORT message on the uplink DCCH when the reporting criteria stored in variable MEASUREMENT_IDENTITY are met for any ongoing measurements that are being performed in the UE.

The reporting criteria are fulfilled if either:

- the first measurement has been completed according to the requirements set in [19] or [20] for a newly initiated measurement with periodic reporting; or
- the time period indicated in the stored IE "Periodical reporting criteria" has elapsed since the last measurement report was submitted to lower layers for a given measurement; or
- an event in stored IE "Measurement reporting criteria" was triggered. Events and triggering of reports for different measurement types are described in detail in clause 14.

For the measurement, which triggered the MEASUREMENT REPORT message, the UE shall:

- 1> set the IE "measurement identity" to the measurement identity, which is associated with that measurement in variable MEASUREMENT_IDENTITY;

- 1> set the IE "measured results" to include measurements according to the IE "reporting quantity" of that measurement stored in variable MEASUREMENT_IDENTITY; and

- 2> if all the reporting quantities are set to "false":

- 3> not set the IE "measured results".

- 1> set the IE "Measured results" in the IE "Additional measured results" according to the IE "reporting quantity" for all measurements associated with the measurement identities included in the "Additional measurements list" stored in variable MEASUREMENT_IDENTITY of the measurement that triggered the measurement report; and

- 2> if more than one additional measured results are to be included:

- 3> sort them in ascending order according to their IE "measurement identity" in the MEASUREMENT REPORT message.

- 1> if the MEASUREMENT REPORT message was triggered by an event (i.e. not a periodical report):

- 2> set the IE "Event results" according to the event that triggered the report.

The UE shall:

- 1> transmit the MEASUREMENT REPORT message on the uplink DCCH using either AM or UM RLC according to the stored IE "measurement reporting mode" associated with the measurement identity that triggered the report.

When the MEASUREMENT REPORT message has been submitted to lower layers for transmission:

- 1> the procedure ends.

Reference

TS 25.331, clauses 8.4.1.8.1, 8.4.2, 8.4.1.3.

8.4.1.1A.3 Test Purpose

1. To confirm that the UE continues to monitor intra-frequency measurement quantity of the cells listed in System Information Block type 11 or 12 messages, after it has entered CELL_DCH state from idle mode. When the intra-frequency measurement reporting criteria specified in System Information Block type 11 or 12 messages have been met, it shall report the measurements using MEASUREMENT REPORT message(s).
2. To confirm that the UE terminates monitoring and reporting activities for the cells listed in "intra-frequency cell info list" IE in System Information Block type 11 or 12 messages, after it has received a MEASUREMENT CONTROL message that specifies the measurement type to be "intra-frequency measurement" with the same measurement identity as in System Information Block Type 11 or 12 messages.
3. To confirm that the UE reconfigures the monitoring and reporting activities based on the last MEASUREMENT CONTROL message received.
4. To confirm that the UE sends MEASUREMENT REPORT message if event 1G is configured and intra-frequency measurement indicates change in best cell.

8.4.1.1A.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1, Cell 2 and Cell 3 are active.

UE: "Registered idle mode on CS" (state 2) or "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.4.1.1A-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution.

Column marked "T0" denotes the initial conditions, while column marked as "T1" will be applied during the test.

Table 8.4.1.1A-1

Parameter	Unit	Cell 1		Cell 2		Cell 3	
		T0	T1	T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1		Ch.1	
PCCPCH_RSCP	dBm	-69	-69	-74	-64	-79	-74

The UE is initially in idle mode and has selected cell 1 for camping. The System Information Block type 11 messages are modified with respect to the default settings to prevent reporting of "Cell synchronisation information" and also to include cell 2 into the monitored neighbour cell list. The key measurement parameters in the modified System Information Block message are as follow: measurement type = "intra-frequency measurement", measurement quantity = "PCCPCH RSCP", report criteria = "periodic reporting criteria", reporting interval = "64 seconds".

SS prompts the operator to make an outgoing call of a supported traffic class. SS and UE shall execute procedure P3 (for CS service) or P5 (for PS service). Next SS and UE shall execute procedure P7 (for CS service) or P9 (for PS service). Then SS and UE shall execute procedure P11 (for CS service) or P13 (for PS service).

The UE shall send a MEASUREMENT REPORT message after reaching CELL_DCH state, reporting cell 2's PCCPCH RSCP value. After 64 seconds has passed since SS receives the first MEASUREMENT REPORT message, the UE shall transmit a second MEASUREMENT REPORT message.

SS sends a MEASUREMENT CONTROL message on the downlink DCCH. In this message, SS configures an intra-frequency measurement based on the measurement quantity PCCPCH RSCP. Parameters used in this message are:

measurement identity = "1", report criteria = "event-trigger", event identity = "1g". All intra-frequency cells are removed. Cell 3 is included as new intra-frequency cell. SS checks to see that no MEASUREMENT REPORT messages are sent within the next 64 seconds (which is due to periodic reporting). SS reconfigures the downlink transmission power settings according to values in column "T1" in table 8.4.12.1A-1. The UE shall transmit a MEASUREMENT REPORT message when it detects that the PCCPCH RSCP of cell 3 is present. SS sends another MEASUREMENT CONTROL message on the downlink DCCH to include cell 2 in the monitored cells. SS configures an intra-frequency measurement based on the measurement quantity PCCPCH RSCP. Parameters used in this message are: measurement identity = "1", report criteria = "event-trigger", event identity = "1g". The UE shall transmit a MEASUREMENT REPORT message when it detects that the PCCPCH RSCP of cell 2 and indicating Cell 3 as a best cell. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is in idle mode and camped onto cell 1. The System Information Block type 11 messages to be transmitted are different from the default settings (see specific message contents). Cell 2 is included in CELL_INFO LIST.
2		↔	SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	UE reaches PS-CELL_DCH or CS-CELL_DCH
3		↔	SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	UE reaches PS-DCCH_DCH or CS-DCCH_DCH
4		↔	SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	UE reaches PS-DCCH+DTCH_DCH or CS-DCCH+DTCH_DCH
5		SS		SS shall wait for a MEASUREMENT REPORT message
6		→	MEASUREMENT REPORT	After receiving this message, SS shall expect to receive the next MEASUREMENT REPORT message after 64 seconds
7		→	MEASUREMENT REPORT	SS shall receive consecutive MEASUREMENT REPORT messages at 64 seconds interval.
8		←	MEASUREMENT CONTROL	A measurement with "measurement identity" IE set to "1" is assigned, with the IE "CHOICE reporting criteria" set to "intra-frequency measurement reporting criteria". See specific message content for the rest of the message.
9				SS waits for 64 seconds and verifies that no further MEASUREMENT REPORT messages are detected on the uplink DCCH.

Step	Direction		Message	Comment
	UE	SS		
10				SS re-adjusts the downlink transmission power settings according to columns "T1" in table 8.4.1.1A-1.
11		→	MEASUREMENT REPORT	SS verifies that UE transmits a MEASUREMENT REPORT message triggered by cell 3 containing report the measured PCCPCH RSCP value of cell 3.
12		←	MEASUREMENT CONTROL	A MEASUREMENT CONTROL is sent to the UE to modify the list of the cells the UE shall monitor.
13		→	MEASUREMENT REPORT	SS verifies that UE transmits a MEASUREMENT REPORT message triggered by cell 2, containing report the measured PCCPCH RSCP value of cell 2. The UE shall report event 1G for change to best cell, cell2.
14		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

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
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	Not used
- Use of HCS	PCCPCH RSCP
- Cell selection and reselection quality measure	
- Intra-frequency measurement system information	Not Present
- Intra-frequency measurement identity	Absence of this IE is equivalent to default value 1
- Intra-frequency cell info list	Not present
- CHOICE intra-frequency cell removal	(This IE shall be ignored by the UE for SIB11)
- New intra-frequency cells	1
- Intra-frequency cell id	Not present
- Cell info	Absence of this IE is equivalent to default value 0 dB
- Cell individual offset	Not Present
- Reference time difference to cell	TRUE
- Read SFN Indicator	TDD
- CHOICE Mode	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- Primary CCPCH Info	Not Present (The IE shall be absent as this is the serving cell)
- Cell selection and Re-selection	2
- Intra-frequency cell id	Not present
- Cell info	Absence of this IE is equivalent to default value 0dB
- Cell individual offset	1024
- Reference time difference to cell	TRUE
- Read SFN Indicator	TDD
- CHOICE Mode	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- Primary CCPCH Info	Not present
- Cell selection and Re-selection info	For neighbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.
- Intra-frequency measurement quantity	Not Present (Default is 0)
- Filter Coefficient	TDD
- CHOICE Mode	PCCPCH RSCP
<u>- Measurement quantity list</u>	Not Present
- Measurement quantity	Not Present
- Intra-frequency measurement for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	FALSE
- Intra-frequency reporting quantity	FALSE
- Reporting quantities for active set cells	FALSE
- Cell synchronisation information reporting	FALSE
indicator	FALSE
- Cell identity reporting indicator	TDD
- CHOICE mode	FALSE
<u>- Timeslot ISCP reporting indicator</u>	FALSE
<u>- Proposed TGSN Reporting required</u>	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	FALSE
- Cell synchronisation information reporting	FALSE
indicator	FALSE
- Cell identity reporting indicator	TDD
- CHOICE mode	FALSE
<u>- Timeslot ISCP reporting indicator</u>	FALSE
<u>- Proposed TGSN Reporting required</u>	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Measurement Reporting Mode	Not present

<ul style="list-style-type: none"> - Measurement Report Transfer Mode - Periodical Reporting / Event Trigger Reporting 	Acknowledged mode RLC Periodical reporting
Mode <ul style="list-style-type: none"> - CHOICE report criteria - Amount of reporting - Reporting interval 	Periodic reporting criteria Infinity 64 seconds
<ul style="list-style-type: none"> - Inter-frequency measurement system information - Inter-RAT measurement system information - Traffic volume measurement system information 	Not present Not Present Not Present

MEASUREMENT REPORT (Step 6 and 7)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	
<ul style="list-style-type: none"> - CHOICE measurement 	Check to see if set to "Intra-frequency measured results list"
<ul style="list-style-type: none"> - Intra-frequency measurement results 	
<ul style="list-style-type: none"> - Cell measured results - Cell Identity 	Check to see if it is absent
<ul style="list-style-type: none"> - Cell synchronisation information 	Check to see if this IE is absent
<ul style="list-style-type: none"> - Primary CCPCH Info 	Check to see if it's the same for cell 2
<ul style="list-style-type: none"> - PCCPCH RSCP - Pathloss 	"Checked to see if set to within an acceptable range"
Measured Results on RACH	Check to see if this IE is present
Additional Measured results	Check to see if this IE is absent
Event Results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Event Trigger
- Periodic Reporting / Event Trigger Reporting	
Mode	Not Present
Additional measurements list	Intra-frequency measurement
CHOICE measurement type	Remove all intra-frequency cells
- Intra-frequency cell info list	2 new intra-frequency cells
- CHOICE intra-frequency cell removal	3
- New intra-frequency cells	0 dB
- Intra-frequency cell id	0 chips
- Cell info	TRUE
- Cell individual offset	TDD
- Reference time difference to cell	Set to same as used for cell 3
- Read SFN Indicator	1
- CHOICE mode	0 dB
- Primary CCPCH Info	Not Present
- Intra-frequency cell id	TRUE
- Cell info	TDD
- Cell individual offset	Set to same code as for cell 1
- Reference time difference to cell	Not Present
- Read SFN Indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH Info	Set to same code as for cell 1
- Intra-frequency cell id	Not Present
- Cell for measurement	Not Present
- Intra-frequency measurement quantity	Not Present (Default is 0)
- Filter Coefficient	TDD
- CHOICE Mode	PCCPCH RSCP
- Measurement quantity	
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting	TRUE
indicator	
- Cell identity reporting indicator	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not Present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each events	
- Intra-frequency event identity	1g
- Triggering condition 1	Not present
- Triggering condition 2	Monitored set cells
- Reporting range	Not Present
- Cells forbidden to affect reporting range	Not Present
- W	Not Present
- Hysteresis	1 dB
- Reporting deactivation threshold	Not Present
- Replacement activation threshold	Not Present
- Time to trigger	0 ms
- Amount of reporting	Infinity
- Reporting interval	Not Present
- Reporting cell status	Not Present
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	3

MEASUREMENT REPORT (Step 11)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	Check to see if measurement results for 2 cells are included (the order in which the different cells are reported is not important) (for cell 1)
- Cell measured results	Check to see if it is absent
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if it's the same for cell 1
- Primary CCPCH Info	Check to see if this IE is present
- PCCPCH RSCP	Check to see if this IE is absent (for cell 3)
- Pathloss	Check to see if it is absent
- Cell measured results	Check to see if this IE is present and that the COUNT-C-SFN frame difference is included in it.
- Cell Identity	Check to see if it's the same for cell 3
- Cell synchronisation information	Check to see if this IE is present
- Primary CCPCH Info	Check to see if this IE is absent
- PCCPCH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if this IE is set to "Intra-frequency measurement event results"
- Intra-frequency event identity	Check to see if this IE is set to "1g"
- Cell measured event results	
- CHOICE mode	Check to see if this IE is set to "TDD"
- Cell parameters Id	Check to see if it's the same for cell 3

MEASUREMENT CONTROL (Step 12)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	1 new intra-frequency cells
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Set to same as used for cell 2
- Cell for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- CHOICE report criteria	Not Present

MEASUREMENT REPORT (Step 13)

Information Element	Value/remark
Measurement identity	Check to see if set to 1
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	Check to see if measurement results for 3 cells are included (the order in which the different cells are reported is not important)
- Cell measured results	(for cell 1)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CPICH Info	Check to see if it's the same for cell 1
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	(for cell 2)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is present and that the COUNT-C-SFN frame difference is included in it.
- Primary CCPCH Info	Check to see if it's the same for cell 2
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	(for cell 3)
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is present and that the COUNT-C-SFN frame difference is included in it.
- Primary CCPCH Info	Check to see if it's the same for cell 3
- PCCPCH RSCP	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional Measured Results	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if this IE is set to "Intra-frequency measurement event results"
- Intra-frequency event identity	Check to see if this IE is set to "1g"
- Cell measured event results	
- CHOICE mode	Check to see if this IE is set to "TDD"
- Primary CCPCH Info	Check to see if it's the same code for cell 2

8.4.1.1A.5 Test Requirement

After step 5 the UE shall start to transmit 2 MEASUREMENT REPORT messages at 64 seconds interval. The measurement quantity "PCCPCH RSCP" of cell 2 shall be reported in these messages.

After step 8 the UE shall not transmit any MEASUREMENT REPORT messages within 64 seconds after SS has transmitted the MEASUREMENT CONTROL message in step 8.

After step 10 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, to report the PCCPCH RSCP value for cell 3. This MEASUREMENT REPORT message shall also contain IE "Event results", indicating the triggering of event '1g' by cell 3. It shall also contain the measured PCCPCH RSCP value and cell synchronisation information for cell 3, and the measured PCCPCH RSCP values for cell 1.

After step 12 the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, to report the PCCPCH RSCP value for cell 2. This MEASUREMENT REPORT message shall also contain IE "Event results", indicating the triggering of event '1g' by cell 2.

<Next change>

8.4.1.3A Measurement Control and Report: Intra-frequency measurement for transition from idle mode to CELL_FACH state (TDD)

8.4.1.3A.1 Definition

8.4.1.3A.2 Conformance requirement

The UE shall obey the follow rules for different measurement types after transiting from idle mode to CELL_FACH state:

Upon transition from idle mode to CELL_FACH state, the UE shall:

- 1> begin or continue monitoring cells listed in the IE "intra-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11, TS 25.331).

The purpose of the measurement reporting procedure is to transfer measurement results from the UE to UTRAN.

In CELL_FACH state, the UE shall:

- 1> transmit a MEASUREMENT REPORT message on the uplink DCCH when the reporting criteria stored in variable MEASUREMENT_IDENTITY are met for any ongoing traffic volume measurement or UE positioning measurement that is being performed in the UE;
- 1> include a measurement report in the IE "Measured results on RACH", as specified in the IE "Intra-frequency reporting quantity for RACH reporting" and the IE "Maximum number of reported cells on RACH" in System Information Block type 12 (or "System Information Block Type 11" if "System Information Block Type 12" is not being broadcast);
- 1> include in the IE "Measured results on RACH" all requested reporting quantities for cells for which measurements are reported.

In TDD, if the Radio Bearer associated with the MEASUREMENT_IDENTITY fulfilling the reporting criteria for an ongoing traffic volume measurement is mapped on transport channel of type USCH, the UE shall:

- 1> initiate the "PUSCH CAPACITY REQUEST" procedure instead of transmitting a MEASUREMENT REPORT (TDD Only).

For the measurement, which triggered the MEASUREMENT REPORT message, the UE shall:

- 1> set the IE "measurement identity" to the measurement identity, which is associated with that measurement in variable MEASUREMENT_IDENTITY;
- 1> set the IE "measured results" to include measurements according to the IE "reporting quantity" of that measurement stored in variable MEASUREMENT_IDENTITY; and
 - 2> if all the reporting quantities are set to "false":
 - 3> not set the IE "measured results".
- 1> set the IE "Measured results" in the IE "Additional measured results" according to the IE "reporting quantity" for all measurements associated with the measurement identities included in the "Additional measurements list" stored in variable MEASUREMENT_IDENTITY of the measurement that triggered the measurement report; and
 - 2> if more than one additional measured results are to be included:
 - 3> sort them in ascending order according to their IE "measurement identity" in the MEASUREMENT REPORT message.
- 1> if the MEASUREMENT REPORT message was triggered by an event (i.e. not a periodical report):

2> set the IE "Event results" according to the event that triggered the report.

The UE shall:

- 1> transmit the MEASUREMENT REPORT message on the uplink DCCH using either AM or UM RLC according to the stored IE "measurement reporting mode" associated with the measurement identity that triggered the report.

When the MEASUREMENT REPORT message has been submitted to lower layers for transmission:

- 1> the procedure ends.

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in subclause 8.6 in TS 25.331 unless otherwise specified below.

The UE shall:

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":
 - 2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
 - 2> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:
 - 3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements:
 - 4> if the measurement is valid in the current RRC state of the UE:
 - 5> begin measurements according to the stored control information for this measurement identity.
 - 2> for any other measurement type:
 - 3> if the measurement is valid in the current RRC state of the UE:
 - 4> begin measurements according to the stored control information for this measurement identity.
- 1> if the IE "measurement command" has the value "release":
 - 2> terminate the measurement associated with the identity given in the IE "measurement identity";
 - 2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.
- 1> clear the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS;
- 1> if the UE "Additional Measurement List" is present:
 - 2> if the received measurement configuration in this MEASUREMENT CONTROL message, or any measurement identities in the "Additional Measurement List" do not all have the same validity:
 - 3> set the variable CONFIGURATION_INCOMPLETE to TRUE.
- 1> and the procedure ends.

Reference

TS 25.331, clauses 8.4.1.9.1, 8.4.2, 8.4.1.3

8.4.1.3A.3 Test Purpose

1. To confirm that the UE begins or continues to monitor cells listed in IE "intra-frequency cell info list" of System Information Block type 11 or 12 messages after it has entered CELL_FACH state from idle mode.
2. To confirm that the UE applies the reporting criteria stated in "intra-frequency measurement reporting criteria" IE in System Information Block Type 11 or 12 in a subsequent transition to CELL_DCH state.
3. To confirm that the UE reports measured results on RACH messages, if it receives IE "Intra-frequency reporting quantity for RACH reporting" and IE "Maximum number of reported cells on RACH" from System Information Block Type 11 or 12 upon a transition from idle mode to CELL_FACH state.

8.4.1.3A.4 Method of test

Initial Condition

System Simulator: 2 cells. Cell 1 and cell 2 are active.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.4.1.3A-1 illustrates the downlink power to be applied for the 2 cells in this test case.

Table 8.4.1.3A-1

Parameter	Unit	Cell 1	Cell 2
UTRA RF Channel Number		Ch. 1	Ch. 1
PCCPCH RSCP	dBm	-64	-74

The UE is initially in idle mode and camps on cell 1. The System Information Block type 11 are modified compared to the default settings to prevent reporting of "Cell synchronisation information" and also to include cell 2 into the IE "intra-frequency cell info list".

SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14. SS starts timer T305 and waits until timer T305 expires, the UE shall send a CELL UPDATE message on the CCCH which includes the measured value of cell 1's PCCPCH RSCP in IE "Measured results on RACH". SS then replies with CELL UPDATE CONFIRM message on the downlink DCCH, without changing the physical channel resources.

SS transmits PHYSICAL CHANNEL RECONFIGURATION message, and allocates dedicated physical channels to the UE. The UE shall transit to CELL_DCH state and then send a MEASUREMENT REPORT message, correctly stating the measurement identity. The measurement identity indicated shall match the value that was previously broadcast on System Information Block type 11 messages when the UE was still in idle mode. The IE "Measured results" in the MEASUREMENT REPORT messages shall contain measured values of cell 2's PCCPCH RSCP. Also MEASUREMENT REPORT message indicates that cell 2 has not fulfilled the condition for changing to a best cell.

NOTE: The Radio Bearer associated with the MEASUREMENT_IDENTITY fulfilling the reporting criteria for an ongoing traffic volume measurement must not be mapped on transport channel of type USCH

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 1, System Information Block type 11	The UE is in idle mode and camps onto cell 1. System Information Block type 1 and 11 to be transmitted are different from the default settings (see specific message contents)
2		↔	SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	SS prompts the test operator to make an outgoing call.
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	UE reaches PS-DCCH FACH
4		↔	SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	UE reaches PS-DCCH+DTCH FACH
5				SS monitors the uplink DCCH to confirm that no MEASUREMENT REPORT messages are detected. SS waits for 5 minutes (for the expiry of T305 timer).
6		→	CELL UPDATE	This message shall contain IE "Measured results on RACH" reporting the measured PCCPCH RSCP for cell 1.
7		←	CELL UPDATE CONFIRM	SS does not change the physical channel configurations.
8		←	PHYSICAL CHANNEL RECONFIGURATION	SS assigns dedicated physical resources.
9		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
10		→	MEASUREMENT REPORT	UE shall begin to report cell 2's PCCPCH RSCP value periodically at 16 seconds interval. The measurement identity shall match the one that is broadcast for use in CELL_DCH in SIB11 in step 1.

Specific Message Content

System Information Block type 1 (Step 1)

Information Element	Value/Remarks
UE Timers and constants in connected mode - T305	5 minutes.

System Information Block type 11 (Step 1)

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	PCCPCH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	5
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	
- Qoffset1 _{s,n}	Not Present (Default is 0 dB)
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	TDD
- Qrxlevmin	-103dBm
- Cells for measurement	Not Present
- Intra-frequency Measurement quantity	
- Filter Coefficient	Not Present
- CHOICE Mode	TDD
- Measurement quantity list	
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity for RACH	
reporting	
- SFN-SFN observed time difference reporting	No report
indicator	
- CHOICE mode	TDD
- Reporting quantity	PCCPCH RSCP
- 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	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- PCCPCH RSCP reporting indicator	TRUEFALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting	TRUE
indicator	
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC

<ul style="list-style-type: none"> - Periodic Reporting/Event Trigger Reporting Mode - CHOICE report criteria - Parameters required for each event - Intra-frequency event identity - Cells forbidden to affect reporting range <u>- CHOICE mode</u> <u>- Primary CCPCH</u> - W - Hysteresis - Threshold used frequency - Reporting deactivation threshold - Replacement activation threshold - Time to trigger - Amount of reporting - Reporting interval - Reporting Cell Status - CHOICE reported cell - Maximum number of reported cells - Inter-frequency measurement system information - Traffic volume measurement system information 	<ul style="list-style-type: none"> Event trigger Intra-frequency measurement reporting criteria 1g Not Present <u>TDD</u> <u>Present</u> 0.0 1.0 dB Not Present 0 Not Present 60 ms Infinity 16 seconds Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency 2 Not Present Not Present
---	--

CELL UPDATE (Step 6)

Information Element	Value/remark
U-RNTI	Check to see if set to same U-RNTI value assigned in the execution of procedure P6.
START list	Checked to see if this IE is present
AM_RLC error indication(RB2, RB3 or RB4)	FALSE
AM_RLC error indication(RB>4)	FALSE
Cell update cause	Check to see if set to 'Periodical cell update'
Failure cause	Check to see if this IE is absent
Measured results on RACH	
- Measurement result for current cell	
<u>- CHOICE mode</u>	<u>TDD</u>
- CHOICE measurement quantity	Check to see if set to 'PCCPCH RSCP'
- <u>Primary PCCPCH RSCP</u>	Checked to see if set to within an acceptable range.
- Measurement results for monitored cells	Checked to see if this IE is absent.

PHYSICAL CHANNEL RECONFIGURATION (Step 8)

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "Packet to CELL_DCH from CELL_FACH".

MEASUREMENT REPORT (Step 10)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is present and if the reported cell synchronisation information is correct
- Cell parameters Id	Check to see if it's the same as for cell 2
- Primary CCPCH RSCP	Check to see if it's the same as for cell 2
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell parameters Id	Check to see if it's the same as for cell 1
- Primary CCPCH RSCP	Check to see if it's the same as for cell 1
- Cell synchronisation information	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Event Results	
- CHOICE event result	Check to see if set to "Intra-frequency measurement event results"
- Intra-frequency event identity	Check to see if set to "1g"

8.4.1.3A.5 Test Requirement

After step 5 the UE shall not transmit any MEASUREMENT REPORT messages on the uplink DCCH.

After step 6 the UE shall initiate cell update procedure by transmitting CELL UPDATE message on CCCH. In this message, IE "cell update cause" shall be set to "periodic cell update". It shall include IE "measured results on RACH", containing the measurement value for cell 1's PCCPCH RSCP.

After step 10 the UE shall transmit MEASUREMENT REPORT messages at 16 seconds interval. In these messages, cell 2's PCCPCH RSCP value shall be reported in IE "Measured results". The IE "measurement identity" in this message shall match the IE "Intra-frequency measurement identity" found in System Information Block type 11 messages transmitted in step 1. The MEASUREMENT REPORT messages shall also contain IE "Event results", indicating that intra-frequency event "1g" has triggered in the UE.

<Next change>

8.4.1.5A Measurement Control and Report: Intra-frequency measurement for transition from CELL_DCH to CELL_FACH state (TDD)

8.4.1.5A.1 Definition

8.4.1.5A.2 Conformance requirement

Upon transition from CELL_DCH to CELL_FACH/CELL_PCH/URA_PCH state, the UE shall:

- 1> stop intra-frequency type measurement reporting;
- 1> if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or

- 1> if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or
- 1> if the transition is not due to a reconfiguration message:
 - 2> delete the measurements of type intra-frequency associated with the variable MEASUREMENT_IDENTITY.
- 1> begin monitoring cells listed in the IE "intra-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11 in [8] TS 25.331).

Reference

3GPP TS 25.331, clause 8.4.1.6.1, 8.4.1.7.1

8.4.1.5A.3 Test Purpose

1. To confirm that the UE stops performing intra-frequency measurement reporting specified in a MEASUREMENT CONTROL message, when it moves from CELL_DCH state to CELL_FACH state.
2. To confirm that the UE reads the System Information Block type 11 or 12 messages when it enters CELL_FACH state from CELL_DCH state, and starts to monitor the cells listed in the IE "intra-frequency cell info list".
3. To confirm that the UE performs measurements on uplink RACH transmissions and appends the measured results in RACH messages, when it receives IE "intra-frequency reporting quantity for RACH reporting" and IE "Maximum number of reported cells on RACH" in the System Information Block type 11 or 12 messages.
4. To confirm that the UE applies the reporting criteria in IE "intra-frequency reporting criteria" in System Information Block Type 11 or 12 messages following a state transition from CELL_FACH to CELL_DCH, if no intra-frequency measurements applicable to CELL_DCH are stored.

8.4.1.5A.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 and cell 2 are active, while cell 3 is switched off.-

UE: PS-DCCH+DTCH_DCH (state 6-10) in cell 1 as specified in clause 7.4 of TS 34.108.

Specific Message Contents

For MASTER INFORMATION BLOCK and system information block 11 of Cell 1 (gives IE's which are different from defaults given in 34.108 subclause 6.1) to be transmitted before idle update preamble.

MASTER INFORMATION BLOCK

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/Remarks
MIB Value Tag	1

System Information Block type 11

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
Cell selection and reselection quality measure	PCCPCH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary PCCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not present
- Cells for measurement	Not Present
-Intra-frequency measurement quantity	Not Present
-Intra-frequency reporting quantity for RACH reporting	Not Present
-Maximum number of reported cells on RACH	Not Present
-Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

Test Procedure

Table 8.4.1.5A-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions, while column marked as "T1" will be applied during the test.

Table 8.4.1.5A-1

Parameter	Unit	Cell 1		Cell 2		Cell 3	
		T0	T1	T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1		Ch. 1	
PCCPCH RSCP	dBm	-60	-60	-75	-85	-122	-70

The UE is initially in CELL_DCH state. The System Information Block type 11 message is modified compared to the default message contents, in order to prevent the reporting of "Cell synchronisation information". No measurement to be applied by the UE in CELL_DCH state is specified in any of the System Information Block type 11 or 12 messages.

SS sends a MEASUREMENT CONTROL message to UE. In this message, the SS requests the establishment of an intra-frequency measurement for the measurement of cell 2's PCCPCH RSCP. At the same time, reporting of PCCPCH RSCP values of active set cells and monitored set cells are requested 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 to move the UE to CELL_FACH. After receiving this message, the UE shall reconfigure itself and reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on RACH. SS monitors the uplink channels to verify that no MEASUREMENT REPORT messages are received.

SS reconfigures itself according to the settings in columns marked "T1" in table 8.4.1.5A-1. SS transmits System Information Block type 12 messages in cell 1, which include cell 3 into the IE "intra-frequency cell info list" and modifies SIB11 to indicate that SIB12 is now being broadcast. IEs "Intra-frequency reporting quantity for RACH

Reporting" and IE "Maximum number of Reported cells on RACH" are also specified in the System Information Type 12 messages. Event type 1a reporting criterion is specified for intra-frequency measurements. SS transmit SYSTEM INFORMATION CHANGE INDICATION message to UE. SS waits until T305 has expired. The UE shall respond with a CELL UPDATE message, which comprises IE "Measured results on RACH" to report the readings of PCCPCH RSCP for cell 1 and cell 3. SS replies with CELL UPDATE CONFIRM message on the downlink DCCH. This message does not change the physical resources nor allocate any new RNTI identities. SS transmits PHYSICAL CHANNEL RECONFIGURATION message again, and configures dedicated physical channel for both uplink and downlink directions. The UE shall send PHYSICAL CHANNEL RECONFIGURATION COMPLETE message and return to CELL_DCH state. SS listens to the uplink DCCH for MEASUREMENT REPORT messages.

SS shall receive the MEASUREMENT REPORT messages at 500 milliseconds interval.

SS verifies that it includes PCCPCH RSCP values of the cells 1, 2 and 3 in IE "Cell measured results" and the triggering of event '1g' on cell 3 in IE "Event results".

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				UE is in PS-DCCH+DTCH_DCH (state 6-10) in cell 1.
2		←	MEASUREMENT CONTROL	SS requests for measurement of cell 2's PCCPCH RSCP value and reporting of PCCPCH RSCP values of active cell and monitored set cell.
3		→	MEASUREMENT REPORT	UE shall send periodic report at 16 seconds interval.
4		←	PHYSICAL CHANNEL RECONFIGURATION	SS moves the UE to CELL_FACH state.
5		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE reaches CELL_FACH state.
6		←	Master Information Block System Information Block type 11, 12	SS reconfigures itself according to the settings stated in column "T1" of table 8.4.1.5A-1. SIB 11 is modified to indicate that SIB12 is now broadcast and includes cell 2 as a neighbour cell. SIB 12 indicates that cell 3 is included in the IE "intra-frequency cell info list". Event 1g is also configured for cell_3. SS waits for 1 minute and verifies that no MEASUREMENT REPORT messages are detected on the uplink.
7		←	SYSTEM INFORMATION CHANGE INDICATION	SS waits until T305 has expired.
8		→	CELL UPDATE	UE shall transmit this message with measured results on RACH channels for cell 1 and cell 3 present in this message.
9		←	CELL UPDATE CONFIRM	No changes in physical resource allocation and RNTI identities.
10		←	PHYSICAL CHANNEL RECONFIGURATION	SS configures dedicated physical channels.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall transit to CELL_DCH state.
12		→	MEASUREMENT REPORT	The UE shall report event 1G for change to best cell, cell3. Repeated at 500 milliseconds interval

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	5
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical Reporting
- Periodic Reporting / Event Trigger Reporting Mode	
Additional measurements list	Not Present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency info list	
- Intra-frequency cell id	2
- Cell info	0 dB
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN Indicator	TDD
- CHOICE mode	Set to same as used for cell 2
- Primary CCPCH Info	Not Present
- Cells for measurement	
- Intra-frequency measurement quantity	
- Filter Coefficient	Not Present (Default is 0)
- CHOICE mode	TDD
- Measurement quantity list	
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity	
- Reporting quantities for active set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
CHOICE MODE	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
CHOICE MODE	TDD
- Timeslot ISCP reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Measurement validity	Not present
- CHOICE report criteria	Periodical reporting criteria
- Amount of reporting	Infinity
- Reporting interval	16 seconds

MEASUREMENT REPORT (Step 3)

Information Element	Value/remark
Measurement identity	Check to see if set to 5
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measured results list	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CCPCH Info	Check to see if it's the same for cell 1
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CCPCH Info	Check to see if it's the same for cell 2
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured result list	Check to see if this IE is absent
Event results	Check to see if this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 4)

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "(Packet to CELL_FACH from CELL_DCH in PS)"

MASTER INFORMATION BLOCK (Step 6)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/Remarks
MIB Value Tag	2

System Information Block type 11 (Step 6)

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary PCCPCH Info	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary PCCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	
- Qoffset _{s,n}	0 dB
- Maximum allowed UL TX power	0 dBm
- HCS neighbouring cell information	Not Present
- CHOICE Mode	TDD
- Qrxlevmin	-103 dBm
- Cells for measurement	Not Present
-Intra-frequency measurement quantity	Not Present
-Intra-frequency reporting quantity for RACH	Not Present
reporting	
-Maximum number of reported cells on RACH	Not Present
-Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

System Information Block type 12 (Step 6)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	Not used
- Use of HCS	Not used
Cell selection and reselection quality measure	PCCPCH RSCP
- Intra-frequency measurement system information	6
- Intra-frequency measurement identity	6
- Intra-frequency cell cells	6
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	Not Present
- Intra-frequency cell id	3
- Cell info	3
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.3 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	0dB
- Qoffset _{s,n}	30dBm
- Maximum allowed UL TX power	Not Present
- HCS neighbouring cell information	TDD
- CHOICE Mode	TDD
- Qrxlevmin	-103dBm
- Intra-frequency measurement quantity	Not Present (Default is 0)
- Filter Coefficient	TDD
<u>- CHOICE mode</u>	TDD
<u>- Measurement list</u>	PCCPCH RSCP
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity for RACH reporting	No report
- SFN-SFN observed time difference reporting indicator	No report
- CHOICE mode	TDD
- Reporting quantity	PCCPCH RSCP
- Maximum number of reported cells on RACH	Current cell + best neighbour
- Reporting information for state CELL_DCH	Current cell + best neighbour
- Intra-frequency reporting quantity	Current cell + best neighbour
- Reporting quantities for active set cells	Current cell + best neighbour
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	FALSE
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	Intra-frequency measurement reporting criteria
- Intra-frequency event identity	1g
Triggering condition 1	Not Present
Triggering condition 2	Monitored set cells
- Reporting range constant	20.0 dB
Cells forbidden to affect reporting	Not present
- W	0.0
- Hysteresis	1.0 dB
Threshold used frequency	Not Present
Reporting deactivation threshold	Z

<ul style="list-style-type: none"> Replacement activation threshold - Time to trigger - Amount of reporting - Reporting Interval - Reporting cell status - CHOICE <i>reported cell</i> - Maximum number of reported cells - Inter-frequency measurement system information - Inter-RAT measurement system information - Traffic volume measurement system information 	<p>Not Present</p> <p>60 ms Infinity 500 milliseconds</p> <p>Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency</p> <p>3</p> <p>Not present Not present Not present</p>
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SYSTEM INFORMATION CHANGE INDICATION (Step 7)

Information Element	Value/Remarks
BCCH modification info - MIB Value tag	2

CELL UPDATE (Step 8)

Information Element	Value/remark
U-RNTI	Check to see if set to the same value assigned during the execution of procedure P3 or P5.
START list	Checked to see if this IE is present
AM_RLC error indication(RB2, RB3 or RB4)	FALSE
AM_RLC error indication(RB>4)	FALSE
Cell update cause	Check to see if it is set to "Periodical cell update"
Failure case	Check to see if it is absent
Measured results on RACH	
- Measurement result for current cell	
CHOICE measurement quantity	Check to see if set to "PCCPCH RSCP"
PCCPCH RSCP	Check to see if it is present
- Measurement results for monitored cells	
- SFN-SFN observed time difference	Not Checked
- CHOICE mode	TDD
- Cell parameters Id	Check to see if the same as cell 3.
CHOICE measurement quantity	Check to see if set to "PCCPCH RSCP"
- PCCPCH RSCP	Check to see if it is present

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

Use the same message sub-type found in [9] TS 34.108 clause 9, which is entitled "(Packet to CELL_DCH from CELL_FACH in PS)".

MEASUREMENT REPORT (Step 12)

Information Element	Value/remark
Measurement identity	Check to see if set to 6
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results list	
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Cell parameters Id	Check to see if it's the same for cell 1
- Proposed TGSN Reporting required	Check to see if this IE is absent
- PCCPCH RSCP reporting indicator	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Cell parameters Id	Check to see if it's the same for cell 2
- Proposed TGSN Reporting required	Check to see if this IE is absent
- PCCPCH RSCP reporting indicator	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
- Cell measured results	
- Cell Identity	Check to see if it is absent
- Cell synchronisation information	Check to see if this IE is absent
- Cell parameters Id	Check to see if it's the same for cell 3
- Proposed TGSN Reporting required	Check to see if this IE is absent
- PCCPCH RSCP reporting indicator	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Event results	Check to see if this set to 'Intra-frequency measurement event results'
- Intra-frequency event identity	Check to see if set to '1g'
- Cell measurement event results	
- CHOICE Mode	Check to see if set to 'TDD'
- Cell parameters id	Check to see if it's the same for cell 3

8.4.1.5A.5 Test Requirement

After step 2, the UE shall start to transmit MEASUREMENT REPORT messages at 16 seconds interval. The message shall contain IE "measured result" to report cell 2's PCCPCH RSCP value.

After step 5, the UE shall not send any MEASUREMENT REPORT messages containing reporting quantities requested in MEASUREMENT CONTROL messages in step 2.

After step 7, the UE shall perform a cell update procedure and transmit a CELL UPDATE message. In this message, measured values PCCPCH RSCP for cell 1 and cell 3 shall be included in the IE "measured results on RACH".

After step 12, the UE shall apply the intra-frequency measurement reporting criteria" received in System Information Block type 12 messages of step 6. It shall send MEASUREMENT REPORT messages at 500 milliseconds interval. In these messages, triggering of event '1g' shall be reported in IE "Event results" with IE " Cell parameters Id " containing the same for cell 3.

The message shall contain IE "measured result" to report PCCPCH RSCP values of cell 1, 2 and 3.

<Next change>

8.4.1.7A Measurement Control and Report: Intra-frequency measurement for transition from CELL_FACH to CELL_DCH state (TDD)

8.4.1.7A.1 Definition

8.4.1.7A.2 Conformance requirement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

- 1> retrieve each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;
- 1> if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH":
 - 2> resume the measurement reporting.
- 1> if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY:
 - 2> continue monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11);
 - 2> if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11):
 - 3> send the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" are fulfilled.

...

Upon cell reselection while in CELL_FACH/CELL_PCH/URA/PCH state and the cell reselection has occurred after the measurement control information was stored, the UE shall:

- 1> delete all measurements of type intra-frequency, inter-frequency, and inter-RAT associated with the variable MEASUREMENT_IDENTITY;
- 1> delete the traffic volume measurements that have not been set up or modified through a MEASUREMENT CONTROL message.

...

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in subclause 8.6 unless otherwise specified below.

The UE shall:

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":
 - 2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
 - 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":
 - ...
 - 2> for measurement type "UE positioning measurement":
 - ...
 - 2> for any other measurement type:
 - 3> if the measurement is valid in the current RRC state of the UE:

- 4> begin measurements according to the stored control information for this measurement identity.
- 1> if the IE "Measurement command" has the value "modify":
 - 2> for all IEs present in the MEASUREMENT CONTROL message:
 - 3> if a measurement was stored in the variable MEASUREMENT_IDENTITY associated to the identity by the IE "measurement identity":
 - 4> for measurement types "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency, or that require measurements on another RAT:
 - ...
 - 4> for any other measurement type:
 - 5> replace the corresponding information stored in variable MEASUREMENT_IDENTITY associated to the identity indicated by the IE "measurement identity" with the one received in the MEASUREMENT CONTROL message;
 - 5> resume the measurements according to the new stored measurement control information.
 - 3> otherwise:
 - ...
 - 2> for all optional IEs that are not present in the MEASUREMENT CONTROL message:
 - 3> leave the currently stored information elements unchanged in the variable MEASUREMENT_IDENTITY if not stated otherwise for that IE.
- 1> if the IE "measurement command" has the value "release":
 - 2> terminate the measurement associated with the identity given in the IE "measurement identity";
 - 2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT_IDENTITY.

Reference

3GPP TS 25.331, clause 8.4.1.3, 8.4.1.6a and 8.4.1.7.1

8.4.1.7A.3 Test Purpose

1. To confirm that UE retrieves each set of measurement control information of measurement type "intra-frequency" stored in the variable MEASUREMENT_IDENTITY;
2. To confirm that UE resumes the measurement reporting if the IE "measurement validity" for a measurement has been assigned the value "CELL_DCH".
3. To test that UE continues monitoring the list of neighbouring cells assigned in the IE "intra-frequency cell info list" in System Information Block type 12 (or System Information Block type 11) if no intra-frequency measurements applicable to CELL_DCH state are stored in the variable MEASUREMENT_IDENTITY
4. To confirm that UE sends the MEASUREMENT REPORT message when reporting criteria in IE "Reporting information for state CELL_DCH" is fulfilled if the IE "intra-frequency measurement reporting criteria" was included in System Information Block type 12 (or System Information Block type 11).

8.4.1.7A.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1, cell 2 and cell 3 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11).

Test Procedure

Table 8.4.1.7A-1 illustrates the downlink power to be applied for the 3 cells at various time instants of the test execution. Column marked "T0" denotes the initial conditions, while column marked as "T1" will be applied during the test.

Table 8.4.1.7A-1

Para-meter	Unit	Cell 1		Cell 2		Cell 3	
		T0	T1	T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1		Ch. 1	
PCCPCH RSCP	dBm	-74	-74	-64	-69	-69	-122

The UE is initially in CELL_FACH state in cell 1. SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.

SS send a RADIO BEARER RECONFIGURATION message to UE, and configures dedicated physical channels on both uplink and downlink directions. The UE shall move to CELL_DCH state and then return RADIO BEARER RECONFIGURATION COMPLETE message. The UE shall send a MEASUREMENT REPORT message containing IE "Measured results" to report cell 2's PCCPCH RSCP value and IE "event results" to report triggering of event type "1g".

After receiving the MEASUREMENT REPORT message, SS transmits a MEASUREMENT CONTROL message with only cell 3 included in the IE "intra-frequency cell info". After receiving this message, the UE shall transmit another set of MEASUREMENT REPORT message for measurement 11. SS verifies that only measurement readings for cell 3's PCCPCH RSCP are report in IE "cell measured results" in these message. Cell 3 shall also trigger event 1g for the measurement that the UE had stored from system information.

SS reconfigures the downlink according to values "T1" and sends new System Information Blocks 11 and 12.

SS sends PHYSICAL CHANNEL RECONFIGURATION message. SS configures common physical channels for both the uplink and the downlink directions. The UE shall transit to CELL_FACH state and then reply with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE. SS waits and checks the uplink RACH to confirm that no MEASUREMENT REPORT messages are received.

SS transmits then a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH. The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS. Shortly after, a MEASUREMENT REPORT message shall be received that has been triggered by cell 2, i.e. the UE shall have deleted the measurement measurement configured through the MEASUREMENT CONTROL message, and instead apply the measurement configured in SIB12: a MEASUREMENT REPORT message with measurement identity 10 shall be received while no such message with measurement identity 11 shall be sent by the UE.

SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to move it to CELL_FACH once again. The UE shall move to that state and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS. SS transmits MEASUREMENT CONTROL message on the downlink DCCH, to configure intra-frequency measurements with validity CELL_DCH. SS waits, and verifies that no MEASUREMENT REPORT messages are detected on the uplink DCCH.

SS sends RADIO BEARER RECONFIGURATION message and configures dedicated physical channels. The UE shall return to CELL_DCH state, transmit a RADIO BEARER RECONFIGURATION COMPLETE message. The UE shall also send a MEASUREMENT REPORT message to the SS triggered by cell 2.

SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to move it to CELL_FACH. The UE shall move to that state and transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to SS. SS shall wait and check that no MEASUREMENT REPORT messages are detected on the uplink DCCH.

SS transmits a RADIO BEARER RECONFIGURATION message to the UE, to move it to CELL_DCH. The UE shall move to that state, and transmit a RADIO BEARER RECONFIGURATION COMPLETE message to SS. Shortly after, a MEASUREMENT REPORT message shall be received that has been triggered by cell 2, i.e the UE shall have retrieved the measurement configured through the MEASUREMENT CONTROL message of a step before, instead of the ones that are broadcast in SIB12.

Following the reception of the MEASUREMENT REPORT message, SS commands the UE using MEASUREMENT CONTROL message to release measurement control information stored in "measurement identity" = 12. Thereafter, SS verifies that no MEASUREMENT REPORT messages are detected on the uplink DCCH. After this requirement is satisfied, SS sends MEASUREMENT CONTROL on the downlink DCCH once more. This message is identical to the one sent in a step before. A MEASUREMENT REPORT message shall be received from the UE triggered by cell 2.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11 and 12	UE is initially in PS-DCCH+DTCH_FACH (state 6-11) in cell 1. System Information Block type 11 and 12 messages are changed with respect to the default contents according to the descriptions in "Specific Message Contents". Measurement identity 10 is included for event 1g and cell2.
2		←	SYSTEM INFORMATION CHANGE INDICATION	
3		←	RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
4		→	RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state.
5		→	MEASUREMENT REPORT	Reports cell 2's PCCPCH RSCP measurement value. Event 1g for cell 2 is triggered.
6		←	MEASUREMENT CONTROL	Cell 3 is added to the list of monitored set of the UE. Measurement identity 11 is included for event 1g and cell3.
7		→	MEASUREMENT REPORT	Cell 3 shall trigger the event 1g configured in the measurement identity 11.
8		→	MEASUREMENT REPORT	Cell 2 shall also trigger the event 1g configured in the measurement identity 10.
9		←	System Information Block type 11 and 12	System Simulator reconfigures the downlink transmission power settings for cells according to Table 8.4.1.7A-1
10		←	PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state.
12				SS waits and checks that no MEASUREMENT REPORT messages are sent by UE.
13		←	RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
14		→	RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state
15		→	MEASUREMENT REPORT	UE shall report cell 2's PCCPCH RSCP measurement value
16		←	PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels
17		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state
18		←	MEASUREMENT CONTROL	SS instructs the UE to setup intra-frequency measurement and reporting for cell 2. Measurement validity" IE is set to CELL_DCH state.
19				SS waits and verifies that no MEASUREMENT REPORT messages are sent by UE.

Step	Direction		Message	Comment
	UE	SS		
20	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels.
21	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall return to CELL_DCH state.
22	→		MEASUREMENT REPORT	UE reports cell 2's measured results for PCCPCH RSCP.
23	←		PHYSICAL CHANNEL RECONFIGURATION	SS configures PRACH and S-CCPCH physical channels
24	→		PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE shall move to CELL_FACH state
25				SS waits and check that no MEASUREMENT REPORT messages are sent by the UE.
26	←		RADIO BEARER RECONFIGURATION	SS configures dedicated physical channels
27	→		RADIO BEARER RECONFIGURATION COMPLETE	UE shall move to CELL_DCH state
28	→		MEASUREMENT REPORT	UE shall have retrieved and resumed the measurement set up through the MEASUREMENT CONTROL of step 18.
29	←		MEASUREMENT CONTROL	Terminate all the intra-frequency measurement and reporting activities related to "measurement identity" = 12.
30				SS waits and verifies that UE stop transmitting MEASUREMENT REPORT messages.
31	←		MEASUREMENT CONTROL	This message is the same as in step 18
32	→		MEASUREMENT REPORT	UE shall transmit a MEASUREMENT REPORT message triggered by cell 2.

Specific Message Content

Master Information Block (Step 1)

Information Element	Value/Remarks
MIB Value Tag	3

System Information Block type 11 for cell 1 (Step 1)

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Cell parameters Id	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS34.108
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity for RACH	Not present
reporting	
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not Present

System Information Block type 12 for cell 1 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	10
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not present
- CHOICE mode	TDD
- Measurement quantity list	
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantityfor 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	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1g
Triggering condition 1	Not present
Triggering condition 2	Monitored set cells
- Reporting range	Not present
Cells forbidden to affect reporting	Not present
- CHOICE Mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- W	Not present
- Hysteresis	0 dB
- Time to trigger	0
- Amount of reporting	Not Present
- Reporting Interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1
- Inter-frequency measurement system information	Not Present

- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

SYSTEM INFORMATION CHANGE INDICATION (Step 2)

Information Element	Value/Remarks
BCCH modification info	
- MIB Value Tag	3
- BCCH modification time	Not Present

RADIO BEARER RECONFIGURATION (Step 3, Step 13, Step 20, Step 26)

Use the same message type found in TS34.108, with condition set to A4.

MEASUREMENT REPORT (Steps 5 and 22)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CCPCH Info	Check to see if it's the same for cell 2
- PCCPCH RSCP	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	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 '1g'
- Cell measurement event results	
- Cell parameters Id	Check to see if it's the same for cell 2

MEASUREMENT CONTROL (Step 6)

Information Element	Value/remark
Measurement Identity	11
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Event Trigger
- Periodic Reporting / Event Trigger Reporting	
Mode	Not Present
Additional measurements list	Intra-frequency measurement
CHOICE measurement type	Remove no intra-frequency cells
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	3
- New intra-frequency info list	0 dB
- Intra-frequency cell id	Not Present
- Cell info	FALSE
- Cell individual offset	TDD
- Reference time difference to cell	Set to same as used for cell 3
- Read SFN Indicator	Not Present
- CHOICE mode	Not Present
- Primary CCPCH Info	3
- Cells selection and Re-selection info	0
- Cells for measurement	TDD
- Intra-frequency cell id	PCCPCH RSCP
- Intra-frequency measurement quantity	FALSE
- Filter Coefficient	FALSE
- CHOICE mode	FALSE
- Measurement quantity list	FALSE
- Measurement quantity	TRUE FALSE
- Intra-frequency reporting quantity	FALSE
- Reporting quantities for active set cells	FALSE
- Cell synchronisation information reporting	FALSE
indicator	FALSE
- Cell identity reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	FALSE
- Cell synchronisation information reporting	FALSE
indicator	TRUE
- Cell identity reporting indicator	FALSE
- Proposed TGSN Reporting required	TRUE
- PCCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- Reporting cell status	Not present
- Measurement validity	Not present
- CHOICE report criteria	Intra-frequency measurement criteria
- Parameters required for each event	1g
- Intra-frequency event identity	Triggering condition 1
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range	Not Present
- Cells forbidden to affect Reporting range	Not Present
- CHOICE Mode	TDD
- Primary CCPCH Info	Set to the same for cell 3
- W	Not Present
- Hysteresis	0 dB
- Time to Trigger	0
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	Report cells within monitored set cells on used
- CHOICE reported cells	frequency
- Maximum number of reported cells	1

MEASUREMENT REPORT (Step 7)

Information Element	Value/remark
Measurement identity	Check to see if set to 11
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
	Check to see if this IE is absent
- Cell synchronisation information	
- Primary CPICH Info	Check to see if it's the same code for cell 3
- Proposed TGSN Reporting required	Check to see if this IE is present
- PCCPCH RSCP reporting indicator	Check to see if this IE is absent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if it's set to 'Intra-frequency measurement event results'
Event Results	
- CHOICE event result	Check to see if this IE is set to '1g'
- Intra-frequency event identity	
- Cell measurement event results	Check to see if it's the same for cell 3

MEASUREMENT REPORT (Step 8)

Information Element	Value/remark
Measurement identity	Check to see if set to 10
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	Check to see if this IE is absent
- Primary CCPCH Info	Check to see if it's the same for cell 2
- Proposed TGSN Reporting required	Check to see if this IE is absent
- PCCPCH RSCP reporting indicator	Check to see if this IE is present
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event Results	Check to see if it's set to 'Intra-frequency measurement event results'
- CHOICE event result	Check to see if this IE is set to '1g'
- Intra-frequency event identity	
- Cell measurement event results	Check to see if it's the same for cell 2

System Information Block type 11 for cell 1 (Step 9)

Information Element	Value/remark
SIB12 indicator	TRUE
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Cell parameters Id	Refer to clause titled "Default settings for cell No.1 (TDD)" in clause 6.1.4 of TS34.108
- Cell Selection and Re-selection info	Not present
- Cells for measurement	Not present
- Intra-frequency measurement quantity	Not present
- Intra-frequency reporting quantity for RACH	Not present
reporting	
- Maximum number of reported cells on RACH	Not present
- Reporting information for state CELL_DCH	Not present
- Inter-frequency measurement system information	Not present
- Inter-RAT measurement system information	Not present
- Traffic volume measurement system information	Not Present

System Information Block type 12 for cell 1 (Step 9)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	10
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not present
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- Cell selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	
- Filter Coefficient	Not present
- CHOICE mode	TDD
- Measurement quantity list	
- Measurement quantity	PCCPCH RSCP
- Intra-frequency reporting quantity_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	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUEFALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	TRUE
- CHOICE mode	TDD
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected cells	Not present
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameter required for each event	
- Intra-frequency event identity	1g
Triggering condition 1	Not present
Triggering condition 2	Monitored set cells
- Reporting range	Not present
- Cells forbidden to affect reporting	Not present
- CHOICE Mode	TDD
- Primary CCPCH Info	Refer to clause titled "Default settings for cell No.2 (TDD)" in clause 6.1.4 of TS 34.108
- W	Not present
- Hysteresis	0 dB
- Time to trigger	0
- Amount of reporting	Not Present
- Reporting Interval	Not Present
- Reporting cell status	
- CHOICE reported cells	Report cells within monitored set cells on used frequency
- Maximum number of reported cells	1
- Inter-frequency measurement system information	Not Present

- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present

PHYSICAL CHANNEL RECONFIGURATION (Steps 10, 16, 23)

Use the same message sub-type found in TS 34.108, which is entitled "Packet to CELL_FACH from CELL_DCH in PS".

MEASUREMENT CONTROL (Steps 18 and 31)

Information Element	Value/remark
Measurement Identity	12
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Event Trigger
- Periodic Reporting / Event Trigger Reporting	
Mode	Not Present
Additional measurements list	Intra-frequency measurement
CHOICE measurement type	Remove no intra-frequency cells
- Intra-frequency cell info list	
- CHOICE intra- frequency cell removal	2
- New intra-frequency info list	0 dB
- Intra-frequency cell id	Not Present
- Cell info	FALSE
- Cell individual offset	TDD
- Reference time difference to cell	Set to same as used for cell 2
- Read SFN Indicator	Not Present
- CHOICE Mode	Not Present
- Primary CCPCH Info	Not Present
- Cell selection and Re-selection info	
- Cells for measurement	0
- Intra-frequency measurement quantity	TDD
- Filter Coefficient	PCCPCH RSCP
- CHOICE mode	FALSE
- Measurement quantity list	
- Measurement quantity	FALSE
- Intra-frequency reporting quantity	FALSE
- Reporting quantities for active set cells	TRUE FALSE
- Cell synchronisation information reporting	FALSE
indicator	FALSE
- Cell identity reporting indicator	FALSE
- Proposed TGSN Reporting required	FALSE
- PCCPCH RSCP reporting indicator	TRUE FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	FALSE
- Cell synchronisation information reporting	FALSE
indicator	TRUE
- Cell identity reporting indicator	FALSE
- Proposed TGSN Reporting required	TRUE
- PCCPCH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	Not present
- Reporting quantities for detected cells	Not present
- Reporting cell status	CELL_DCH
- Measurement validity	Intra-frequency measurement criteria
- UE state	1g
- CHOICE report criteria	Not Present
- Parameters required for each event	Monitored set cells
- Intra-frequency event identity	Not Present
Triggering condition 1	Not Present
Triggering condition 2	Not Present
- Reporting Range	Set to the same for cell 2
- Cells forbidden to affect Reporting range	Not Present
- Primary CCPCH Info	Not Present
- W	0 dB
- Hysteresis	0
- Time to Trigger	Not Present
- Amount of reporting	Not Present
- Reporting interval	Not Present
- Reporting cell status	Report cells within monitored set cells on used
- CHOICE reported cell	frequency
- Maximum number of reported cells	1

MEASUREMENT REPORT (Steps 22, 28 and 32)

Information Element	Value/remark
Measurement identity	Check to see if set to 12
Measured Results	
- CHOICE measurement	Check to see if set to "Intra-frequency measured results list"
- Intra-frequency measurement results	
- Cell measured results	Check to see if this IE is absent
- Cell Identity	Check to see if this IE is absent
- Cell synchronisation information	
- Primary CCPCH Info	Check to see if it's the same for cell 2
- Proposed TGSN Reporting required	Check to see if this IE is absent
- PCCPCH RSCP reporting indicator	Check to see if this IE is presentabsent
- Pathloss	Check to see if this IE is absent
Measured Results on RACH	
Additional measured results	Check to see if it's set to 'Intra-frequency measurement event results'
Event Results	
- CHOICE event result	Check to see if this IE is set to '1g'
- Intra-frequency event identity	
- Cell measurement event results	
- Cell parameters Id	Check to see if it's the same for cell 2

MEASUREMENT CONTROL (Step 29)

Information Element	Value/remark
Measurement Identity	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

8.4.1.7A.5 Test Requirement

After step 3 the UE shall report cell 2's PCCPCH RSCP value by transmitting MEASUREMENT REPORT messages.

After step 5 the UE shall transmit two MEASUREMENT REPORT messages which contain measured results of cell 3's PCCPCH RSCP value only, one for measurement identity 10 and one for measurement identity 11.

After step 9 and step 11 the UE shall not transmit MEASUREMENT REPORT messages, which pertain to intra-frequency type measurement reporting.

After step 9b, the UE shall transmit a MEASUREMENT REPORT according to what is broadcast in SIB 11 and 12 of cell 1, and MEASUREMENT REPORT message pertaining to the MEASUREMENT CONTROL message that it had received in step 5.

After steps 13 and 14e, 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 messages, containing measured results of cell 2's PCCPCH RSCP value.

After step 15 the UE shall stop measurement activities pertaining to periodic reporting of cell 2's PCCPCH RSCP, no MEASUREMENT REPORT messages shall be detectable by the SS on the uplink DCCH.

After step 17, the UE shall transmit a MEASUREMENT REPORT message to the SS as specified in the MEASUREMENT CONTROL message received in step 17.

After step 21 the UE shall re-select to cell 2 and initiate a cell update procedure. SS shall receive a CELL UPDATE message on the uplink CCCH of cell 2, with the "cell update cause" IE stated as "cell re-selection".

After step 23, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH AM RLC.

After step 25 the UE shall report cell 1 and 3's PCCPCH RSCP value by transmitting MEASUREMENT REPORT messages.

3GPP TSG-T-WG1#19
 Seoul, Korea, 12th-16th May 2003

T1-030512

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 474 ⌘ rev - ⌘ Current version: 5.3.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Update of Broadcast of system information test for TDD mode		
Source:	⌘ Siemens AG		
Work item code:	⌘ TEI Date: ⌘ 01/05/2003		
Category:	⌘ F Release: ⌘ Rel-5 Use <u>one</u> of the following categories: <table style="width: 100%; margin-top: 5px;"> <tr> <td style="width: 50%; vertical-align: top;"> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. </td> <td style="width: 50%; vertical-align: top;"> Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) </td> </tr> </table>	F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
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Reason for change:	⌘ Broadcast of system information test needed for TDD mode.
Summary of change:	⌘ Inclusion of Contents of Scheduling Block 1 (TDD 3.84 Mcps option) ⌘ Contents of Scheduling Block 1 for FDD to be used for TDD 1.28 Mcps option too.
Consequences if not approved:	⌘ TDD UEs could be not tested properly

Clauses affected:	⌘ 8.1.10									
Other specs affected:	<table border="1" style="border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>	Y	N							⌘ Other core specifications ⌘ ⌘ Test specifications ⌘ ⌘ O&M Specifications ⌘
	Y	N								
Other comments:	⌘									

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.1.10 Broadcast of system information

8.1.10.1 Dynamic change of segmentation, concatenation & scheduling and handling of unsupported information blocks

8.1.10.1.1 Definition

8.1.10.1.2 Conformance requirement

1. The RRC layer in the UE shall perform re-assembly of segments. All segments belonging to the same master information block, scheduling block or system information block shall be assembled in ascending order with respect to the segment index. When all segments of the master information block, scheduling block or a system information block have been received, the UE shall perform decoding of the complete master information block, scheduling block or system information block.
2. For all system information blocks or scheduling blocks that are supported by the UE referenced in the master information block or the scheduling blocks, the UE shall perform the following actions:

.....

- read and store the IEs of that system information block;

NOTE: There are options with and without scheduling blocks.

3. For system information blocks, not supported by the UE.....

- skip reading this system information block;
- skip monitoring changes to this system information block.

4. However, to enable future introduction of new system information blocks, the UE shall also be able to receive system information blocks other than the ones indicated within the scheduling information. The UE may ignore contents of such system information block.

Reference

3GPP TS 25.331 clause 8.1.1.1.4, 8.1.1.5 and 8.1.1.6.

8.1.10.1.34 Test Purpose

1. To verify that dynamic change of System Information is identified, new information read and used.
2. To verify that the UE can support all segment types and "all" segment combinations.
3. To verify that the UE can dynamically use different configurations
4. To verify that the UE properly uses combinations of Default and assigned values.

NOTE: There are 4 segment types and 11 different SYSTEM INFORMATION segment combinations to interpret when re-assembling segments. There are many alternative SIB position offsets and repetition rates.

The allowed segment types are:

- First segment
- Subsequent segment
- Last segment
- Complete

The allowed segment combinations are:

1. No segment
2. First segment
3. Subsequent segment
4. Last segment
5. Last segment + First segment
6. Last segment + one or several Complete
7. Last segment + one or several Complete + First segment
8. One or several Complete
9. One or several Complete + First segment
10. One Complete of size 215 to 226 (not fully tested)
11. Last segment of size 215 to 222

NOTE: Segment combinations 10 and 11 are more difficult to test as they require SIBs of a very specific size.

8.1.10.1.45 Method of test

Alternate two sets of System Information and generate a call after one or the other set has been broadcasted.

These two sets of System Information are based on the System Information specified in 34.108, section 6.

A "Minimum" configuration and a "Maximum" configuration of System Information are defined. The "Minimum" configuration does not contain all of the Information Blocks defined for Configuration 1 in section 6 of 34.108, while the "Maximum" configuration does. The contents of the SIBs remains the same (for the "Minimum" configuration, the contents of SIB11 changes for the "Maximum" configuration) while the contents of the MIB and SB is altered depending on the nature of the test, i.e. the schedule changes between the "Minimum" and "Maximum" configurations.

The four segment types and the eleven segment combinations are tested using the two configurations.

NOTE: The decoding of system information in the UE is only measurable by functional tests. A large number of functions utilize system information. An extensive test of the system information decoding thus creates a large number of functional tests, which is impractical. This test specification uses a "sample test", where only a few functions are invoked.

Initial Condition

System Simulator: 2 cells (Cell 1, Cell 2), settings for Cell 1 and Cell 2 according to TS 34.108, clause 6.1.5, table 6.1.2 (Cell 1 configured as the serving cell). The Minimum Configuration System Information is being broadcast in Cell 1. The Maximum Configuration System Information is being broadcast in Cell 2.

UE: Idle state (state 2 or state 3 or state 7) as specified in clause 7.4 of TS 34.108 with a CN UE identity (set to IMSI), depending on the CN domain(s) supported by the UE.

Test procedure

- a) The UE is in C1 in Camped Normally state.
- b) UE starts establishing a MO call/session.
- c) SS disconnects the call. UE shall enter IDLE state.

- d) The SS sets the Cell Barred Indicator in SIB3 to "Barred". The SS notifies the UE of the changed System Information by sending the Paging Type 1 message including the IE BCCH Modification Info indicating that new System Information is available.
- e) Based on the updated information in SIB3, the UE performs a cell reselection to Cell 2. The UE reads the System Information in Cell 2, i.e. Maximum Configuration System Information.
- f) UE starts establishing a MO call/session.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	UE			Mobile originated call/session establishment
2	SS			Disconnection of call
3	←		System Information (Minimum Configuration)	System Information message is sent in Cell 1 with the Cell Barred Indicator in SIB3 set to "Barred".
4	←		Paging Type 1	This message is to inform the UE in Idle State that System Information has been updated.
5	UE			Mobile originated call /session establishment

Specific message content for "Minimum" configuration

The Minimum configuration is the same as the Configuration 1 System Information on 34.108, section 6 with some differences:

- Only SIB1, SIB3, SIB5, SIB7, SIB11 are used, i.e. the Minimum number of SIBs is used.
- No SB is used, all scheduling information is contained in the MIB. The contents of this changed MIB are shown below.
- A different schedule is used. Details below.
- SIB11 lists eight cells (one serving cell and seven neighbouring cells). Only the first two of these are considered relevant.

Other characteristics of the Minimum configuration are:

- An unknown future System Information Block (SIB-F1) is included. SIB-F1 is used to test segment combination 10. However, it should be noted that, based on the scheduling information in the MIB, UEs may decide not to read segment combinations associated with SIBs that they do not support/comprehend. Hence, the use of SIB-F1 does not fully cover the verification of combinations 10. The tests really just verify that UE ignores it. There is no real verification that the UE can support segment combinations 10.

The following tables show (based on SIB_REP and SIB_POS in the MIB and SB) the schedule used for the Minimum configuration.

Table 1: The schedule in this table incorporates segment combinations 1, 2, 3, 4, 7, 8, 10.

Block Type	MIB	SIB1	SIB3	SIB5	SIB7	SIB11
SIB_REP	8	64	64	64	16	64
SEG_COUNT	1	1	1	3	1	4

Frame No / SIB_POS	0	2	4	6	8	10	12	14
Block Type	MIB		SIB7		MIB			

Frame No / SIB_POS	16	18	20	22	24	26	28	30
Block Type	MIB		SIB7/SIB3	SIB1	MIB		SIB-F1	SIB5

Frame No / SIB_POS	32	34	36	38	40	42	44	46
Block Type	MIB	SIB5	SIB5/SIB7/SIB11	SIB11	MIB	SIB11	SIB11	

Frame No / SIB_POS	48	50	52	54	56	58	60	62
Block Type	MIB		SIB7		MIB			

Contents of Master Information Block PLMN type is the case of GSM-MAP

- MIB value tag	1
- Supported PLMN types	
- PLMN type	GSM-MAP
- PLMN identity	
- MCC digit	Set to the same Mobile Country Codes stored in the test USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- MNC digit	Set to the same Mobile Network Codes stored in the test USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- ANSI-41 Core Network information	Not Present
- References to other system information blocks and scheduling blocks	
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	PLMN Value tag
- PLMN Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	22
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 1
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	20
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 3
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	64
- SIB_POS	30
- SIB_POS offset info	
- SIB_OFF	4
- SIB_OFF	2
- SIB type	System Information Type 5
- Scheduling information	
- CHOICE Value tag	Not Present
- SEG_COUNT	1
- SIB_REP	16
- SIB_POS	4
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type 7
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	4
- SIB_REP	64
- SIB_POS	36
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	4
- SIB_OFF	2
- SIB and SB type	System Information Type 11
- Scheduling information	
- CHOICE Value tag	Not Present
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	28
- SIB_POS offset info	Not Present – use default
- SIB and SB type	System Information Type F1

Specific message content for "Maximum" configuration

The Maximum configuration is the same as the Configuration 1 System Information on 34.108, section 6 with some differences:

- A different schedule is used. Details below.
- SIB11 lists eight cells (one serving cell and seven neighbouring cells). Only the first two of these are considered relevant.
- SIB6 and SIB12 includes all optional IEs even if having same values as correspondent IEs in SIB5 and SIB11 respectively (to facilitate implementation of the test case for the Maximum configuration).

Other characteristics of the Maximum configuration are:

- one "unknown future" block (SIB-F2) is included. This SIB is concatenated with another SIB and is used to verify that the UE can receive an Information Block that it does not support and still process the Information Blocks that it does support in the correct way.
- The test of the segment combination 9 is verified if the UE is able to read SIB7 and the first segment of SIB5 in position 4.
- The test of the segment combination 11 is verified if the UE is able to read the last segment of SIB 5. The SS ensures that this last segment shall have the length between 215 and 222 bits. Depending on the length of SIB 5, the combination 11 occurs either in SIB_position 6, or in the most cases in SIB_position 10

The following tables show (based on SIB_REP and SIB_POS in the MIB and SB) the schedule used for the Maximum configuration.

Table 2: The schedule in this table incorporates segment combinations 1, 2, 3, 5, 6, 8, 9, 11.

Block Type	MIB	SB1	SIB1	SIB2	SIB3	SIB4	SIB5	SIB6	SIB7	SIB11	SIB12	SIB18
SIB_REP	8	16	64	64	64	64	64	64	32	64	64	64
SEG_COUNT	1	1	1	1	1	1	3	3	1	4	4	1

Frame No / SIB_POS	0	2	4	6	8	10	12	14
Block Type	MIB	SB1	SIB7/SIB5	SIB5	MIB	SIB5	SIB3/SIB-F2	SIB11

Frame No / SIB_POS	16	18	20	22	24	26	28	30
Block Type	MIB	SB1	SIB11	SIB11	MIB	SIB11/SIB12	SIB12	SIB12

Frame No / SIB_POS	32	34	36	38	40	42	44	46
Block Type	MIB	SB1	SIB7/SIB18	SIB12	MIB	SIB6	SIB6	SIB6/SIB2

Frame No / SIB_POS	48	50	52	54	56	58	60	62
Block Type	MIB	SB1	SIB4		MIB	SIB1		

Contents of Master Information Block PLMN type is the case of GSM-MAP

Information Element	Value/remark
- MIB value tag	1
- Supported PLMN types	
- PLMN type	GSM-MAP
- PLMN identity	
- MCC digit	Set to the same Mobile Country Codes stored in the test USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- MNC digit	Set to the same Mobile Network Codes stored in the test USIM card (TS 34.108 clause 8.3.2.2 EF IMSI(IMSI)).
- ANSI-41 Core Network information	Not Present
- References to other system information blocks and scheduling blocks	
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	Cell Value Tag
- Cell Value tag	1
- Scheduling	
- SEG_COUNT	1
- SIB_REP	16
- SIB_POS	2
- SIB_POS offset info	Not Present – use default
- SIB type	Scheduling Block 1
- Scheduling information	
- CHOICE Value tag	PLMN Value tag
- PLMN Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	58
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 1
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	46
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 2
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	12
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 3
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	52
- SIB_POS offset info	Not Present – use default
- SIB type	System Information Type 4
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	64
- SIB_POS	4
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	4
- SIB type	System Information Type 5

Contents of Scheduling Block 1 (FDD [and TDD 1.28 Mcps option](#))

Information Element	Value/remark
- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	64
- SIB_POS	42
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB and SB type	System Information Type 6
- Scheduling information	
- CHOICE Value tag	Not Present
- SEG_COUNT	1
- SIB_REP	32
- SIB_POS	4
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type 7
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	4
- SIB_REP	64
- SIB_POS	14
- SIB_POS offset info	
- SIB_OFF	6
- SIB_OFF	2
- SIB_OFF	4
- SIB and SB type	System Information Type 11
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	4
- SIB_REP	64
- SIB_POS	26
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB_OFF	8
- SIB and SB type	System Information Type 12
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	36
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type 18
- Scheduling information	
- CHOICE Value tag	Not Present
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	12
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type F2

[Contents of Scheduling Block 1 \(TDD 3.84 Mcps option\)](#)

- References to other system information blocks	
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	4
- SIB_REP	128

- SIB_POS	3
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB and SB type	System Information Type 6
- Scheduling information	
- CHOICE Value tag	Not Present
- SEG_COUNT	1
- SIB_REP	16
- SIB_POS	2
- SIB_POS offset info	Not Present
- SIB type SIBs only	System Information Type 7
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	64
- SIB_POS	29
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB and SB type	System Information Type 11
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	3
- SIB_REP	64
- SIB_POS	13
- SIB_POS offset info	
- SIB_OFF	2
- SIB_OFF	2
- SIB and SB type	System Information Type 12
- Scheduling information	
- CHOICE Value tag	Cell Value tag
- Cell Value tag	1
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	54
- SIB_POS offset info	Not Present
- SIB type SB	System Information Type 18
- Scheduling information	
- CHOICE Value tag	Not Present
- SEG_COUNT	1
- SIB_REP	64
- SIB_POS	6
- SIB_POS offset info	Not Present
- SIB and SB type	System Information Type F2

Contents of System Information Block type F1

Information Element	Value/remark
Data	Arbitrary data with a size of 226 bits

Contents of System Information Block type F2

Information Element	Value/remark
Data	Arbitrary data with a size of 50 bits

NOTE: For these future System Information Block types one of the available spare values for SIB type should be used

8.1.10.1.56 Test requirement

After step 1 the UE shall have a call/session established in Cell 1.

After step 5 the UE shall have a call/session established in Cell 2.

3GPP TSG-T-WG1#19
 Seoul, Korea, 12th-16th May 2003

T1-030514

CR-Form-v7
CHANGE REQUEST
⌘ 34.123-1 CR 476 ⌘ rev - ⌘ Current version: 5.3.0 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Measurement Control and Report: Traffic volume measurement for transitions, TDD update
Source:	⌘ Siemens AG
Work item code:	⌘ TEI Date: ⌘ 01/05/2003
Category:	⌘ F Release: ⌘ Rel-5 Use <u>one</u> of the following categories: Use <u>one</u> of the following releases: F (correction) 2 (GSM Phase 2) A (corresponds to a correction in an earlier release) R96 (Release 1996) B (addition of feature), R97 (Release 1997) C (functional modification of feature) R98 (Release 1998) D (editorial modification) R99 (Release 1999) Detailed explanations of the above categories can Rel-4 (Release 4) be found in 3GPP TR 21.900 . Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ Measurement Control and Report: Traffic volume measurement for transitions for TDD UEs must be tested.
Summary of change:	⌘ The test cases below are updated as follow to be used for testing TDD UEs too: 8.4.1.16 Measurement Control and Report: Traffic volume measurement for transition from idle mode to CELL_FACH state System Information Block type 11 (Step 1) (TDD) included 8.4.1.17 Measurement Control and Report: Traffic volume measurement for transition from idle mode to CELL_DCH state System Information Block type 11 (Step 1) (TDD) 8.4.1.18 Measurement Control and Report: Traffic volume measurement for transition from CELL_FACH state to CELL_DCH state RADIO BEARER RECONFIGURATION, references corrected System Information Block type 12 (Step 1) (TDD) 8.4.1.19 Measurement Control and Report: Traffic volume measurement for transition from CELL_DCH to CELL_FACH state RADIO BEARER RECONFIGURATION, references corrected System Information Block type 12 (Step 33) (TDD)

Consequences if not approved:	⌘	TDD UEs could be not tested properly										
Clauses affected:	⌘	8.4.1.16, 8.4.1.17, 8.4.1.18, 8.4.1.19										
Other specs affected:	⌘	<table border="1"> <tr> <td>Y</td> <td>N</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>X</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other core specifications	⌘ TS 34.123-2
		Y	N									
		<input type="checkbox"/>	<input type="checkbox"/>									
X	<input type="checkbox"/>											
<input type="checkbox"/>	<input type="checkbox"/>											
	Test specifications											
	O&M Specifications											
Other comments:	⌘											

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.4.1.16 Measurement Control and Report: Traffic volume measurement for transition from idle mode to CELL_FACH state

8.4.1.16.1 Definition

8.4.1.16.2 Conformance requirement

Upon transition from idle mode to CELL_FACH state, the UE shall:

1> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT_IDENTITY;

1> begin traffic volume measurement reporting according to the assigned information.

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in TS 25.331 subclause 8.6 unless otherwise specified below.

The UE shall:

1> read the IE "Measurement command";

1> if the IE "Measurement command" has the value "setup":

2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;

2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":

...

2> for measurement type "UE positioning measurement":

...

2> for any other measurement type:

3> if the measurement is valid in the current RRC state of the UE:

4> begin measurements according to the stored control information for this measurement identity.

Reference

3GPP TS 25.331 clause 8.4.1.9.4, 3GPP TS 25.331 clause 8.4.1.3.

8.4.1.16.3 Test Purpose

1. To confirm that after a state transition from idle mode to CELL_FACH state, the UE shall begin a traffic volume type measurement, as specified in System Information Block type 11 or 12 messages on BCCH.
2. To confirm that in CELL_FACH state, the UE shall send a MEASUREMENT REPORT message when reporting criteria is satisfied. During CELL_FACH state, if the UE receives a MEASUREMENT CONTROL message, it shall perform the measurement and reporting tasks based on the MEASUREMENT CONTROL message received.

8.4.1.16.4 Method of test

Initial Condition

System Simulator: 1cell

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

The UE is initially in idle mode. The System Information Block type 11 message is modified with respect to the default settings to request UE to perform traffic volume measurements. Key measurement parameters are as follows: measurement quantity = "RLC Buffer Payload", report criteria = "periodic reporting criteria", reporting interval = "6 seconds", reporting amount = 'infinity'. The System Information type 12 message is not broadcasted.

SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute procedure P6. Next SS and UE shall execute procedure P10. Then SS and UE shall execute procedure P14.

UE shall begin traffic volume measurements, and shall send MEASUREMENT REPORT message after completing first measurement. UE shall send second MEASUREMENT REPORT message 6 seconds after first MEASUREMENT REPORT message.

SS sends MEASUREMENT CONTROL message to the UE. This message overwrites measurement information saved from System information type 11. Key measurement parameters are as follow: measurement type = "traffic volume measurement", measurement quantity = "RLC Buffer Payload", report criteria = "Event triggered, event 4B: Transport Channel Traffic Volume becomes smaller than an absolute threshold ", Time to trigger = "5 seconds", pending time after trigger = "16 seconds", "reporting threshold = '4K'". Since there is no uplink traffic, UE shall send MEASUREMENT REPORT message after 5 seconds (time to trigger interval). SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is idle mode and camped onto cell 1. System Information Block type 11 to be transmitted is different from the default settings (see specific message contents)
2		↔	SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	SS prompts the test operator to make an outgoing call.
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5		→	Void	
6		→	MEASUREMENT REPORT	
7		→	MEASUREMENT REPORT	Time difference between earlier and this MEASUREMENT REPORT message should be 6 Seconds.
8		←	MEASUREMENT CONTROL	Traffic volume measurement reporting is requested if measurement is below threshold.

9			SS monitors the uplink DCCH to confirm that no MEASUREMENT REPORT messages are received in 5 seconds.
10	→	MEASUREMENT REPORT	Measurement report because event 4b is triggered
11	↔	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Content

System Information Block type 11 (Step 1) ([FDD](#))

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	Not used
- Use of HCS	CPICH RSCP
- Cell selection and reselection quality measure	Not Present
- Intra-frequency measurement system information	Not Present
- Intra-frequency measurement identity	Not Present
- Intra-frequency cell info list	Remove no intra-frequency cells
- CHOICE intra-frequency cell removal	1
- New intra-frequency cells	0 dB
- Intra-frequency cell id	Not Present
- Cell info	TRUE
- Cell individual offset	FDD
- Reference time difference to cell	Set to same code as used for cell 1
- Read SFN indicator	Not Present
- CHOICE mode	FALSE
- Primary CPICH info	Not Present
- Primary scrambling code	FALSE
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity for RACH	Not Present
reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	4
- Traffic volume measurement ID	Rach
- Traffic volume measurement object list	RLC Buffer Payload
- Traffic volume measurement quantity	True
- Traffic volume reporting quantity	False
- RB buffer payload	False
- RB buffer payload average	Not Present
- RB buffer payload variance	All States except CELL_DCH
- Traffic volume measurement reporting criteria	Acknowledged Mode
- Measurement validity	Periodical
- Measurement reporting mode	Periodical reporting criteria
- Measurement report transfer mode	Infinity
- Periodical or event trigger	6 seconds
- Report criteria system Information	
- Reporting amount	
- Reporting interval	

System Information Block type 11 (Step 1) (TDD)

<u>Information Element</u>	<u>Value/remark</u>
<u>SIB12 indicator</u>	<u>FALSE</u>
<u>FACH measurement occasion info</u>	<u>Not Present</u>
<u>Measurement control system information</u>	
- <u>Use of HCS</u>	<u>Not used</u>
- <u>Intra-frequency measurement system information</u>	
- <u>Intra-frequency measurement identity</u>	<u>Not Present</u>
- <u>Intra-frequency cell info list</u>	
- <u>CHOICE intra-frequency cell removal</u>	<u>Remove no intra-frequency cells</u>
- <u>New intra-frequency cells</u>	
- <u>Intra-frequency cell id</u>	<u>1</u>
- <u>Cell info</u>	
- <u>Cell individual offset</u>	<u>0 dB</u>
- <u>Reference time difference to cell</u>	<u>Not Present</u>
- <u>Read SFN indicator</u>	<u>TRUE</u>
- <u>CHOICE mode</u>	<u>TDD</u>
- <u>Primary CCPCH info</u>	<u>Set to same as used for cell 1</u>
- <u>TX Diversity indicator</u>	<u>FALSE</u>
- <u>Cells for measurement</u>	<u>Not Present</u>
- <u>Intra-frequency measurement quantity</u>	<u>Not Present</u>
- <u>Intra-frequency reporting quantity for RACH reporting</u>	<u>Not Present</u>
- <u>Maximum number of reported cells on RACH</u>	<u>Not Present</u>
- <u>Reporting information for state CELL_DCH</u>	<u>Not Present</u>
- <u>Inter-frequency measurement system information</u>	<u>Not Present</u>
- <u>Inter-RAT measurement system information</u>	<u>Not Present</u>
- <u>Traffic volume measurement system information</u>	
- <u>Traffic volume measurement ID</u>	<u>4</u>
- <u>Traffic volume measurement object list</u>	<u>RACH</u>
- <u>Traffic volume measurement quantity</u>	<u>RLC Buffer Payload</u>
- <u>Traffic volume reporting quantity</u>	
- <u>RB buffer payload</u>	<u>TRUE</u>
- <u>RB buffer payload average</u>	<u>False</u>
- <u>RB buffer payload variance</u>	<u>False</u>
- <u>Traffic volume measurement reporting criteria</u>	<u>Not Present</u>
- <u>Measurement validity</u>	<u>All States except CELL_DCH</u>
- <u>Measurement reporting mode</u>	
- <u>Measurement report transfer mode</u>	<u>Acknowledged Mode</u>
- <u>Periodical or event trigger</u>	<u>Periodical</u>
- <u>Report criteria system Information</u>	<u>Periodical reporting criteria</u>
- <u>Reporting amount</u>	<u>Infinity</u>
- <u>Reporting interval</u>	<u>6 seconds</u>

MEASUREMENT REPORT (Step 6,7)

Information Element	Value/remark
Measurement identity	Check to see if set to 4
Measured Results	
- CHOICE measurement	Check to see if set to "traffic volume measured results list"
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 8)

Information Element	Value/remark
Measurement Identity	4
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Measurement validity	Not Present
- Report criteria	Traffic Volume Reporting Criteria
- UL transport channel id	Rach
- Event specific parameters	
- Event id	4B
- Reporting threshold	4K
- Time to trigger	5000 ms
- Pending time after trigger	16000 ms
- Tx interruption after trigger	Not Present
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Event trigger
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 10)

Information Element	Value/remark
Measurement identity	4
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Traffic Volume Event Results
- UL transport channel causing event	Rach
- Traffic volume event identity	4B

8.4.1.16.5 Test Requirement

After step 5 the UE shall send MEASUREMENT REPORT messages on the uplink DCCH containing RLC buffer payload information for all SRBs. After 6 seconds UE shall send second MEASUREMENT REPORT messages containing RLC buffer payload information for all SRBs.

After step 8 the UE shall overwrite measurement information received from system information type 11 with measurement information in MEASUREMENT CONTROL message. The UE shall not send MEASUREMENT REPORT message within time to trigger interval. After step 9 the UE shall transmit MEASUREMENT REPORT messages with event identity 4B.

8.4.1.17 Measurement Control and Report: Traffic volume measurement for transition from idle mode to CELL_DCH state

8.4.1.17.1 Definition

8.4.1.17.2 Conformance requirement

Upon transition from idle mode to CELL_DCH state, the UE shall:

- 1> begin a traffic volume type measurement, assigned in System Information Block type 11 (or System Information Block type 12).

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in TS 25.331 subclause 8.6 unless otherwise specified below.

The UE shall:

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":

- 2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
- 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":
 - ...
- 2> for measurement type "UE positioning measurement":
 - ...
- 2> for any other measurement type:
 - 3> if the measurement is valid in the current RRC state of the UE:
 - 4> begin measurements according to the stored control information for this measurement identity.

Reference

3GPP TS 25.331 clause 8.4.1.8.4, 3GPP TS 25.331 clause 8.4.1.3.

8.4.1.17.3 Test Purpose

1. To confirm that after a state transition from idle mode to CELL_DCH state, the UE begin a traffic volume type measurement, as specified in System Information Block type 11 or 12 messages on BCCH. When entering CELL_DCH state, the UE shall send a MEASUREMENT REPORT message when reporting criteria is satisfied.
2. During CELL_DCH state, if the UE receives a MEASUREMENT CONTROL message, it shall perform the measurement and reporting tasks based on the MEASUREMENT CONTROL message received.

8.4.1.17.4 Method of test

Initial Condition

System Simulator: 1cell

UE: "Registered idle mode on CS" (state 2) or "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

The UE is initially in idle mode. The System Information Block type 11 message is modified with respect to the default settings to request UE to perform traffic volume measurements. Key measurement parameters are as follows: measurement quantity = "Average RLC Buffer Payload", report criteria = "Event triggered, event 4B", reporting threshold = "8K", report transfer mode = "Unacknowledged mode". The System Information type 12 message is not broadcasted.

SS prompts the operator to make an outgoing call of a supported traffic class. SS and UE shall execute procedure P3 (for CS service) or P5 (for PS service). Next SS and UE shall execute procedure P7 (for CS service) or P9 (for PS service). Then SS and UE shall execute procedure P11 (for CS service) or P13 (for PS service).

UE shall begin traffic volume measurements after entering in CELL_DCH state. The UE shall send MEASUREMENT REPORT message because uplink traffic is below threshold.

SS sends MEASUREMENT CONTROL message to the UE. This message reconfigures measurement information saved from System information type 11. Key measurement parameters are as follow: measurement type = "traffic volume measurement", measurement quantity = "RLC Buffer Payload", report criteria = "Periodic reporting criteria", reporting interval = "8 seconds", reporting amount = "8". The UE shall periodically send MEASUREMENT REPORT message to report RLC Buffer Payload for each RB.

SS sends MEASUREMENT CONTROL message to release traffic volume measurement. UE shall not send measurement report after receiving this message. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is idle mode and camped onto cell 1. System Information Block type 11 to be transmitted is different from the default settings (see specific message contents)
2		↔	SS executes procedure P3 (clause 7.4.2.1.2) or P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P7 (clause 7.4.2.3.2) or P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P11 (clause 7.4.2.5.2) or P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5		→	Void	
6		→	MEASUREMENT REPORT	Event 4B is triggered. This message should come on RB1.
7		←	MEASUREMENT CONTROL	Periodic Traffic volume measurement reporting is requested.
8		→	MEASUREMENT REPORT	This message should come on RB2.
9		→	MEASUREMENT REPORT	Time difference between earlier and this MEASUREMENT REPORT message should be 8 Seconds.
10		←	MEASUREMENT CONTROL	Release traffic volume measurement.
11				Wait for 8 Seconds to confirm that UE does not send measurement report message.
12		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

System Information Block type 11 (Step 1) ([FDD](#))

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	Not used
- Use of HCS	CPICH RSCP
- Cell selection and reselection quality measure	Not Present
- Intra-frequency measurement system information	Remove no intra-frequency cells
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	0 dB
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	TRUE
- Intra-frequency cell id	FDD
- Cell info	Set to same code as used for cell 1
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN indicator	Not Present
- CHOICE mode	FALSE
- Primary CPICH info	Not Present
- Primary scrambling code	Not Present
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	2
- Traffic volume measurement ID	Not Present
- Traffic volume measurement object list	Average RLC Buffer Payload
- Traffic volume measurement quantity	200 msec
- Time Interval to take an average	False
- Traffic volume reporting quantity	True
- RB buffer payload	False
- RB buffer payload average	Not Present
- RB buffer payload variance	CELL_DCH
- Traffic volume measurement reporting criteria	Unacknowledged Mode
- Measurement validity	Event Trigger
- Measurement reporting mode	Traffic Volume Reporting Criteria
- Measurement report transfer mode	Not Present
- Periodical or event trigger	4B
- Report criteria system Information	8K
- UL transport channel id	Not Present
- Event specific parameters	Not Present
- Event id	Not Present
- Reporting threshold	Not Present
- Time to trigger	Not Present
- Pending time after trigger	Not Present
- Tx interruption after trigger	Not Present

System Information Block type 11 (Step 1) (TDD)

<u>Information Element</u>	<u>Value/remark</u>
<u>SIB12 indicator</u>	<u>FALSE</u>
<u>FACH measurement occasion info</u>	<u>Not Present</u>
<u>Measurement control system information</u>	
- <u>Use of HCS</u>	<u>Not used</u>
- <u>Intra-frequency measurement system information</u>	
- <u>Intra-frequency measurement identity</u>	<u>Not Present</u>
- <u>Intra-frequency cell info list</u>	
- <u>CHOICE intra-frequency cell removal</u>	<u>Remove no intra-frequency cells</u>
- <u>New intra-frequency cells</u>	
- <u>Intra-frequency cell id</u>	<u>1</u>
- <u>Cell info</u>	
- <u>Cell individual offset</u>	<u>0 dB</u>
- <u>Reference time difference to cell</u>	<u>Not Present</u>
- <u>Read SFN indicator</u>	<u>TRUE</u>
- <u>CHOICE mode</u>	<u>TDD</u>
- <u>Primary CCPCH info</u>	<u>Set to same as used for cell 1</u>
- <u>TX Diversity indicator</u>	<u>FALSE</u>
- <u>Cells for measurement</u>	<u>Not Present</u>
- <u>Intra-frequency measurement quantity</u>	<u>Not Present</u>
- <u>Intra-frequency reporting quantity for RACH reporting</u>	<u>Not Present</u>
- <u>Maximum number of reported cells on RACH</u>	<u>Not Present</u>
- <u>Reporting information for state CELL_DCH</u>	<u>Not Present</u>
- <u>Inter-frequency measurement system information</u>	<u>Not Present</u>
- <u>Inter-RAT measurement system information</u>	<u>Not Present</u>
- <u>Traffic volume measurement system information</u>	
- <u>Traffic volume measurement ID</u>	<u>2</u>
- <u>Traffic volume measurement object list</u>	<u>Not Present</u>
- <u>Traffic volume measurement quantity</u>	<u>Average RLC Buffer Payload</u>
- <u>Traffic volume reporting quantity</u>	
- <u>Time Interval to take an average</u>	<u>200 msec</u>
- <u>RB buffer payload</u>	<u>FALSE</u>
- <u>RB buffer payload average</u>	<u>TRUE</u>
- <u>RB buffer payload variance</u>	<u>FALSE</u>
- <u>Traffic volume measurement reporting criteria</u>	<u>Not Present</u>
- <u>Measurement validity</u>	<u>CELL_DCH</u>
- <u>Measurement reporting mode</u>	
- <u>Measurement report transfer mode</u>	<u>Unacknowledged Mode</u>
- <u>Periodical or event trigger</u>	<u>Event Trigger</u>
- <u>Report criteria system Information</u>	<u>Traffic volume reporting criteria</u>
- <u>Event specific parameters</u>	
- <u>Event id</u>	<u>4B</u>
- <u>Reporting threshold</u>	<u>8K</u>
- <u>Time to trigger</u>	<u>Not Present</u>
- <u>Pending time after trigger</u>	<u>Not Present</u>
- <u>Tx interruption after trigger</u>	<u>Not Present</u>

MEASUREMENT REPORT (Step 6)

Information Element	Value/remark
Measurement identity	Check to see if set to 2
Measured Results	
- CHOICE measurement	Check to see if set to "traffic volume measured results list"
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is present
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is present
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is present
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is absent
- RLC buffer payload average	Check to see if this IE is present
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	
- UL transport channel causing event	DCH 5
- Traffic volume event identity	4B

MEASUREMENT CONTROL (Step 7)

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Set up
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RBe	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	Not Present
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	8
- Reporting interval	8 Sec
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 8,9)

Information Element	Value/remark
Measurement identity	2
Measured Results	Traffic volume measured results list
- CHOICE measurement	
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

MEASUREMENT CONTROL (Step 10)

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Release
Measurement reporting mode	Not Present
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

8.4.1.17.5 Test Requirement

After step 5, due to triggering of event 4B, the UE shall send MEASUREMENT REPORT message using unacknowledged mode of RLC. After step 7, UE shall send MEASUREMENT REPORT message using Acknowledged mode of RLC. After 8 seconds UE shall send second MEASUREMENT REPORT message. After step 10, the UE shall not send MEASUREMENT REPORT message.

8.4.1.18 Measurement Control and Report: Traffic volume measurement for transition from CELL_FACH state to CELL_DCH state

8.4.1.18.1 Definition

8.4.1.18.2 Conformance requirement

Upon transition from CELL_FACH to CELL_DCH state, the UE shall:

- retrieve each set of measurement control information of measurement type "traffic volume" stored;
- if the optional IE "measurement validity" for this measurement has not been included:
 - delete the measurement;
- if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states except CELL_DCH":
 - stop measurement reporting; and

- save the measurement to be used after the next transition to CELL_FACH state;
- if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
 - continue measurement reporting;
- if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "CELL_DCH":
 - resume this measurement and associated reporting;
- if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message when transiting to CELL_DCH state:
 - continue an ongoing traffic volume type measurement, assigned in System Information Block type 11 or System Information Block type 12.

Reference

3GPP TS 25.331 clause 8.4.1.7.4

8.4.1.18.3 Test Purpose

1. To confirm that the UE performs traffic volume measurements and the associated reporting when it enters CELL_DCH state from CELL_FACH state, and that such measurement contexts (and optionally, the reporting context) valid for CELL_DCH state have been previously stored.
2. To confirm that the UE shall continue to perform traffic volume measurement listed in the System Information Block type 11 or 12 messages, if no previously assigned measurements are present. The UE shall transmit MEASUREMENT REPORT messages if reporting conditions stated in System Information Block type 11 or 12 messages have been satisfied.

8.4.1.18.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108

Test Procedure

Initially the UE is in CELL_FACH state. MEASUREMENT CONTROL message is sent to the UE to establish traffic volume measurement context with optional IE "measurement validity" is not present. The UE shall perform measurement and reporting as assigned in MEASUREMENT CONTROL message. RADIO BEARER RECONFIGURATION procedure is used to take the UE from CELL_FACH state to CELL_DCH state. While entering CELL_DCH state from CELL_FACH state, the UE shall delete traffic volume measurement contexts if optional IE "measurement validity" is not present. So, in CELL_DCH state UE shall not perform traffic volume measurement and reporting. UE is taken to the CELL_FACH state from CELL_DCH state using RADIO BEARER RECONFIGURATION procedure. The UE shall not send MEASUREMENT REPORT message as measurement context is already deleted.

The behavior of the UE when moved from CELL_FACH state to CELL_DCH state and assigned traffic volume measurement context is present with IE "measurement validity" is set to "All But CELL_DCH state" or "CELL_DCH state" or "All states" is tested in a similar way.

When the UE is in CELL_FACH state, System Information is modified to assign traffic volume measurement and reporting to the UE. No previously assigned traffic volume measurement contexts are present in the UE. A SYSTEM INFORMATION CHANGE INDICATION is sent on FACH to inform the UE about the change. The UE is taken to CELL_DCH state from CELL_FACH state using RADIO BEARER RECONFIGURATION procedure. In CELL_DCH

state the UE shall continue traffic volume measurement and reporting as assigned in System Information. Traffic volume measurement and reporting is released by sending MEASUREMENT CONTROL message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MEASUREMENT CONTROL	Optional IE "measurement validity" is not included.
2		→	MEASUREMENT REPORT	
3		←	RADIO BEARER RECONFIGURATION	
4		→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall delete measurement context setup by MEASUREMENT CONTROL message (Step 1).
5				SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
6		←	RADIO BEARER RECONFIGURATION	
7		→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_FACH state.
8				SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
9		←	MEASUREMENT CONTROL	IE "measurement validity" is set to "All But CELL_DCH".
10		→	MEASUREMENT REPORT	.
11		←	RADIO BEARER RECONFIGURATION	
12		→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall stop traffic volume measurement setup by MEASUREMENT CONTROL message (Step 9).
13				SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
14		←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 9).
15		←	RADIO BEARER RECONFIGURATION	
16		→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_FACH state.

17	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "CELL_DCH".
18			SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
19	←	RADIO BEARER RECONFIGURATION	
20	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall start traffic volume measurement setup by MEASUREMENT CONTROL message (Step 17).
21	→	MEASUREMENT REPORT	
22	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 17)
23	←	RADIO BEARER RECONFIGURATION	
24	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_FACH state.
25	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "All states".
26	→	MEASUREMENT REPORT	
27	←	RADIO BEARER RECONFIGURATION	
28	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall continue traffic volume measurement setup by MEASUREMENT CONTROL message (Step 25).
29	→	MEASUREMENT REPORT	
30	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 25)
31	←	RADIO BEARER RECONFIGURATION	
32	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_FACH state.

33	←	MIB and SIB12 modified	Traffic volume measurements and reporting is assigned to Ues
33a	←	SYSTEM INFORMATION CHANGE INDICATION	
34	→	MEASUREMENT REPORT	
35	←	RADIO BEARER RECONFIGURATION	
36	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_DCH state from CELL_FACH state UE shall continue traffic volume measurement assigned in System Information (Step 33).
37	→	MEASUREMENT REPORT	
38	←	MEASUREMENT CONTROL	UE shall release measurement context assigned in System Information (Step 33).

Specific Message Content

MEASUREMENT CONTROL (Step 1)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Measurement validity	Not Present
- Report criteria	Periodical Reporting Criteria
- Reporting amount	8
- Reporting interval	8 Sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 2)

Information Element	Value/remark
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	20
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 3, 11, 19, 27, and 35)

Use the same message type found in [TS 34.108 clause 9](#)~~Annex A~~ with condition set to A4.

RADIO BEARER RECONFIGURATION (Step 6, 15, 23, and 31)

Use the same message type found in [TS 34.108 clause 9](#)~~Annex A~~ with condition set to A5.

MEASUREMENT CONTROL (Step 9)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Measurement validity	All But CELL_DCH

MEASUREMENT REPORT (Step 10)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	2

MEASUREMENT CONTROL (Step 14)

Information Element	Value/remark
Measurement Identity	2
Measurement Command	Release
Measurement reporting mode	Not Present
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT CONTROL (Step 17)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

Information Element	Value/remark
Measurement Identity	3
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Measurement validity	CELL_DCH

MEASUREMENT REPORT (Step 21)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	3

MEASUREMENT CONTROL (Step 22)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	3

MEASUREMENT CONTROL (Step 25)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

Information Element	Value/remark
Measurement Identity	4
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- UL transport channel identity	RACH
- UL transport channel identity	DCH :1
- UL transport channel identity	DCH : 5
- Measurement validity	All States

MEASUREMENT REPORT (Step 26, and 29)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4

MEASUREMENT CONTROL (Step 30)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	4

Master Information Block (Step 33)

Information Element	Value/Remarks
MIB Value Tag	2

System Information Block type 12 (Step 33) [\(FDD\)](#)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	Not used
- Use of HCS	CPICH RSCP
- Cell selection and reselection quality measure	Not Present
- Intra-frequency measurement system information	Remove no intra-frequency cells
- Intra-frequency measurement identity	1
- Intra-frequency cell info list	0 dB
- CHOICE intra-frequency cell removal	Not Present
- New intra-frequency cells	TRUE
- Intra-frequency cell id	FDD
- Cell info	Set to same code as used for cell 1
- Cell individual offset	Not Present
- Reference time difference to cell	FALSE
- Read SFN indicator	Not Present
- CHOICE mode	Not Present
- Primary CPICH info	Not Present
- Primary scrambling code	Set to same code as used for cell 1
- Primary CPICH Tx power	Not Present
- TX Diversity indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	Not Present
- Traffic volume measurement ID	5
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	True
- RB buffer payload	False
- RB buffer payload average	False
- RB buffer payload variance	False
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	All states
- Measurement reporting mode	Acknowledged Mode
- Measurement report transfer mode	Periodical
- Periodical or event trigger	Periodical reporting criteria
- Report criteria system Information	Infinity
- Reporting amount	8 seconds
- Reporting interval	

System Information Block type 12 (Step 1) (TDD)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	Not Present
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	Set to same as used for cell 1
- TX Diversity indicator	FALSE
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity for RACH reporting	Not Present
- Maximum number of reported cells on RACH	Not Present
- Reporting information for state CELL_DCH	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	
- Traffic volume measurement ID	5
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	TRUE
- RB buffer payload average	FALSE
- RB buffer payload variance	FALSE
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	All states
- Measurement reporting mode	
- Measurement report transfer mode	Acknowledged Mode
- Periodical or event trigger	Periodical
- Report criteria system Information	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	8 seconds

SYSTEM INFORMATION CHANGE INDICATION (Step 33a)

Information Element	Value/Remarks
Paging record list	Not Present
BCCH modification info	
- MIB Value Tag	3
- BCCH modification time	Not Present

MEASUREMENT REPORT (Step 34, and 37)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	5

MEASUREMENT CONTROL (Step 38)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	5

8.4.1.18.5 Test Requirement

The UE shall send MEASUREMENT REPORT message in steps 21, 29 and 37. The UE shall not send MEASUREMENT REPORT message in steps 5, 8, and 13.

8.4.1.19 Measurement Control and Report: Traffic volume measurement for transition from CELL_DCH to CELL_FACH state

8.4.1.19.1 Definition

8.4.1.19.2 Conformance requirement

Upon transition from CELL_DCH to CELL_FACH or CELL_PCH or URA_PCH state, the UE shall:

- 1> retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT_IDENTITY; and
 - 2> if the optional IE "measurement validity" for this measurement has not been included:
 - 3> delete the measurement associated with the variable MEASUREMENT_IDENTITY.
 - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL_DCH":
 - 3> stop measurement reporting;
 - 3> store the measurement associated with the variable MEASUREMENT_IDENTITY to be used after the next transition to CELL_DCH state.
 - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
 - 3> continue measurement reporting.
 - 2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL_DCH":
 - 3> resume this measurement and associated reporting.
- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL_FACH or CELL_PCH or URA_PCH states (stored in the variable MEASUREMENT_IDENTITY), which has the same identity as the one indicated in the IE "Traffic volume measurement system information":
 - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT_IDENTITY;
- 2> begin traffic volume measurement reporting according to the assigned information.

Reference

3GPP TS 25.331 clauses 8.4.1.6.6.

8.4.1.19.3 Test Purpose

1. The UE shall performs traffic volume measurements and the associated reporting when it enters CELL_FACH state from CELL_DCH state, and that such measurement contexts (and optionally, the reporting context) valid for CELL_FACH state have been previously stored.
2. The UE shall perform traffic volume measurement listed in the System Information Block type 11 or 12 messages, if no previously assigned measurements are present. The UE shall transmit MEASUREMENT REPORT messages if reporting conditions has been satisfied.

Reference

3GPP TS 25.331 clause 8.4.1.6.6

8.4.1.19.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

Initially the UE is in CELL_DCH state. MEASUREMENT CONTROL message is sent to the UE to establish traffic volume measurement context with optional IE "measurement validity" is not present. The UE shall perform measurement and reporting as assigned in MEASUREMENT CONTROL message. RADIO BEARER RECONFIGURATION procedure is used to take the UE from CELL_DCH state to CELL_FACH state. While entering CELL_FACH state from CELL_DCH state, the UE shall delete traffic volume measurement contexts if optional IE "measurement validity" is not present. So, in CELL_FACH state UE shall not perform traffic volume measurement and reporting. UE is taken to the CELL_DCH state from CELL_FACH state using RADIO BEARER RECONFIGURATION procedure. The UE shall not send MEASUREMENT REPORT message as measurement context is already deleted.

The behavior of the UE when moved from CELL_DCH state to CELL_FACH state and assigned traffic volume measurement context is present with IE "measurement validity" is set to "All But CELL_DCH state" or "CELL_DCH state" or "All states" is tested in a similar way.

When the UE is in CELL_DCH state, System Information is modified to assign traffic volume measurement and reporting to the UE. No previously assigned traffic volume measurement contexts are present in the UE. The UE is taken to CELL_FACH state from CELL_DCH state using RADIO BEARER RECONFIGURATION procedure. In CELL_FACH state the UE shall perform traffic volume measurement and reporting as assigned in System Information. Traffic volume measurement and reporting is released by sending MEASUREMENT CONTROL message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MEASUREMENT CONTROL	Optional IE "measurement validity" is not included.
2		→	MEASUREMENT REPORT	
3		←	RADIO BEARER RECONFIGURATION	

4	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall delete measurement context setup by MEASUREMENT CONTROL message (Step 1).
5			SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
6	←	RADIO BEARER RECONFIGURATION	
7	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_DCH state.
8			SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
9	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "All But CELL_DCH".
10			SS waits for 8 seconds to confirm that there is no MEASUREMENT REPORT message from UE.
11	←	RADIO BEARER RECONFIGURATION	
12	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall start traffic volume measurement setup by MEASUREMENT CONTROL message (Step 9).
13	→	MEASUREMENT REPORT	
14	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 9).
15	←	RADIO BEARER RECONFIGURATION	
16	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_DCH state.
17	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "CELL_DCH".
18	→	MEASUREMENT REPORT	
19	←	RADIO BEARER RECONFIGURATION	
20	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall stop traffic volume measurement setup by MEASUREMENT CONTROL message (Step 17).

21			SS waits for 8 seconds to confirm that there is no
22	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 17)
23	←	RADIO BEARER RECONFIGURATION	
24	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_DCH state.
25	←	MEASUREMENT CONTROL	IE "measurement validity" is set to "All states".
26	→	MEASUREMENT REPORT	
27	←	RADIO BEARER RECONFIGURATION	
28	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall continue traffic volume measurement setup by MEASUREMENT CONTROL message (Step 25).
29	→	MEASUREMENT REPORT	
30	←	MEASUREMENT CONTROL	UE shall release measurement context setup by MEASUREMENT CONTROL message (Step 25)
31	←	RADIO BEARER RECONFIGURATION	
32	→	RADIO BEARER RECONFIGURATION COMPLETE	UE is in CELL_DCH state.
33	←	SIB12 modified	Traffic volume measurements and reporting is assigned to UEs
34	←	RADIO BEARER RECONFIGURATION	
35	→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in CELL_FACH state from CELL_DCH state UE shall start traffic volume measurement as assigned in System Information (Step 33).
36	→	MEASUREMENT REPORT	
37	←	MEASUREMENT CONTROL	UE shall release measurement context assigned in System Information (Step 33).

Specific Message Content

MEASUREMENT CONTROL (Step 1)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Measurement validity	Not Present
- Report criteria	Periodical Reporting Criteria
- Reporting amount	8
- Reporting interval	8 Sec
Measurement reporting mode	
- Transfer Mode	Acknowledged mode
- Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 2)

Information Element	Value/remark
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	20
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 3, 11, 19, 27, and 34)

Use the same message type found in [TS 34.108 clause 9](#)~~Annex A~~ with condition set to A5.

RADIO BEARER RECONFIGURATION (Step 6, 15, 23, and 31)

Use the same message type found in [TS 34.108 clause 9](#)~~Annex A~~ with condition set to A4.

MEASUREMENT CONTROL (Step 9)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

Information Element	Value/remark
Measurement Identity Measurement Command - CHOICE measurement type - Measurement validity	2 Setup Traffic Volume Measurement All But CELL_DCH

MEASUREMENT REPORT (Step 13)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	2

MEASUREMENT CONTROL (Step 14)

Information Element	Value/remark
Measurement Identity Measurement Command Measurement reporting mode Additional measurement list DPCH compressed mode status	2 Release Not Present Not Present Not Present

MEASUREMENT CONTROL (Step 17)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

Information Element	Value/remark
Measurement Identity Measurement Command - CHOICE measurement type - Measurement validity	3 Setup Traffic Volume Measurement CELL_DCH

MEASUREMENT REPORT (Step 18)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	3

MEASUREMENT CONTROL (Step 22)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	3

MEASUREMENT CONTROL (Step 25)

The contents of this message are identical to MEASUREMENT CONTROL (Step 1) message with the following exceptions:

Information Element	Value/remark
Measurement Identity	4
Measurement Command	Setup
- CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- UL transport channel identity	RACH
- UL transport channel identity	DCH :1
- UL transport channel identity	DCH : 5
- Measurement validity	All States

MEASUREMENT REPORT (Step 26, and 29)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4

MEASUREMENT CONTROL (Step 30)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	4

System Information Block type 12 (Step 33) [\(FDD\)](#)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell_selection_and_reselection_quality	CPICH RSCP
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	Not Present
- Inter-RAT measurement system information	Not Present
- Traffic volume measurement system information	
- Traffic volume measurement ID	5
- Traffic volume measurement object list	Not Present
- Traffic volume measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RB buffer payload	True
- RB buffer payload average	False
- RB buffer payload variance	False
- Traffic volume measurement reporting criteria	Not Present
- Measurement validity	Not Present
- Measurement reporting mode	
- Measurement report transfer mode	Acknowledged Mode
- Periodical or event trigger	Periodical
- Report criteria system Information	Periodical reporting criteria
- Reporting amount	Infinity
- Reporting interval	8 seconds

System Information Block type 12 (Step 33) (TDD)

<u>Information Element</u>	<u>Value/remark</u>
<u>FACH measurement occasion info</u>	<u>Not Present</u>
<u>Measurement control system information</u>	
- <u>Use of HCS</u>	<u>Not used</u>
- <u>Intra-frequency measurement system information</u>	<u>Not Present</u>
- <u>Inter-frequency measurement system information</u>	<u>Not Present</u>
- <u>Inter-RAT measurement system information</u>	<u>Not Present</u>
- <u>Traffic volume measurement system information</u>	
- <u>Traffic volume measurement ID</u>	<u>5</u>
- <u>Traffic volume measurement object list</u>	<u>Not Present</u>
- <u>Traffic volume measurement quantity</u>	<u>RLC Buffer Payload</u>
- <u>Traffic volume reporting quantity</u>	
- <u>RB buffer payload</u>	<u>TRUE</u>
- <u>RB buffer payload average</u>	<u>FALSE</u>
- <u>RB buffer payload variance</u>	<u>FALSE</u>
- <u>Traffic volume measurement reporting criteria</u>	<u>Not Present</u>
- <u>Measurement validity</u>	<u>Not Present</u>
- <u>Measurement reporting mode</u>	
- <u>Measurement report transfer mode</u>	<u>Acknowledged Mode</u>
- <u>Periodical or event trigger</u>	<u>Periodical</u>
- <u>Report criteria system Information</u>	<u>Periodical reporting criteria</u>
- <u>Reporting amount</u>	<u>Infinity</u>
- <u>Reporting interval</u>	<u>8 seconds</u>

MEASUREMENT REPORT (Step 36)

The contents of this message are identical to MEASUREMENT REPORT (Step 2) message with the following exceptions:

Information Element	Value/Remarks
Measurement identity	5

MEASUREMENT CONTROL (Step 37)

The contents of this message are identical to MEASUREMENT CONTROL (Step 14) message with the following exceptions:

Information Element	Value/Remark
Measurement Identity	5

8.4.1.19.5 Test Requirement

The UE shall send MEASUREMENT REPORT message in steps 13, 29 and 36. The UE shall not send MEASUREMENT REPORT message in steps 5, 8, and 21.

CHANGE REQUEST

№ **34.123-1 CR 480** № rev - № Current version: **5.3.0** №

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the № symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	№ Corrections to Package 3 RRC test cases (clause 8.1)		
Source:	№ Panasonic		
Work item code:	№ TEI	Date:	№ 28/04/2003
Category:	№ F	Release:	№ Rel-5
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	№ 1. In the current test spec, IE "Primary CPICH Info" in RRC CONNECTION SETUP message (step 3) follows the default message in TS 34.108, which is set to the Primary CPICH of cell 1. However, this test case intends to test RRC connection establishment on another cell.
Summary of change:	№ 1. <u>TC 8.1.2.10</u> <ul style="list-style-type: none"> • IE "Primary CPICH Info" is added to RRC CONNECTION SETUP message (step 3), and is set to that of cell 4.
Consequences if not approved:	№ This test case could fail good UE.

Clauses affected:	№ 8.1.2.10										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table> Other core specifications № Test specifications O&M Specifications	Y	N		X		X		X		
Y	N										
	X										
	X										
	X										
Other comments:	№ Affects R'99, Rel-4 and Rel-5 UEs.										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modifications>**8.1.2.10 RRC connection establishment in CELL_DCH on another frequency****8.1.2.10.1 Definition****8.1.2.10.2 Conformance requirement**

1. The UE shall, in the transmitted RRC CONNECTION REQUEST message:

- 1> set the IE "Establishment cause" to the value of the variable ESTABLISHMENT_CAUSE;
- 1> set the IE "Initial UE identity" to the value of the variable INITIAL_UE_IDENTITY;
- 1> set the IE "Protocol error indicator" to the value of the variable PROTOCOL_ERROR_INDICATOR;
- 1> include a measurement report in the IE "Measured results on RACH", as specified in the IE "Intra-frequency reporting quantity for RACH reporting" and the IE "Maximum number of reported cells on RACH" in System Information Block type 11; and
- 1> include in the IE "Measured results on RACH" all requested reporting quantities for cells for which measurements are reported; and
- 1> take care that the maximum allowed message size is not exceeded when forming the IE "Measured results on RACH".

2. The UE shall compare the value of the IE "Initial UE identity" in the received RRC CONNECTION SETUP message with the value of the variable INITIAL_UE_IDENTITY.

...

If the values are identical, the UE shall:

...

- 1> if the UE will be in the CELL_DCH state at the conclusion of this procedure:
- 2> perform the physical layer synchronisation procedure A as specified in [29] (FDD only).

Reference

3GPP TS 25.331 clauses 8.1.3.3, 8.1.3.6

8.1.2.10.3 Test Purpose

To confirm that the UE manages to establish an RRC CONNECTION on another frequency when so required by SS in the RRC CONNECTION SETUP message.

8.1.2.10.4 Method of test**Initial condition**

System simulator: 2 cells – Cell 1 on UARFCN 1 and Cell 4 on UARFCN 4.

UE: "Registered idle mode on CS" (state 2) or "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial state shall be "Registered idle mode on CS/PS" (state 7).

Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

System Information Block type 11

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
SIB12 indicator	FALSE
Measurement control system information	
- Intra-frequency measurement system information	No report
- Intra-frequency reporting quantity for RACH reporting	FDD
- SFN-SFN observed time difference reporting indicator	CPICH Ec/No
- CHOICE mode	Current Cell
- Reporting quantity	Not present
- Maximum number of reported cells on RACH	
- Reporting information for state CELL_DCH	

System Information Block type 11 (TDD)

Use same message sub-clause 6.1 of TS34.108, with following exception:

Information Element	Value/remark
- SIB12 indicator	FALSE
- Intra-frequency measurement system information	Not Present
- Inter-frequency measurement system information	
- Inter-frequency cell info list	
- New inter-frequency cell id	
- Inter frequency cell id	4
- Frequency info	
- CHOICE mode	TDD
- UARFCN (Nt)	Reference to table 6.1 of TS34.108 for Cell 4
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	Reference clause 6.1, TS34.108, Default settings for cell 4
- Cell parameters ID	Reference clause 6.1, TS34.108, Default settings for cell 4
- Primary CPICH TX power	Not present
- Timeslot list	Not present
- Cell Selection and Re-selection Info	Not present For neighbouring cell, if HCS is not used and all the parameters in cell selection and re-selection info are Default value, this IE is absent.
- Qoffset1 _{s,n}	0dB
- Maximum allowed UL TX power	Reference to table 6.1.6, TS 34.108
- HCS neighbouring cell information	Not present
- CHOICE mode	TDD
- Qrxlevmin	Reference to table 6.1.6, TS 34.108
- Cells for measurement	Not present

Test procedure

The UE is initially in idle mode and is camping on cell 1. SIB 11 is broadcast in cell 1.

SS prompts the operator to make an outgoing call of a supported traffic class. The UE shall transmit an RRC CONNECTION REQUEST on the CCCH, and SS replies with the RRC CONNECTION SETUP, in which the IEs are

set as described below. The UE shall send the RRC CONNECTION SETUP COMPLETE back to SS in cell 4 on the DPCH described in the RRC CONNECTION SET UP message received from the SS. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	→		RRC CONNECTION REQUEST	By outgoing call operation
2		←	RRC CONNECTION SETUP	Indicating frequency of cell 4 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 4 for FDD.
3				The UE configures the layer 2 and layer 1.
4	→		RRC CONNECTION SETUP COMPLETE	This message is sent to SS on the frequency indicated in the RRC CONNECTION SETUP message
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific message content

All messages indicated below shall use the same content as found in TS 34.108 clause 6.1 with the following exceptions:

RRC CONNECTION REQUEST (Step 2) (FDD)

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
Measured results on RACH	Check that the Ec/No for the cell 1 is reported.

RRC CONNECTION REQUEST (Step 2) (TDD)

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
Measured results on RACH	Check that the P-CCPCH RSCP for the cell 1 is reported.

RRC CONNECTION SETUP (Step 3) (FDD)

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd) Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Not present UARFCN downlink of cell 4 Set to same code as used for cell 4

RRC CONNECTION SETUP (Step 3) (TDD)

Use the same message type found in clause 9 of TS 34.108, with the following exception.

Information Element	Value/remark
Frequency info - UARFCN(Nt)	UARFCN of the cell 4

8.1.2.10.5 Test requirement

In step 4, the UE shall send the RRC CONNECTION SETUP COMPLETE message on the frequency indicated in the RRC CONNECTION SETUP message.

<End of Modifications>

CR-Form-v7

CHANGE REQUEST

34.123-1 CR 481 # rev - # Current version: **5.3.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# Corrections to Package 4 RRC test cases (clause 8.2)		
Source:	# Panasonic		
Work item code:	# TEI	Date:	# 28/04/2003
Category:	# F	Release:	# Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	2	(GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R96	(Release 1996)
	B (addition of feature),	R97	(Release 1997)
	C (functional modification of feature)	R98	(Release 1998)
	D (editorial modification)	R99	(Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Rel-4	(Release 4)
		Rel-5	(Release 5)
		Rel-6	(Release 6)

Reason for change:	#	<ol style="list-style-type: none"> 1. "0" is not a valid value for IE "TGD". 2. IE "Read SFN Indicator" shall be set to TRUE for neighbouring cell. 3. Editorial errors.
Summary of change:	#	<ol style="list-style-type: none"> 1. <u>TC 8.2.6.37</u> <ul style="list-style-type: none"> • IE "TFCI Combining Indicator" is MP. It is set to FALSE. • IE "TGD" is set to "undefined". • IE "Read SFN Indicator" is set to TRUE for neighbouring cells. • Editorial corrections.
Consequences if not approved:	#	This test case could fail good UE.

Clauses affected:	#	8.2.6.37				
Other specs affected:	#	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications #	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Y	N					
<input type="checkbox"/>	<input checked="" type="checkbox"/>					
		<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table> Test specifications #	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
<input type="checkbox"/>	<input checked="" type="checkbox"/>					
		<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table> O&M Specifications #	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
<input type="checkbox"/>	<input checked="" type="checkbox"/>					
Other comments:	#	Affects R'99, Rel-4 and Rel-5 UEs.				

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Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modifications>**8.2.6.37 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Hard handover to another frequency with timing re-initialised)****8.2.6.37.1 Definition****8.2.6.37.2 Conformance requirement**

In case the reconfiguration procedure is used to remove all existing RL(s) in the active set while new RL(s) are established the UE shall:

- 1> perform the physical layer synchronisation procedure A as specified in TS 25.214
- 1> apply the hard handover procedure as specified (below);
- 1> be able to perform this procedure even if no prior UE measurements have been performed on the target cell and/or frequency.

...

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

...

When performing hard handover with change of frequency, the UE shall:

- 1> stop all intra-frequency and inter-frequency measurements on the cells listed in the variable CELL_INFO_LIST. Each stopped measurement is restarted when a MEASUREMENT CONTROL message is received with the corresponding measurement identity.

...

When the UE is in CELL_DCH state and receives any of the messages causing the UE to perform a hard handover, the UE shall check the IE "Timing indication" in that message and:

- 1> if IE "Timing indication" has the value "initialise" (i.e. timing re-initialised hard handover):
 - 2> read SFN on target cell identified by the first radio link listed in the IE "Downlink information per radio link list" included in that message;
 - 2> set the CFN according to the following formula:
 - 3> for FDD:

$$CFN = (SFN - (DOFF \text{ div } 38400)) \text{ mod } 256$$

where the formula gives the CFN of the downlink DPCH frame which starts at the same time as or which starts during the PCCPCH frame with the given SFN.

...

If the IE "DPCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is not included, the UE shall:

- 1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag" in the variable TGPS_IDENTITY):
 - 2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:

- 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time" received in this message, when the new configuration received in this message is taken into use;

...

If the IE "Downlink DPCH info common for all RL" is included in a message used to perform a Timing re-initialised hard handover or the IE "Downlink DPCH info common for all RL" is included in a message other than RB SETUP used to transfer the UE from a state different from Cell_DCH to Cell_DCH, and ciphering is active for any radio bearer using RLC-TM, the UE shall, after having activated the dedicated physical channels indicated by that IE:

- 1> set the 20 MSB of the HFN component of COUNT-C for TM-RLC to the value of the latest transmitted IE "START" or "START List" for this CN domain, while not incrementing the value of the HFN component of COUNT-C at each CFN cycle; and
- 1> set the remaining LSBs of the HFN component of COUNT-C to zero;
- 1> start to perform ciphering on the radio bearer in lower layers while not incrementing the HFN;
- 1> include the IE "COUNT-C activation time" in the response message and specify a CFN value other than the default, "Now" for this IE;
- 1> calculate the START value according to subclause 8.5.9;
- 1> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the response message;
- 1> at the CFN value as indicated in the response message in the IE "COUNT-C activation time":
 - 2> set the 20 MSB of the HFN component of the COUNT-C variable to the START value as indicated in the IE "START list" of the response message for the relevant CN domain; and
 - 2> set the remaining LSBs of the HFN component of COUNT-C to zero;
 - 2> increment the HFN component of the COUNT-C variable by one;
 - 2> set the CFN component of the COUNT-C to the value of the IE "COUNT-C activation time" of the response message. The HFN component and the CFN component completely initialise the COUNT-C variable;
 - 2> step the COUNT-C variable, as normal, at each CFN value, i.e. the HFN component is no longer fixed in value but incremented at each CFN cycle.

Reference

3GPP TS 25.331 clauses 8.2.2.3, 8.2.2.4, 8.3.5, 8.5.15.2, 8.6.6.15, 8.6.6.28

8.2.6.37.3 Test Purpose

To confirm that the UE is able to perform a hard-handover with change of frequency, with and without prior measurements on the target frequency.

To confirm that the UE answers with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message when the procedure has been initiated with the PHYSICAL CHANNEL RECONFIGURATION message.

To confirm that the UE stops intra-frequency measurements after the inter-frequency handover has been performed, until a MEASUREMENT CONTROL message is received from the SS.

To confirm that the UE computes as it shall the CFN to be used after the handover.

To confirm that the UE deactivates compressed mode (if required) when it has been ordered to do so in the PHYSICAL CHANNEL RECONFIGURATION message.

To confirm that the UE includes the IE "COUNT-C activation time" and the IE "START list" (in the IE "Uplink counter synchronisation info") in the response message if ciphering is active for any radio bearer using RLC-TM.

8.2.6.37.4 Method of test

Initial Condition

System Simulator: 5 cells – Cell 1 and cell 2 on frequency f_1 , cell 4 and cell 5 on frequency f_2 , and cell 6 on frequency f_3 . Cells 2 and 5 shall have the same primary scrambling code.

UE: "CS-DCCH+DTCH_DCH" (state 6-9) or "PS-DCCH+DTCH_DCH" (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the test case shall be run twice, once starting from state 6-9, once starting from state 6-10. Ciphering shall be activated.

Related ICS/IXIT statements

- Compressed mode required yes/no

Test Procedure

Table 8.2.6.37-1 illustrates the downlink power to be applied for the 5 cells, as well as the frequency and scrambling code for each cell.

Table 8.2.6.37-1

Parameter	Unit	Cell 1			Cell 2			Cell 4			Cell 5			Cell 6		
Frequency		f_1			f_1			f_2			f_2			f_3		
Scrambling code		Scrambling code 1			Scrambling code 2			Scrambling code 3			Scrambling code 2			Scrambling code 4		
		T0	T1	T2	T0	T1	T2	T0	T1	T2	T0	T1	T2	T0	T1	T2
CPICH Ec	dBm/3.8 4 MHz	-60	-60	-75	-95	-	-	-	-	-	-60	-60	-	-50	-	-50

The UE is initially in CELL_DCH, and has only cell 1 in its active set.

At instant T1, the downlink power is changed according to what is shown in table 8.2.6.37 -1. Cell 2 should then trigger event 1a as has been configured through the default System Information Block Type 11. The UE shall thus send a MEASUREMENT REPORT to the SS, triggered by cell 2.

The SS adds then cell 2 to the active set of the Ue, by sending an ACTIVE SET UPDATE message to the UE. The UE shall answer with an ACTIVE SET UPDATE COMPLETE message.

The SS configures then compressed mode (if required), to prepare the UE for inter-frequency measurements, by sending a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE. Compressed mode is started at the same time in that message (if required).

At instant T2, the downlink power is changed according to what is shown in table 8.2.6.37-1. Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

SS then transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE on DCCH using AM-RLC, to order it to perform timing reinitialised inter-frequency handover to cell 4 on frequency f_2 . The UE is also ordered to stop compressed mode (if required) after the handover.

The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS when the inter-frequency handover has succeeded. In case the initial condition was CS-DCCH+DTCH_DCH, that message shall contain the IEs "COUNT-C activation time" and the IE "START list" (in the IE "Uplink counter synchronisation info"), indicating to the SS when and from which value to start incrementing the HFN part of the COUNT-C variable used for ciphering. The SS shall restart incrementing the HFN part of the COUNT-C variable from the value specified in the IE START from the CFN indicated in the IE COUNT-C activation time.

The SS then waits for 20 seconds, and checks that no MEASUREMENT REPORT is received from the UE.

The SS sends then a MEASUREMENT CONTROL message to the UE, to modify the intra-frequency cell info list of the UE. About 640 ms after, a MEASUREMENT REPORT message shall be received from the UE, triggered by cell 5. Subsequent MEASUREMENT REPORT messages shall be received at 4 seconds interval.

Only if the UE requires compressed mode for performing interfrequency measurements, the SS sends a MEASUREMENT CONTROL message to the UE that sets up inter-frequency measurements, but does not activate compressed mode in that message. It waits then for 20 seconds, and checks that no MEASUREMENT REPORT message triggered by cell 6 is received.

Independent of the UE requiring compressed mode, the SS then continues by sending a PHYSICAL CHANNEL RECONFIGURATION message to the UE on DCCH using AM-RLC, to order it to perform timing reinitialised inter-frequency handover to cell 6 on frequency f_3 .

The UE shall then transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS when the inter-frequency handover has succeeded. In case the initial condition was CS-DCCH+DTCH_DCH, that message shall contain the IEs "COUNT-C activation time" and the IE "START list" (in the IE "Uplink counter synchronisation info"), indicating to the SS when and from which value to start incrementing the HFN part of the COUNT-C variable used for ciphering.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS changes the power of the cells according to column T1 in table 8.2.6.37-1
2		→	MEASUREMENT REPORT	Event 1a is triggered by cell 2 in the UE, which sends a MEASUREMENT REPORT message to the SS
3		←	ACTIVE SET UPDATE	The SS adds cell 2 to the active set of the UE.
4		→	ACTIVE SET UPDATE COMPLETE	The UE answers with an ACTIVE SET UPDATE COMPLETE message to the SS
5		←	PHYSICAL CHANNEL RECONFIGURATION	The SS downloads the compressed mode parameters in the UE (if required).
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of the compressed mode parameters (only if compressed mode was configured).
7		←	MEASUREMENT CONTROL	The SS configures inter-frequency measurements in the UE, and activates compressed mode (if required).
8				The SS changes the power of the cells according to column T2 in table 8.2.6.37-1.
9		→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
10		←	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform timing re-initialised inter-frequency handover to cell 4 on frequency f_2 .

11	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After the UE has succeeded in performing the inter-frequency handover, it shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using the new configuration.
12			The SS waits for 20 seconds and monitors that no MEASUREMENT REPORT message is received from the UE.
13	←	MEASUREMENT CONTROL	The SS updates the list of intra-frequency cells in the UE.
14	→	MEASUREMENT REPORT	Cell 5 triggers event 1a in the UE, which sends a MEASUREMENT REPORT message to the SS. Subsequent MEASUREMENT REPORT messages shall be received from the UE at 4 seconds interval.
15	←	MEASUREMENT CONTROL	The SS sets up an inter-frequency measurement in the UE (if compressed mode is required), but does not activate compressed mode.
16			The SS waits for 20 seconds and monitors that no MEASUREMENT REPORT message is received from the UE.
17	←	PHYSICAL CHANNEL RECONFIGURATION	The SS orders the UE to perform timing re-initialised inter-frequency handover to cell 6 on frequency f_3 .
18	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	After the UE has succeeded in performing the inter-frequency handover, it shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS using the new configuration.

Specific Message Content

All messages indicated below shall use the same content as described in default message content, with the following exceptions:

MEASUREMENT REPORT (Step 2)

Information Element	Value/Remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity Measured Results - Intra-frequency measured results - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss	1 Check that this IE is absent Check that this IE is absent Check that this IE is absent Scrambling code 1 (or scrambling code 2) Check that this IE is absent Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent Check that this IE is present and includes IE COUNT-C-SFN frame difference Scrambling code 2 (or scrambling code 1 if the previous scrambling code included by the UE was scrambling code 2) Check that this IE is absent Check that this IE is present Check that this IE is absent
Measured results on RACH Additional measured results	Check that this IE is absent Check that this IE is absent
Event results - Intra-frequency measurement event results - Intra-frequency event identity - Cell measurement event results - Primary CPICH info - Primary scrambling code	1a Scrambling code 2

ACTIVE SET UPDATE (Step 3)

The message to be used in this test is defined in TS 34.108, clause 9, with the following exceptions:

Information Element	Value/Remark
Radio link addition information - Primary CPICH Info - Primary Scrambling Code - Downlink DPCH info for each RL - CHOICE mode - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code - Secondary scrambling code - Spreading factor - Code Number - Scrambling code change - TPC Combination Index - SSDT Cell Identity - Close loop timing adjustment mode - TFCI Combining Indicator - SCCPCH information for FACH	Scrambling code 2 Reference to TS34.108 clause 6.10 Parameter Set FDD P-CPICH can be used. Calculated value from Cell synchronisation information Not Present Not Present Refer to TS 34.108 clause 6.10.2.4 "Typical radio parameter sets" Any value between 0 and Spreading factor-1 (use different values for each DPCH in case several DPCHs are allocated to the UE). Not Present 0 Not Present Not Present FALSE Not Present Not Present

PHYSICAL CHANNEL RECONFIGURATION (Step 5 for the CS case)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE channel requirement	Not Present
CHOICE mode	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Uplink compressed mode method	SF/2 (or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information per radio link list	2 radio links
Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	Scrambling code 1
- Cell ID	Not present
- PDSCH with SHO DCH info	Not present
- PDSCH code mapping	Not present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	0

<ul style="list-style-type: none"> - Secondary CPICH info - DL channelisation code <ul style="list-style-type: none"> - Secondary scrambling code - Spreading factor - Code number - Scrambling code change - TPC combination index - SSDT cell identity - Closed loop timing adjustment mode <p>Downlink information for each radio link</p> <ul style="list-style-type: none"> - CHOICE mode <ul style="list-style-type: none"> - Primary CPICH info - Cell ID - PDSCH with SHO DCH info - PDSCH code mapping - Downlink DPCH info for each RL <ul style="list-style-type: none"> - CHOICE mode <ul style="list-style-type: none"> - Primary CPICH usage for channel estimation - DPCH frame offset - Secondary CPICH info - DL channelisation code <ul style="list-style-type: none"> - Secondary scrambling code - Spreading factor - Code number - Scrambling code change - TPC combination index 	<p>Not present</p> <p>Not present Reference to TS34.108 clause 6.10 Parameter Set Same as the code currently allocated to the UE in cell 1</p> <p>Code change 0</p> <p>Not present Not present</p> <p>FDD Scrambling code 2 Not present Not present Not present</p> <p>FDD Primary CPICH may be used</p> <p>0 Not present</p> <p>Not present Reference to TS34.108 clause 6.10 Parameter Set Same as the code currently allocated to the UE in cell 2</p> <p>No code change 0</p>
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PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 5 for the PS case)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	HLS(or not sent, depending on the UE capability)
- Uplink compressed mode method	HLS(or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 7)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	2 inter-frequency cells
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Inter-frequency cell id	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Not present
- Primary Scrambling Code	Scrambling code 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	
- UE autonomous update	On with no reporting
- Non autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2b
- Threshold used frequency	-70 dBm

- W used frequency	0.0
- Hysteresis	1.0 dB
- Time to trigger	100 ms
- Reporting cell status	Report cells within monitored and/or virtual active set on non-used frequency
- Maximum number of reported cells per reported non-used frequency	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-65 dBm
- W non-used frequency	0
DPCH compressed mode status info	
- TGPS reconfiguration CFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$

MEASUREMENT REPORT (Step 9)

Information Element	Value/Remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value. 2
Measurement identity Measured Results - Inter-frequency measured results list - Frequency info -CHOICE mode - UARFCN uplink - UARFCN downlink - UTRA carrier RSSI - Inter-frequency cell measurement results - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss	FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 Check that this IE is absent Check that the value of this IE is set to 2 cells reported Check that this IE is absent Check that this IE is absent Check that this IE is absent Check that the value of this IE is set to Scrambling code 3 (or scrambling code 2) Check that this IE is absent Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent Check that this IE is absent Check that the value of this IE is set to Scrambling code 2 (or scrambling code 3 if the previous scrambling code included by the UE was scrambling code 2) Check that this IE is absent Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent
Measured results on RACH Additional measured results	Check that this IE is absent Check that this IE is absent
Event results - Inter-frequency measurement event results - Inter-frequency event identity - Inter-frequency cells - Frequency info -CHOICE mode - UARFCN uplink - UARFCN downlink - Non freq related measurement event results - Primary CPICH info - Primary scrambling code	2b FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 Check that the value of this IE is set to Scrambling code 3

PHYSICAL CHANNEL RECONFIGURATION (Step 10)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	FDD
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not present
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_2
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing indication	Initialise
- CFN-targetSFN frame offset	0
- Downlink DPCH power control information	Not Present
- Downlink rate matching restriction information	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10
	Parameter Set
- Fixed or flexible position	Reference to TS34.108 clause 6.10
	Parameter Set
- TFCl existence	Reference to TS34.108 clause 6.10
	Parameter Set
- CHOICE SF	Reference to TS34.108 clause 6.10
	Parameter Set
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence	
- configuration parameters	Not present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Arbitrary value between 0..306688 by step of
	512
Downlink information per radio link list	1 radio link
Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	Scrambling code 3
- Cell ID	Not present
- PDSCH with SHO DCH info	Not present
- PDSCH code mapping	Not present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel	Primary CPICH may be used
- estimation	
- DPCH frame offset	Set to value of DPCH Frame Offset modulo
	38400
- Secondary CPICH info	Not present
- DL channelisation code	Reference to TS34.108 clause 6.10
	Parameter Set
- Secondary scrambling code	Not present
- Spreading factor	Reference to TS34.108 clause 6.10
	Parameter Set
- Code number	Any value between 0 and Spreading factor-1
- Scrambling code change	Not Present
- TPC combination index	0
- SSDT cell identity	Not present
- Closed loop timing adjustment mode	Not present

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Steps 11 and 18 for the CS case)

Information Element	Value/Remark
Message Type	
RRC transaction identifier	Checked to see if it is set to identical value of the same IE in the downlink PHYSICAL CHANNEL RECONFIGURATION message
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Uplink integrity protection activation info	Check that not present
CHOICE mode	FDD
COUNT-C activation time	Check that this IE shall be present
Radio bearer uplink ciphering activation time info	Check that not present
Uplink counter synchronisation info	Check that present
>RB with PDCP information list	Check that absent
>START list	Check that this IE is set to 1
>>CN Domain identity	Check that this IE is set to CS Domain
>>START	Not checked

PHYSICAL CHANNEL RECONFIGURATION COMPLETE (Steps 11 and 18 for the PS case)

Information Element	Value/Remark
Message Type	
RRC transaction identifier	Checked to see if it is set to identical value of the same IE in the downlink PHYSICAL CHANNEL RECONFIGURATION message
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Uplink integrity protection activation info	Check that not present
CHOICE mode	FDD
COUNT-C activation time	Check that not present
Radio bearer uplink ciphering activation time info	Check that not present
Uplink counter synchronisation info	Check that not present

MEASUREMENT CONTROL (Step 13)

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement Reporting Mode	Not present
Additional measurements list	Not present
CHOICE measurement type	Intra-frequency measurement
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove all intra-frequency cells
- New intra-frequency info list	2 new intra-frequency cells
- Intra-frequency cell id	4
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 3 (for cell 4)
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells selection and Re-selection info	Not Present
- Intra-frequency cell id	5
- Cell info	
- Cell individual offset	10 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 2 (for cell 5)
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells selection and Re-selection info	Not Present
- Cells for measurement	Not Present
- Intra-frequency measurement quantity	Not Present
- Intra-frequency reporting quantity	Not Present
- Reporting cell status	Not Present
- Measurement validity	Not Present
- CHOICE report criteria	Not Present

MEASUREMENT REPORT (Step 14)

Information Element	Value/Remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number	The presence of this IE is dependent on Ixit statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent. This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity Measured Results - Intra-frequency measured results - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss	1 Check that this IE is absent Check that this IE is absent Check that this IE is absent Check that this IE is set to Scrambling code 2 (or scrambling code 3) Check that this IE is absent Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent Check that this IE is present and includes IE COUNT-C-SFN frame difference Check that this IE is set to Scrambling code 3 (or scrambling code 2 if scrambling code 3 was indicated first) Checked that this IE is absent Checked that this IE is present Checked that this IE is absent
Measured results on RACH Additional measured results	Checked that this IE is absent Checked that this IE is absent
Event results - Intra-frequency measurement event results - Intra-frequency event identity - Cell measurement event results - Primary CPICH info - Primary scrambling code	1a Check that this IE is set to Scrambling code 2

MEASUREMENT CONTROL (Step 15)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	2 inter-frequency cells
- Inter-frequency cell id	1
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f ₁
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f ₁
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 1
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Inter-frequency cell id	2
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f ₁
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f ₁
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	TRUEFALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Not present
- Primary Scrambling Code	Scrambling code 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	

- UE State	CELL_DCH
- Inter-frequency set update	On with no reporting
- UE autonomous update	Not present
- Non autonomous update mode	Inter-frequency measurement reporting criteria
- CHOICE report criteria	
- Parameters required for each event	
- Inter-frequency event identity	2c
- Threshold used frequency	Not present
- W used frequency	Not present
- Hysteresis	1.0 dB
- Time to trigger	100 ms
- Reporting cell status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2
- Parameters required for each non-used frequency	1 frequency
- Threshold non used frequency	-90 dBm
- W non-used frequency	0.0
DPCH compressed mode status info	Not present

PHYSICAL CHANNEL RECONFIGURATION (Step 17)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	
- CHOICE mode	FDD
- UARFCN uplink (Nu)	Not Present
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_3
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- Timing indication	Initialise
- CFN-targetSFN frame offset	0
- Downlink DPCH power control information	Not Present
- Downlink rate matching restriction information	Not Present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Fixed or flexible position	Reference to TS34.108 clause 6.10 Parameter Set
- TFCl existence	Reference to TS34.108 clause 6.10 Parameter Set
- CHOICE SF	Reference to TS34.108 clause 6.10 Parameter Set
- DPCH compressed mode info	Not present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Arbitrary set to value 0..306688 by step of 512
Downlink information per radio link list	1 radio link
Downlink information for each radio link	
- CHOICE mode	FDD
- Primary CPICH info	Scrambling code 4
- Cell ID	Not present
- PDSCH with SHO DCH info	Not present
- PDSCH code mapping	Not present
- Downlink DPCH info for each RL	
- CHOICE mode	FDD
- Primary CPICH usage for channel estimation	Primary CPICH may be used
- DPCH frame offset	Set to value of DPCH Frame Offset modulo 38400
- Secondary CPICH info	Not present
- DL channelisation code	Reference to TS34.108 clause 6.10 Parameter Set
- Secondary scrambling code	Not present
- Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
- Code number	Any value between 0 and Spreading factor-1
- Scrambling code change	Not Present
- TPC combination index	0
- SSDT cell identity	Not present
- Closed loop timing adjustment mode	Not present

8.2.6.37.5 Test Requirement

After step 1, the UE shall send a MEASUREMENT REPORT message triggered by event 1a for cell 2.

After step 3, the UE shall send an ACTIVE SET UPDATE COMPLETE message to acknowledge that it has added cell 2 to its active set.

After step 5, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of the compressed mode parameters (only if compressed mode is required), that were sent in the PHYSICAL CHANNEL RECONFIGURATION message of step 4.

After step 8, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2 . In that message, cell 4 shall be the only cell included in the IE event results.

After step 10, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS in cell 4 to acknowledge the successful timing re-initialised inter-frequency handover, and in case the UE was in state 6-9 as defined in clause 7.4 of 34.108 as initial condition to the test, the IEs "COUNT-C activation time" and "START list" (in the IE "Uplink counter synchronisation info") shall be included in that message. The UE shall also start incrementing the HFN part of the COUNT-C variable from the value specified in the IE START from the CFN indicated in the IE COUNT-C activation time.

After step 11, the UE shall not send any MEASUREMENT REPORT message triggered by event 1a for cell 5.

After step 13, the UE send a MEASUREMENT REPORT message triggered by event 1a for cell 5.

For UE's that require compressed mode for performing interfrequency measurements, after step 15 the UE shall not send any MEASUREMENT REPORT message triggered by event 2c for frequency 1.

After step 17, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS in cell 4 to acknowledge the successful timing re-initialised inter-frequency handover, and in case the UE was in state 6-9 as defined in clause 7.4 of 34.108 as initial condition to the test, the IEs "COUNT-C activation time" and "START list" (in the IE "Uplink counter synchronisation info") shall be included in that message.

<End of Modifications>

CHANGE REQUEST

⌘ **34.123-1 CR 485** ⌘ rev **-** ⌘ Current version: **5.3.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to 34.123-1 REL-5; Removal of package 4 and low priority redundant RRC Reconfiguration failure cases				
Source:	⌘ Ericsson				
Work item code:	⌘ TEI	Date:	⌘ May 2003		
Category:	⌘ F	Release:	⌘ REL-5		
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:		
	F (correction)		2	(GSM Phase 2)	
	A (corresponds to a correction in an earlier release)		R96	(Release 1996)	
	B (addition of feature),		R97	(Release 1997)	
	C (functional modification of feature)		R98	(Release 1998)	
	D (editorial modification)		R99	(Release 1999)	
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4	(Release 4)	
			Rel-5	(Release 5)	
			Rel-6	(Release 6)	

Reason for change:	⌘ There should be no need to test all the different failure cases for all the different procedures, when the method of test and tested UE functionality is the same and only the message types differ. More information can be found in T1-030545 "Report from e-mail discussion on Removal of redundant RRC reconfiguration failure cases".
Summary of change:	⌘ <u>The following test cases are removed:</u>
	8.2.1.5 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Physical channel Failure and cell reselection)
	8.2.1.6 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)
	8.2.1.15 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)
	8.2.2.3 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)
	8.2.2.5 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)
	8.2.2.6 Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

- 8.2.2.12 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old configuration)
- 8.2.2.13 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)
- 8.2.2.14 Radio Bearer Reconfigure from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)
- 8.2.2.15 Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)
- 8.2.3.2 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Unsupported configuration)
- 8.2.3.3 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Physical channel failure and reversion to old configuration)
- 8.2.3.4 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Physical channel failure and cell reselection)
- 8.2.3.5 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)
- 8.2.3.6 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)
- 8.2.3.10 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)
- 8.2.3.12 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)
- 8.2.3.13 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)
- 8.2.3.14 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)
- 8.2.4.2 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Unsupported configuration)
- 8.2.4.5 Transport Channel Reconfiguration from CELL_DCH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)
- 8.2.4.6 Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)
- 8.2.4.11 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)
- 8.2.4.12 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old channel)
- 8.2.4.13 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)
- 8.2.4.14 Transport Channel Reconfiguration from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

- 8.2.4.15 Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)
- 8.2.6.3 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Failure (Physical channel failure and reversion to old channel)
- 8.2.6.4 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Failure (Physical channel failure and cell reselection)
- 8.2.6.10 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)
- 8.2.6.13 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

Consequences if not approved: ☞ Unnecessary test cases remain.

Clauses affected: ☞ 8.2.1.5, 8.2.1.6, 8.2.1.15, 8.2.2.3, 8.2.2.5, 8.2.2.6, 8.2.2.12, 8.2.2.13, 8.2.2.14, 8.2.2.15, 8.2.3.2, 8.2.3.3, 8.2.3.4, 8.2.3.5, 8.2.3.6, 8.2.3.10, 8.2.3.12, 8.2.3.13, 8.2.3.14, 8.2.4.2, 8.2.4.5, 8.2.4.6, 8.2.4.11, 8.2.4.12, 8.2.4.13, 8.2.4.14, 8.2.4.15, 8.2.6.3, 8.2.6.4, 8.2.6.10, 8.2.6.13 (contents removed and headings set to void)

Other specs affected:	☞	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Y</td><td>N</td></tr><tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr></table>	Y	N	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications Test specifications O&M Specifications	☞	TS 34.123-2
		Y	N								
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Other comments: ☞ Affects REL-5, REL-4 and R99.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☞ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.1.5 ~~Void~~Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: Failure (Physical channel Failure and cell reselection)

8.2.1.5.1 ~~Definition~~

8.2.1.5.2 ~~Conformance requirement~~

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

- 1> revert to the configuration prior to the reception of the message (old configuration);
- 1> if the old configuration includes dedicated physical channels (CELL_DCH state) and the UE is unable to revert to the old configuration:
 - 2> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "radio link failure";
 - 2> after the cell update procedure has completed successfully:
 - 3> proceed as below:
 - ...
- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.
- ...

If the CELL_UPDATE_CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- includes "Physical channel information elements":

the UE shall:

- 1> transmit a PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE as response message using AM RLC.

...

The UE shall:

- 1> in case of reception of a RADIO_BEARER_SETUP message:

...

- 2> transmit a RADIO_BEARER_SETUP_FAILURE as response message on the DCCH using AM RLC.

Reference

~~3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7.~~

~~8.2.1.5.3 Test purpose~~

~~To confirm that UE transmits RADIO BEARER SETUP FAILURE message after it completes a cell update procedure due to a physical channel failure in the radio bearer establishment procedure.~~

~~8.2.1.5.4 Method of test~~

Initial Condition

System Simulator: 1 cell.

UE: CS_DCCH_DCH (state 6-5) or PS_DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. SS transmits a RADIO BEARER SETUP message to the UE. After transmitting the RADIO BEARER SETUP message, the SS shall not configure its dedicated physical channel in accordance with the settings in the message and release the old configuration after the RLC acknowledgement. The UE recognizes that it cannot synchronise on the new physical channel and wants to revert to the old configuration, but the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH. The UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value of IE "failure cause" to "physical channel failure". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER SETUP	
2				The SS does not configure new radio access bearer and shall release the configuration.
3		→	CELL UPDATE	The value "radio link failure" shall be set in IE "Cell update cause".
4		←	CELL UPDATE CONFIRM	This message includes Physical channel information elements.
5				The SS configures the dedicated physical channel according to the Physical channel information elements included in the CELL UPDATE CONFIRM message.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	RADIO BEARER SETUP FAILURE	The IE "failure cause" shall be set to "physical channel failure"
8		→	MEASUREMENT REPORT	

Specific Message Contents

~~MEASUREMENT CONTROL (Step 0a)~~

Use the ~~MEASUREMENT CONTROL~~ message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	7
Measurement Command	Setup
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode-RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	DCH
— UL Target Transport Channel ID	5
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

~~MEASUREMENT REPORT (Step 0b and 8)~~

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	7
Measured Results	
— CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	1
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER SETUP (Step 1)

The contents of RADIO BEARER SETUP message in this test case is indicated as "Non-speech from CELL_DCH to CELL_DCH in CS", "Speech to CELL_DCH from CELL_DCH in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in clause 9 of TS 34.108. The occurrence of physical channel failure requires that the RADIO BEARER SETUP message includes a change of the physical channel configuration e.g. spreading factor. E.g. this means the new configuration should be different from "Conversational / speech / UL:12.2 DL:12.2 kbps / CS-RAB + UL:3.4 DL:3.4 kbps-SRBs for DCCH" since the physical channel configuration is the same as for the initial Stand-alone UL:13.6 DL:13.6 kbps-SRBs for DCCH.

CELL UPDATE (Step 3)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in clause 9 of TS 34.108 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 4) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in clause 9 of TS 34.108 with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement —— UplinkDPCH Info	Uplink-DPCH info Same as RRC CONNECTION SETUP message used to move to initial condition
Downlink information common for all radio links	Same as RRC CONNECTION SETUP message used to move to initial condition
Downlink information for each radio links	Same as RRC CONNECTION SETUP message used to move to initial condition

CELL UPDATE CONFIRM (Step 4) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in clause 9 of TS 34.108 with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_DCH
Uplink-DPCH timeslots and codes	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to initial condition

RADIO BEARER SETUP FAILURE (Step 7)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Failure-cause	"physical channel failure"

8.2.1.5.5 ——— Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink-DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

~~After step 2 the UE shall transmit CELL_UPDATE message on the CCCH with IE "Cell update cause" set to "radio link failure".~~

~~After step 5 the UE shall transmit PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE message on the uplink DCCH using AM RLC.~~

~~After step 6 the UE shall transmit RADIO_BEARER_SETUP_FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".~~

~~After step 7, the UE shall transmit a MEASUREMENT_REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.~~

8.2.1.6 Void 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~~

~~If the received message is any of the messages:~~

~~— RADIO_BEARER_SETUP; or~~

~~∴~~

~~the UE shall:~~

~~2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or~~

~~∴~~

~~3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS;~~

~~∴~~

~~3> else:~~

~~4> reject the transaction; and~~

~~4> if the IE "Message Type" of the received message is not present in the table "Rejected transactions" in the variable TRANSACTIONS:~~

~~5> store the IE "Message type" and the IE "RRC transaction identifier" of the received message in the table "Rejected transactions" in the variable TRANSACTIONS.~~

~~If the table "Rejected transactions" in the variable TRANSACTIONS is set due to the received message and the variable PROTOCOL_ERROR_REJECT is set to FALSE, the UE shall:~~

~~1> not apply the configuration contained in the received reconfiguration message;~~

~~1> transmit a failure response message as specified in subclause TS 25.331 8.2.2.9, setting the information elements as specified below:~~

~~2> include the IE "RRC transaction identifier"; and~~

~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and~~

~~2> clear that entry;~~

~~2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".~~

~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

The UE shall:

~~1> in case of reception of a RADIO BEARER SETUP message:~~

~~...~~

~~2> transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.9, 8.2.2.12, clause 8.6.3.11.~~

8.2.1.6.3 ~~Test purpose~~

~~To confirm that if the UE receives a RADIO BEARER SETUP message during a reconfiguring procedure due to a radio bearer message other than RADIO BEARER SETUP, it shall keep its configuration as if the RADIO BEARER SETUP message had not been received and complete the reconfiguration procedure according to the previously received message.~~

8.2.1.6.4 ~~Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: CS_DCCH+DTCH_DCH (state 6-9) or PS_DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.~~

~~Test Procedure~~

~~The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a RADIO BEARER SETUP message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the RADIO BEARER SETUP message, the UE shall keep its current configuration as if it had not received the RADIO BEARER SETUP message and shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the RADIO BEARER SETUP FAILURE message, the UE reconfigures the new physical channel parameters upon the specified activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC. UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RECONFIGURATION	Including IE "Activation Time"
2		←	RADIO BEARER SETUP	The SS send this message before the expiry of activation time specified in the message of step 1.
3		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration according to the RADIO BEARER SETUP message.
4		→	RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.
5		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 1a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	4
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	DCH
— UL Target Transport Channel ID	5
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 1b and 13)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
CHOICE measurement	Traffic volume measured results list
—Traffic volume measurement results	
—RB identity	4
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	2
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	3
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	4
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	4
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 1)

For RADIO BEARER RECONFIGURATION message in step 1, use the message sub-type indicated as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the exception of the following Information Elements:

Information Element	Value/remark
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256
Uplink DPCH Info	
—Scrambling code number	4

RADIO BEARER SETUP (Step 2)

The contents of RADIO BEARER SETUP message in this test case is indicated as "Non-speech in CS" as found in Annex A or the RADIO BEARER SETUP message as found in clause 9 of TS 34.108 with the following exceptions:

Information Element	Value/remark
Activation Time	Not Present
Uplink DPCH Info	
—Scrambling code number	2

RADIO BEARER SETUP FAILURE

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Message Type	
Failure case	Incompatible simultaneous reconfiguration

8.2.1.6.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

~~After step 2 the UE shall keep its configuration as if the UE had not received the RADIO BEARER SETUP message and shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".~~

~~After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.~~

~~After step 4, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.~~

8.2.1.15 ~~Void~~Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.1.15.1 ~~Definition~~

8.2.1.15.2 ~~Conformance requirement~~

If the received reconfiguration message contains a protocol error causing the variable `PROTOCOL_ERROR_REJECT` to be set to `TRUE` according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> ~~transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~
- 2> ~~include the IE "RRC transaction identifier"; and~~
- 2> ~~set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and~~
- 2> ~~clear that entry;~~
- 2> ~~set the IE "failure cause" to the cause value "protocol error";~~
- 2> ~~include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION.~~

If the variable `INVALID_CONFIGURATION` is set to `TRUE` the UE shall:

- 1> ~~keep the configuration existing before the reception of the message;~~
- 1> ~~transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~
- 2> ~~include the IE "RRC transaction identifier"; and~~
 - 3> ~~set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
 - 3> ~~clear that entry.~~
- 2> ~~set the IE "failure cause" to "invalid configuration".~~
- 1> ~~set the variable INVALID_CONFIGURATION to FALSE;~~
- 1> ~~continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

The UE shall:

- 1> ~~in case of reception of a RADIO BEARER SETUP message:~~
 - ...
 - 2> ~~transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.13, 8.2.2.11, 8.2.2.9.~~

~~8.2.1.15.3 Test purpose~~

~~To confirm that the UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC if it receives an invalid RADIO BEARER SETUP message which does not include any IEs except IE "Message Type".~~

~~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 including some IEs set to give an invalid configuration.~~

~~8.2.1.15.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: PS-DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108.~~

~~Test Procedure~~

~~The UE is in CELL_FACH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits an invalid RADIO BEARER SETUP message to the UE which contains an unexpected critical message extension. 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 "Message extension not comprehended" in IE "Protocol error cause". The UE keeps current configuration after SS transmits RADIO BEARER SETUP message including some IEs set to give an invalid configuration. Then UE transmits a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER SETUP	See specific message content.
2		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.
3		←	RADIO BEARER SETUP	This message includes IE set to give an invalid configuration.
4		→	RADIO BEARER SETUP FAILURE	The UE does not change the configuration.
5		→	MEASUREMENT REPORT	

~~Specific Message Contents~~

~~MEASUREMENT CONTROL (Step 0a)~~

~~Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:~~

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	RACH or CPCH
— UL Target Transport Channel ID	Not Present
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 5)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
— CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	1
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER SETUP (Step 1)

Use the RADIO BEARER SETUP message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'01'H

~~RADIO BEARER SETUP FAILURE (Step 2)~~

~~The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:~~

Information Element	Value/remark
Failure cause	
----- Failure cause	Protocol error
----- Protocol error information	
----- Protocol error cause	Message extension not comprehended

~~RADIO BEARER SETUP (Step 3)~~

~~The contents of RADIO BEARER SETUP message in this test case is identical as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:~~

~~RADIO BEARER SETUP (Step 3) (FDD)~~

Information Element	Value/remark
----- Default DPCH Offset Value	512
----- DPCH frame offset	4024

~~RADIO BEARER SETUP (Step 3) (TDD)~~

Information Element	Value/remark
----- PRACH TFCS	Present

~~RADIO BEARER SETUP FAILURE (Step 4)~~

~~The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in Annex A, with the following exceptions:~~

Information Element	Value/remark
Failure cause	Invalid configuration

~~8.2.1.15.5 ----- Test requirement~~

~~After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

~~After step 1 the UE shall 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 "Message extension not comprehended" in IE "Protocol error cause".~~

~~After step 3 the UE shall transmit RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC, setting the value of IE "failure cause" to "invalid configuration".~~

~~After step 4, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

8.2.2.3 ~~Void~~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~~

~~When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.~~

~~If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".~~

~~...~~

~~If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:~~

~~1> revert to the configuration prior to the reception of the message (old configuration);~~

~~...~~

~~1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~

~~2> include the IE "RRC transaction identifier"; and~~

~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~

~~2> clear that entry;~~

~~2> set the IE "failure cause" to "physical channel failure".~~

~~1> set the variable ORDERED_RECONFIGURATION to FALSE;~~

~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

~~...~~

~~The UE shall:~~

~~1> in case of reception of a RADIO BEARER RECONFIGURATION message:~~

~~...~~

~~2> transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.~~

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 radio bearers according to the RADIO BEARER RECONFIGURATION message before timer T312 expires.~~

~~To confirm that ongoing Measurements continue after the reception of the RADIO BEARER RECONFIGURATION FAILURE message.~~

~~8.2.2.3.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.~~

~~Test Procedure~~

~~The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RECONFIGURATION message including the new radio bearer parameters to the UE but it keeps its current dedicated physical channel configuration. 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". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
0a	←		MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b	→		MEASUREMENT REPORT	
1	←		RADIO BEARER RECONFIGURATION	
2				SS does not reconfigure L1.
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.
4	→		MEASUREMENT REPORT	

~~Specific Message Contents~~

~~MEASUREMENT CONTROL (Step 0a)~~

~~Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:~~

Information Element	Value/Remark
Measurement Identity	4
Measurement Command	Setup
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	DCH
— UL Target Transport Channel ID	5
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 4)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
— CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 1)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in clause 9 of TS 34.108.

~~RADIO BEARER RECONFIGURATION FAILURE (Step 2)~~

~~The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in clause 9 of TS 34.108, with the following exceptions:~~

Information Element	Value/remark
Failure cause	Physical channel failure

~~8.2.2.3.5 Test requirement~~

~~After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.~~

~~After step 2 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".~~

~~After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.~~

8.2.2.5 ~~Void~~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~~

If the received message is any of the messages:

— RADIO BEARER RECONFIGURATION; or

...

the UE shall:

2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or

...

3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS;

...

3> else:

4> reject the transaction; and

4> if the IE "Message Type" of the received message is not present in the table "Rejected transactions" in the variable TRANSACTIONS:

5> store the IE "Message type" and the IE "RRC transaction identifier" of the received message in the table "Rejected transactions" in the variable TRANSACTIONS.

...

If the table "Rejected transactions" in the variable TRANSACTIONS is set due to the received message and the variable PROTOCOL_ERROR_REJECT is set to FALSE, the UE shall:

1> not apply the configuration contained in the received reconfiguration message;

1> transmit a failure response message as specified in subclause TS 25.331 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The UE shall:

1> in case of reception of a RADIO BEARER RECONFIGURATION message:

...

~~2> transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clauses 8.2.2.9, 8.2.2.12, 8.6.3.11.~~

~~8.2.2.5.3 Test purpose~~

~~To confirm that if the UE receives a RADIO BEARER RECONFIGURATION message during a reconfiguring procedure due to a radio bearer message other than RADIO BEARER RECONFIGURATION, it shall keep its configuration as if the RADIO BEARER RECONFIGURATION message had not been received and complete the reconfiguration procedure according to the previously received message.~~

~~8.2.2.5.4 Method of test~~

Initial Condition

~~System Simulator: 1 cell.~~

~~UE: CS_DCCH_DCH (state 6-5) or PS_DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.~~

Test Procedure

~~The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER SETUP message to the UE. The SS transmits a RADIO BEARER RECONFIGURATION message before the "activation time" indicated in the RADIO BEARER SETUP message expires. When the UE receives the RADIO BEARER RECONFIGURATION message, the UE shall keep its current configuration as if it had not received the RADIO BEARER RECONFIGURATION message and shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the RADIO BEARER RECONFIGURATION FAILURE message, the UE reconfigures the new physical channel parameters upon the specified activation time and transmits a RADIO BEARER SETUP COMPLETE message on DCCH using AM RLC. UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
4		←	RADIO BEARER SETUP	
2		←	RADIO BEARER RECONFIGURATION	Sent before the "activation time" in step 1 has elapsed
3		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change its configuration according to the RADIO BEARER RECONFIGURATION message in step 2.
4		→	RADIO BEARER SETUP COMPLETE	This message is on DCCH using AM RLC.
5		→	MEASUREMENT REPORT	

Specific Message Contents

~~MEASUREMENT CONTROL (Step 0a)~~

Use the ~~MEASUREMENT CONTROL~~ message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode-RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	DCH
— UL Target Transport Channel ID	5
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

~~MEASUREMENT REPORT (Step 0b and 5)~~

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
— CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	1
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER SETUP (Step 1) (FDD)

For RADIO BEARER SETUP message in step 1, use the message sub-type indicated as "Non-speech in CS" as found in Annex A or the RADIO BEARER SETUP message as found in clause 9 of TS 34.108, with following exceptions:

Information Element	Value/remark
Activation Time	Current CFN [current CFN mod 8 + 8]
Uplink DPCH Info —— Scrambling code number	4

RADIO BEARER SETUP (Step 1) (TDD)

For RADIO BEARER SETUP message in step 1, use the message sub-type indicated as "Non-speech in CS" as found in Annex A or the RADIO BEARER SETUP message as found in clause 9 of TS 34.108, with following exceptions:

Information Element	Value/remark
Activation Time	Current CFN [current CFN mod 8 + 8]
Uplink DPCH timeslots and codes —— First timeslot code list	Assigned by SS

RADIO BEARER RECONFIGURATION (Step 2)

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 as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with following exceptions:

Information Element	Value/remark
Activation Time	Not Present.
Uplink DPCH Info —— Scrambling code number	2

RADIO BEARER RECONFIGURATION FAILURE

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure-cause	Incompatible simultaneous reconfiguration

8.2.2.5.5 ——— Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2, the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure-cause" set to "Incompatible simultaneous reconfiguration".

After step 3, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

After step 4, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.2.6 ~~Void~~Radio Bearer Reconfiguration from CELL_DCH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.2.6.1 ~~Definition~~

8.2.2.6.2 ~~Conformance requirement~~

If the received reconfiguration message contains a protocol error causing the variable `PROTOCOL_ERROR_REJECT` to be set to `TRUE` according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> ~~transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~
 - 2> ~~include the IE "RRC transaction identifier"; and~~
 - 2> ~~set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and~~
 - 2> ~~clear that entry;~~
 - 2> ~~set the IE "failure cause" to the cause value "protocol error";~~
 - 2> ~~include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION.~~

If the variable `INVALID_CONFIGURATION` is set to `TRUE` the UE shall:

- 1> ~~keep the configuration existing before the reception of the message;~~
- 1> ~~transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~
 - 2> ~~include the IE "RRC transaction identifier"; and~~
 - 3> ~~set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
 - 3> ~~clear that entry.~~
 - 2> ~~set the IE "failure cause" to "invalid configuration".~~
- 1> ~~set the variable INVALID_CONFIGURATION to FALSE;~~
- 1> ~~continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

The UE shall:

- 1> ~~in case of reception of a RADIO BEARER RECONFIGURATION message:~~
 - ...
 - 2> ~~transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.13, 8.2.2.11, 8.2.2.9.~~

~~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 an invalid RADIO BEARER RECONFIGURATION message which does not include any IEs except IE "Message Type".~~

~~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 including some IEs set to give an invalid configuration.~~

~~8.2.2.6.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: CS-DCCH+DTCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.~~

~~Test Procedure~~

~~The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits an invalid RADIO BEARER RECONFIGURATION message to the UE which contains an unexpected critical message extension. 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 "Message extension not comprehended" in IE "Protocol error cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. The UE keeps current configuration after SS transmits a RADIO BEARER RECONFIGURATION message including some IEs set to give an invalid configuration. Then UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RECONFIGURATION	See specific message content.
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration.
2a		→	MEASUREMENT REPORT	
3		←	RADIO BEARER RECONFIGURATION	This message includes IE set to give an invalid configuration.
4		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration.
5		→	MEASUREMENT REPORT	

~~Specific Message Contents~~

~~MEASUREMENT CONTROL (Step 1a)~~

~~Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:~~

Information Element	Value/Remark
Measurement Identity	4
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	DCH
— UL Target Transport Channel ID	5
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b, 2a and 5)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
- CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 1)

Use the RADIO BEARER RECONFIGURATION message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'01'H

RADIO BEARER RECONFIGURATION FAILURE (Step 2)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	
Failure cause	Protocol error
Protocol error information	
Protocol error cause	Message extension not comprehended

RADIO BEARER RECONFIGURATION (Step 3) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A with following exceptions:

Information Element	Value/remark
Default DPCH Offset Value	512
DPCH frame offset	1024

RADIO BEARER RECONFIGURATION (Step 3) (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A with following exceptions:

Information Element	Value/remark
PRACH TFCS	Present

RADIO BEARER RECONFIGURATION FAILURE (Step 5)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.2.6.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 1 the UE shall 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 "Message extension not comprehended" in IE "Protocol error cause".

After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

After step 4, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.2.12 ~~Void~~Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old configuration)

8.2.2.12.1 ~~Definition~~

8.2.2.12.2 ~~Conformance requirement~~

~~When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.~~

~~If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".~~

~~...~~

~~If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:~~

~~1> revert to the configuration prior to the reception of the message (old configuration);~~

~~...~~

~~1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~

~~2> include the IE "RRC transaction identifier"; and~~

~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~

~~2> clear that entry;~~

~~2> set the IE "failure cause" to "physical channel failure".~~

~~1> set the variable ORDERED_RECONFIGURATION to FALSE;~~

~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

~~...~~

~~The UE shall:~~

~~1> in case of reception of a RADIO BEARER RECONFIGURATION message:~~

~~...~~

~~2> transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.~~

8.2.2.12.3 ~~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 before timer T312 expires according to a RADIO BEARER RECONFIGURATION message.~~

~~8.2.2.12.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.~~

~~Test Procedure~~

~~The UE is in CELL_FACH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RECONFIGURATION message, which includes the new radio bearer parameters, to the UE and keeps its current physical channel configuration. Therefore, the UE cannot reconfigure the radio bearers and shall attempt cell reselection procedure after T312 expires. Then the UE shall detect the same serving cell only and transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, with the value "physical channel failure" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
0a	←		MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b	→		MEASUREMENT REPORT	
1	←		RADIO BEARER RECONFIGURATION	
2	→		RADIO BEARER RECONFIGURATION FAILURE	The SS does not reconfigure L1 and the UE fails to reconfigure its radio bearers.
3	→		MEASUREMENT REPORT	

~~Specific Message Contents~~

~~MEASUREMENT CONTROL (Step 0a)~~

~~Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:~~

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Setup
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	RACH or CPCH
— UL Target Transport Channel ID	Not Present
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 3)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
— CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	1
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Clause 9 of TS 34.108.

RADIO BEARER RECONFIGURATION FAILURE (Step 2)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the message found in Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

~~8.2.2.12.5~~ ~~Test requirement~~

~~After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

~~After step 1 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting "physical channel failure" in IE "failure cause".~~

~~After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

8.2.2.13 ~~Void~~Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

~~8.2.2.13.1~~ ~~Definition~~

~~8.2.2.13.2~~ ~~Conformance requirement~~

~~When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.~~

~~If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".~~

~~...~~

~~If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:~~

~~1> revert to the configuration prior to the reception of the message (old configuration);~~

~~...~~

~~1> if the old configuration does not include dedicated physical channels (CELL_FACH state):~~

~~2> select a suitable UTRA cell according to TS 25.304;~~

~~2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:~~

~~3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";~~

~~3> after the cell update procedure has completed successfully:~~

~~4> proceed as below.~~

~~1> transmit a failure response message as specified in TS 25.304 subclause 8.2.2.9, setting the information elements as specified below:~~

~~2> include the IE "RRC transaction identifier"; and~~

~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~

~~2> clear that entry;~~

~~2> set the IE "failure cause" to "physical channel failure".~~

~~1> set the variable ORDERED_RECONFIGURATION to FALSE;~~

~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

~~...~~

~~If the CELL_UPDATE_CONFIRM message:~~

~~— does not include "RB information elements"; and~~

~~— does not include "Transport channel information elements"; and~~

~~— does not include "Physical channel information elements"; and~~

~~— includes "CN information elements"; or~~

~~— includes the IE "Ciphering mode info"; or~~

~~— includes the IE "Integrity protection mode info"; or~~

~~— includes the IE "New C-RNTI"; or~~

~~— includes the IE "New U-RNTI";~~

~~the UE shall:~~

~~1> transmit a UTRAN_MOBILITY_INFORMATION_CONFIRM as response message using AM RLC.~~

~~...~~

~~The UE shall:~~

~~1> in case of reception of a RADIO_BEARER_RECONFIGURATION message:~~

~~...~~

~~2> transmit a RADIO_BEARER_RECONFIGURATION_FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7, 8.5.4.~~

8.2.2.13.3 ~~Test purpose~~

~~To confirm that the UE transmits a RADIO_BEARER_RECONFIGURATION_FAILURE message after it completes a cell update procedure due to a physical channel failure in the radio bearer reconfiguration procedure.~~

8.2.2.13.4 ~~Method of test~~

Initial Condition

~~System Simulator: 2 cells – Cell 1 and 2 are active.~~

~~UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108 in cell 1.~~

Test Procedure

Table 8.2.2.13

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA-RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec	dBm /3.84 MHz	-60	-75	-75	-60
P-CCPCH (RSCP) (TDD)	dBm	-60	-75	switched off	-60

Table 8.2.2.13 illustrates the downlink power to be applied for the 2-cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RECONFIGURATION message, which includes the new radio bearer parameters, to the UE but SS does not reconfigure dedicated physical channel in accordance with the settings in the message. At the same time, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.2.13. The UE recognize that it cannot synchronize with the SS on the new radio bearers. The UE performs cell reselection and transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH after receiving a CELL UPDATE message. UE reply with UTRAN MOBILITY INFORMATION CONFIRM message. The UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
4		←	RADIO BEARER RECONFIGURATION	
2				The SS does not reconfigure the dedicated physical channel in accordance with the RADIO BEARER RECONFIGURATION message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.2.13.
3			Void	
4			Void	
5		→	CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
6		←	CELL UPDATE CONFIRM	This message includes IE "new C-RNTI".
7		→	UTRAN MOBILITY INFORMATION CONFIRM	
8		→	RADIO BEARER RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"
9		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	4
Measurement Command	Setup
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	RACH or GPCH
— UL Target Transport Channel ID	Not Present
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 9)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
—CHOICE measurement	Traffic volume measured results list
—Traffic volume measurement results	
—RB identity	4
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	2
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	3
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	4
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 1)

Use the same message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Clause 9 of TS 34.108.

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Clause 9 of TS 34.108 with the following exceptions:

Information Element	Value/remark
U-RNTI	
—SRNC Identity	Assigned previously in cell 1
—S-RNTI	Assigned previously in cell 1
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 6)

Use the same message type found in clause Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 7)

Only the message type is checked.

RADIO BEARER RECONFIGURATION FAILURE (Step 8)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the message found in Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

~~8.2.2.13.5 Test requirement~~

~~After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

~~After step 4 the UE shall transmit a CELL UPDATE message on the CCCH with IE "Cell update cause" set to "cell reselection".~~

~~After step 6, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.~~

~~After step 7 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".~~

~~After step 8, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

8.2.2.14 ~~Void~~Radio Bearer Reconfigure from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

~~8.2.2.14.1 Definition~~~~8.2.2.14.2 Conformance requirement~~

~~If the received message is any of the messages:~~

~~— RADIO BEARER RECONFIGURATION; or~~

~~...~~

~~the UE shall:~~

~~2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or~~

~~...~~

~~3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS;~~

~~...~~

~~3> else:~~

~~4> reject the transaction; and~~

~~4> if the IE "Message Type" of the received message is not present in the table "Rejected transactions" in the variable TRANSACTIONS;~~

~~5> store the IE "Message type" and the IE "RRC transaction identifier" of the received message in the table "Rejected transactions" in the variable TRANSACTIONS.~~

~~...~~

~~If the table "Rejected transactions" in the variable TRANSACTIONS is set due to the received message and the variable PROTOCOL_ERROR_REJECT is set to FALSE, the UE shall:~~

~~1> not apply the configuration contained in the received reconfiguration message;~~

~~1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~

~~2> include the IE "RRC transaction identifier"; and~~

- ~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and~~
- ~~2> clear that entry;~~
- ~~2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".~~
- ~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

The UE shall:

- ~~1> in case of reception of a RADIO BEARER RECONFIGURATION message:~~
 - ~~...~~
 - ~~2> transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.9, 8.2.2.12, 8.6.3.11.~~

~~8.2.2.14.3 Test purpose~~

~~To confirm that if the UE receives a RADIO BEARER RECONFIGURATION message during a reconfiguring procedure due to a radio bearer message other than RADIO BEARER RECONFIGURATION, it shall keep its configuration as if the RADIO BEARER RECONFIGURATION message had not been received and complete the reconfiguration procedure according to the previously received message.~~

~~8.2.2.14.4 Method of test~~

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE. The SS transmits a RADIO BEARER RECONFIGURATION message before the "activation time" indicated in the PHYSICAL CHANNEL RECONFIGURATION message expires. When the UE receives the RADIO BEARER RECONFIGURATION message, the UE shall keep the configuration as if it had not received the RADIO BEARER RECONFIGURATION message and shall transmit a RADIO RECONFIGURATION SETUP FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the RADIO BEARER RECONFIGURATION FAILURE message, the UE reconfigures the new physical channel parameters and transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	
2		←	RADIO BEARER RECONFIGURATION	
3		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change its configuration according to the RADIO BEARER RECONFIGURATION message.
4		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (FDD)

For PHYSICAL CHANNEL RECONFIGURATION in step 1, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time	Not Present
Uplink DPCH Info	
— Scrambling code number	4

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (TDD)

For PHYSICAL CHANNEL RECONFIGURATION in step 1, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN [current CFN mod 8 + 8]
Uplink DPCH timeslots and codes	
— First timeslot code list	Assigned by SS

RADIO BEARER RECONFIGURATION (Step 2) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time	Not Present
Uplink DPCH Info	
— Scrambling code number	2

RADIO BEARER RECONFIGURATION (Step 2) (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time	
Uplink DPCH timeslots and codes	
— First timeslot code list	A different code combination to that used in step 1.

RADIO BEARER RECONFIGURATION FAILURE

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Incompatible simultaneous reconfiguration

~~8.2.2.14.5~~ ~~Test requirement~~

~~After step 2 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".~~

~~After step 3 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.~~

8.2.2.15 Void~~Radio Bearer Reconfiguration from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)~~

~~8.2.2.15.1~~ ~~Definition~~

~~8.2.2.15.2~~ ~~Conformance requirement~~

~~If the received reconfiguration message contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:~~

- ~~1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~

 - ~~2> include the IE "RRC transaction identifier"; and~~
 - ~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and~~
 - ~~2> clear that entry;~~
 - ~~2> set the IE "failure cause" to the cause value "protocol error";~~
 - ~~2> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION.~~

~~If the variable INVALID_CONFIGURATION is set to TRUE the UE shall:~~

- ~~1> keep the configuration existing before the reception of the message;~~
- ~~1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~

 - ~~2> include the IE "RRC transaction identifier"; and~~

 - ~~3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
 - ~~3> clear that entry.~~

 - ~~2> set the IE "failure cause" to "invalid configuration".~~

- ~~1> set the variable INVALID_CONFIGURATION to FALSE;~~

~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

The UE shall:

~~1> in case of reception of a RADIO BEARER RECONFIGURATION message:~~

~~...~~

~~2> transmit a RADIO BEARER RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.13, 8.2.2.11, 8.2.2.9.~~

~~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 it receives an invalid RADIO BEARER RECONFIGURATION message which does not include any IEs except IE "Message Type".~~

~~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 including some IEs set to give an invalid configuration.~~

~~8.2.2.15.4~~ ~~Method of test~~

Initial Condition

~~System Simulator: 1 cell.~~

~~UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.~~

Test Procedure

~~The UE is in CELL_FACH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits an invalid RADIO BEARER RECONFIGURATION message to the UE which contains an unexpected critical message extension. 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 "Message extension not comprehended" in IE "Protocol error cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. The UE keeps current configuration when SS transmits RADIO BEARER RECONFIGURATION message including some IEs set to give an invalid configuration. The UE transmits a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
4		←	RADIO BEARER RECONFIGURATION	See specific message content.
2		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration.
2a		→	MEASUREMENT REPORT	
3		←	RADIO BEARER RECONFIGURATION	This message includes IE set to invalid value
4		→	RADIO BEARER RECONFIGURATION FAILURE	The UE does not change the configuration
5		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	4
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	RACH or CPCH
— UL Target Transport Channel ID	Not Present
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b, 2a and 5)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RECONFIGURATION (Step 1)

Use the RADIO BEARER RECONFIGURATION message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'01H

RADIO BEARER RECONFIGURATION FAILURE (Step 2)

The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	
— Failure cause	Protocol error
— Protocol error information	
— Protocol error cause	Message extension not comprehended

RADIO BEARER RECONFIGURATION (Step 3) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
— Default DPCH Offset Value	512
— DPCH frame offset	4024

RADIO BEARER RECONFIGURATION (Step 3) (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A with following exceptions:

Information Element	Value/remark
— PRACH TFCS	Present

~~RADIO BEARER RECONFIGURATION FAILURE (Step 4)~~

~~The contents of RADIO BEARER RECONFIGURATION FAILURE message in this test case is the same as the RADIO BEARER RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:~~

Information Element	Value/remark
Failure cause	Invalid configuration

~~8.2.2.15.5 Test requirement~~

~~After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

~~After step 1 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, which includes the cause "protocol error" in IE "failure cause" and "Message extension not comprehended" in IE "Protocol error cause".~~

~~After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

~~After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".~~

~~After step 4, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

8.2.3.2 ~~Void~~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~~

If the UTRAN instructs the UE to use a configuration, which it does not support and/or if the received message causes the variable UNSUPPORTED_CONFIGURATION to be set to TRUE, the UE shall:

- 1> ~~transmit a failure response as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~
 - 2> ~~include the IE "RRC transaction identifier"; and~~
 - 2> ~~set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
 - 2> ~~clear that entry;~~
 - 2> ~~set the IE "failure cause" to "configuration unsupported".~~
- 1> ~~set the variable UNSUPPORTED_CONFIGURATION to FALSE;~~
- 1> ~~continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

The UE shall:

- 1> ~~in case of reception of a RADIO BEARER RELEASE message:~~
 - 2> ~~transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.~~

Reference

3GPP TS 25.331 clause 8.2.2.6, 8.2.2.9.

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: CS_DCCH+DTCH_DCH (state 6-9) or PS_DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. 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 unsupported" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO-BEARER RELEASE	Including unsupported configuration by the UE
2		→	RADIO-BEARER RELEASE FAILURE	The UE does not change the radio-bearer.
3		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	DCH
— UL Target Transport Channel ID	5
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 3)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
CHOICE measurement	Traffic volume measured results list
Traffic volume measurement results	
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	2
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	3
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RELEASE (FDD) (Step 1)

The contents of RADIO BEARER RELEASE message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Frequency info	
UARFCN uplink (Nu)	0
UARFCN downlink (Nd)	950

RADIO BEARER RELEASE (TDD) (Step 1)

The contents of RADIO BEARER RELEASE message in this test case is identical as "Speech in CS" found in Annex A with the following exceptions:

Information Element	Value/remark
Frequency info	
UARFCN (Nt)	0

RADIO BEARER RELEASE FAILURE (Step 2)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure-cause	Configuration unsupported

8.2.3.2.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 1 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC with the IE "failure cause" set to "configuration unsupported".

After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.3.3 ~~Void~~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~~

When a physical-dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

The UE shall:

1> in case of reception of a RADIO BEARER RELEASE message:

...

2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

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: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.~~

~~Test Procedure~~

~~The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RELEASE message but it keeps its current dedicated physical channel configuration. This causes the UE to fail to release the radio bearer, and after T312 expires 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". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
0a	←		MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b	→		MEASUREMENT REPORT	
1	←		RADIO BEARER RELEASE	
2				The SS keeps its current dedicated physical channel configuration.
3	→		RADIO BEARER RELEASE FAILURE	After T312 expires, the UE finds that it fails to release a radio bearer and reverts to the old configuration.
4	→		MEASUREMENT REPORT	

~~Specific Message Contents~~

~~MEASUREMENT CONTROL (Step 1a)~~

~~Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:~~

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Setup
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	DCH
— UL Target Transport Channel ID	5
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 1b and 13)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
— CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	1
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RELEASE (Step 1)

The contents of RADIO BEARER RELEASE message in this test case is identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Clause 9 of TS 34.108.

RADIO BEARER RELEASE FAILURE (Step 3)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Failure-cause	Physical channel failure

~~8.2.3.3.5~~ ~~Test requirement~~

~~After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.~~

~~After step 2 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC which includes the value "physical channel failure" in IE "failure cause".~~

~~After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.~~

8.2.3.4 ~~Void~~Radio Bearer Release for transition from CELL_DGH to CELL_DCH: Failure (Physical channel failure and cell reselection)

~~8.2.3.4.1~~ ~~Definition~~

~~8.2.3.4.2~~ ~~Conformance requirement~~

~~If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:~~

- ~~1> revert to the configuration prior to the reception of the message (old configuration);~~
- ~~1> if the old configuration includes dedicated physical channels (CELL_DCH state) and the UE is unable to revert to the old configuration:

 - ~~2> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "radio link failure";~~
 - ~~2> after the cell update procedure has completed successfully:

 - ~~3> proceed as below.~~~~~~
- ~~...~~
- ~~1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

 - ~~2> include the IE "RRC transaction identifier"; and~~
 - ~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
 - ~~2> clear that entry;~~
 - ~~2> set the IE "failure cause" to "physical channel failure".~~~~
- ~~1> set the variable ORDERED_RECONFIGURATION to FALSE;~~
- ~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

~~...~~

~~If the CELL_UPDATE_CONFIRM message:~~

- ~~— does not include "RB information elements"; and~~
- ~~— does not include "Transport channel information elements"; and~~
- ~~— includes "Physical channel information elements";~~

~~the UE shall:~~

~~1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message using AM RLC.~~

~~...~~

~~The UE shall:~~

~~1> in case of reception of a RADIO BEARER RELEASE message:~~

~~...~~

~~2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7.~~

~~8.2.3.4.3 Test purpose~~

~~To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message after it completes a cell update 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: 1 cell.~~

~~UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.~~

Test Procedure

~~The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a RADIO BEARER RELEASE message to the UE but does not configure dedicated physical channel in accordance with the settings in the message and release the previous configuration. As a result, the UE recognizes that it cannot reconfigure the radio bearers and wants to revert to the old configuration, but the UE cannot revert to the old configuration. The UE transmits a CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL UPDATE CONFIRM message on downlink CCCH. The UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RELEASE	
2				The SS does not configure the dedicated physical channel in accordance with the RADIO BEARER RELEASE message and shall release the old configuration.
3		→	CELL UPDATE	This message includes the value "radio link failure" set in IE "Cell update cause".
4		←	CELL UPDATE CONFIRM	This message includes "Physical channel information elements".
5				The SS configures the dedicated physical channel according to the "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	RADIO BEARER RELEASE FAILURE	The IE "failure cause" shall be set to "physical channel failure"
8		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	7
Measurement Command	Setup
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode-RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	DCH
— UL Target Transport Channel ID	5
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 8)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	7
Measured Results	
—CHOICE measurement	Traffic volume measured results list
—Traffic volume measurement results	
—RB identity	4
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	2
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	3
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	4
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RELEASE (Step 1)

The contents of RADIO BEARER RELEASE message in this test case are identical as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in clause 9 of TS 34.108.

CELL UPDATE (Step 3)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in clause 9 of TS 34.108 with the following exceptions:

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'
Cell Update Cause	"radio link failure"

CELL UPDATE CONFIRM (Step 4) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Annex A with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC State indicator	CELL_DCH
CHOICE channel requirement	Uplink DPCH info
—Uplink DPCH Info	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information common for all radio links	Same as RRC CONNECTION SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to initial condition

CELL UPDATE CONFIRM (Step 4) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in clause 9 of TS 34.108 with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 3
RRC-State indicator	CELL_DCH
UplinkDPCH timeslots and codes	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to initial condition

RADIO BEARER RELEASE FAILURE (Step 7)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.3.4.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "radio link failure".

After step 5 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 6 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

After step 7, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.3.5 Void 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

If the received message is any of the messages:

— RADIO BEARER RELEASE; or

...

the UE shall:

2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or

...

3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS;

...

3> else:

4> reject the transaction; and

4> if the IE "Message Type" of the received message is not present in the table "Rejected transactions" in the variable TRANSACTIONS:

5> store the IE "Message type" and the IE "RRC transaction identifier" of the received message in the table "Rejected transactions" in the variable TRANSACTIONS.

...

If the table "Rejected transactions" in the variable TRANSACTIONS is set due to the received message and the variable PROTOCOL_ERROR_REJECT is set to FALSE, the UE shall:

1> not apply the configuration contained in the received reconfiguration message;

1> transmit a failure response message as specified in subclause TS 25.331 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The UE shall:

1> in case of reception of a RADIO BEARER RELEASE message:

...

2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.9, 8.2.2.12, clause 8.6.3.11.

8.2.3.5.3 Test purpose

To confirm that if the UE receives a RADIO BEARER RELEASE message during a reconfiguring procedure due to a radio bearer message other than RADIO BEARER RELEASE, it shall keep its configuration as if the RADIO BEARER RELEASE message had not been received and complete the reconfiguration procedure according to the previously received message.

8.2.3.5.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a RADIO BEARER RELEASE message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the RADIO BEARER RELEASE message, the UE shall keep the configuration as if it had not received the RADIO BEARER RELEASE message and shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". When the activation time lapses, the UE reconfigures the new physical channel parameters and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	
2		←	RADIO BEARER RELEASE	Message sent before the "Activation time" indicated in the message of step 1 has elapsed.
3		→	RADIO BEARER RELEASE FAILURE	The UE does not change the configuration due to the reception of RADIO BEARER RELEASE message.
4		→	RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type title as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN [current CFN mod 8 + 8]
Uplink DPCH info	4
—— Scrambling code number	
Downlink information common for all radio links	
—— Downlink DPCH info common for all RL	
—— Timing Indicator	Maintain

RADIO BEARER RECONFIGURATION (TDD)

The contents of RADIO BEARER 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
Uplink DPCH timeslots and codes	Assigned by SS
—— First timeslot code list	
Downlink information common for all radio links	
—— Downlink DPCH info common for all RL	
—— Timing Indicator	Maintain

RADIO BEARER RELEASE (Step 2) (FDD)

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 with the following exceptions:

Information Element	Value/remark
Activation-Time Info Uplink-DPCH Info —Scrambling code number	Current-CFN-[current-CFN mod 8 + 8] 2

RADIO-BEARER RECONFIGURATION (Step 2) (TDD)

The contents of RADIO-BEARER RECONFIGURATION message in this test case is identical as "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
Activation-Time -Uplink-DPCH timeslots and codes -First timeslot code list	Not Present A different code combination to that used in step 1.

RADIO-BEARER RELEASE FAILURE

The contents of RADIO-BEARER RELEASE FAILURE message in this test case is the same as the RADIO-BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure-cause	Incompatible simultaneous reconfiguration

8.2.3.5.5 Test requirement

After step 2 the UE shall transmit a RADIO-BEARER RELEASE FAILURE message on the DCCH using AM RLC with IE "failure-cause" set to "Incompatible simultaneous reconfiguration".

After step 3 the UE shall transmit a RADIO-BEARER RECONFIGURATION COMPLETE message.

8.2.3.6 Void Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.3.6.1 Definition

8.2.3.6.2 Conformance requirement

If the received reconfiguration message contains a protocol error causing the variable `PROTOCOL_ERROR_REJECT` to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
- 2> include the IE "RRC transaction identifier"; and
- 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable `TRANSACTIONS`; and
- 2> clear that entry;
- 2> set the IE "failure cause" to the cause value "protocol error";
- 2> include the IE "Protocol error information" with contents set to the value of the variable `PROTOCOL_ERROR_INFORMATION`.

If the variable `INVALID_CONFIGURATION` is set to TRUE the UE shall:

- ~~1> keep the configuration existing before the reception of the message;~~
- ~~1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~
 - ~~2> include the IE "RRC transaction identifier"; and~~
 - ~~3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
 - ~~3> clear that entry.~~
 - ~~2> set the IE "failure cause" to "invalid configuration".~~
- ~~1> set the variable INVALID_CONFIGURATION to FALSE;~~
- ~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

The UE shall:

- ~~1> in case of reception of a RADIO BEARER RELEASE message:~~
 - ~~...~~
 - ~~2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.~~

Reference

3GPP TS 25.331 clause 8.2.2.13, 8.2.2.11, 8.2.2.9.

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 an invalid RADIO BEARER RELEASE message, which contains an unexpected critical message extension.~~

~~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 including some IEs set to give an invalid configuration.~~

8.2.3.6.4 ~~Method of test~~

Initial Condition

System Simulator: 1 cell.

UE: CS_DCCH+DTCH_DCH (state 6-9) or PS_DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits an invalid RADIO BEARER RELEASE message to the UE which does not any IEs except IE "Message Type". 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 "Message extension not comprehended" in IE "Protocol error cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. SS transmits a RADIO BEARER RELEASE message including some IEs set to give an invalid configuration. The UE keeps current configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER RELEASE	See specific message content.
2		→	RADIO BEARER RELEASE FAILURE	The UE shall not change the configuration.
2a		→	MEASUREMENT REPORT	
3		←	RADIO BEARER RELEASE	This message includes IE set to give an invalid configuration
4				The UE does not change the configuration
5		→	RADIO BEARER RELEASE FAILURE	The IE "failure cause" shall be set to "invalid configuration"
6		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 1a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	4
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode-RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	DCH
— UL Target Transport Channel ID	5
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 1b, 2a and 6)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RELEASE (Step 1)

Use the RADIO BEARER RELEASE message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'01'H

RADIO BEARER RELEASE FAILURE (Step 2)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	
— Failure cause	Protocol error
— Protocol error information	
— Protocol error cause	Message extension not comprehended

RADIO BEARER RELEASE (Step 3) (FDD)

The contents of RADIO BEARER RELEASE message in this test case is identical as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
— Default DPCH Offset Value	512
— DPCH frame offset	1024

RADIO BEARER RELEASE (Step 3) (TDD)

Information Element	Value/remark
— PRACH TFCS	Present

RADIO BEARER RELEASE FAILURE (Step 5)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.3.6.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 1 the UE shall 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 "Message extension not comprehended" in IE "Protocol error cause".

After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 4 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause".

After step 5, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.3.10 ~~Void~~Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.3.10.1 ~~Definition~~

8.2.3.10.2 ~~Conformance requirement~~

~~If the UTRAN instructs the UE to use a configuration, which it does not support and/or if the received message causes the variable UNSUPPORTED_CONFIGURATION to be set to TRUE, the UE shall:~~

- ~~1> transmit a failure response as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~
 - ~~2> include the IE "RRC transaction identifier"; and~~
 - ~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
 - ~~2> clear that entry;~~
 - ~~2> set the IE "failure cause" to "configuration unsupported".~~
- ~~1> set the variable UNSUPPORTED_CONFIGURATION to FALSE;~~
- ~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

~~The UE shall:~~

- ~~1> in case of reception of a RADIO BEARER RELEASE message:~~
 - ~~...~~
 - ~~2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.6, 8.2.2.9.~~

8.2.3.10.3 ~~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 configuration unsupported by the UE.~~

8.2.3.10.4 ~~Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.~~

~~Test Procedure~~

~~The UE is in CELL_FACH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. 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 unsupported" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
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.
3		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	RACH or GPCH
— UL Target Transport Channel ID	Not Present
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 3)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
CHOICE measurement	Traffic volume measured results list
Traffic volume measurement results	
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	2
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	3
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RELEASE (FDD) (Step 1)

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_FACH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
Frequency info	
UARFCN uplink (Nu)	0
UARFCN downlink (Nd)	950

RADIO BEARER RELEASE (TDD) (Step 1)

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_FACH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
Frequency info	
UARFCN (Nt)	0

RADIO BEARER RELEASE FAILURE (Step 2)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure-cause	Configuration unsupported

8.2.3.10.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 1 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, stating the reason "configuration unsupported" in IE "failure-cause".

~~After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

8.2.3.12 ~~Void~~Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.3.12.1 ~~Definition~~

8.2.3.12.2 ~~Conformance requirement~~

~~When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.~~

~~If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".~~

~~...~~

~~If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:~~

~~1> revert to the configuration prior to the reception of the message (old configuration);~~

~~...~~

~~1> if the old configuration does not include dedicated physical channels (CELL_FACH state):~~

~~2> select a suitable UTRA cell according to TS 25.304;~~

~~2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:~~

~~3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";~~

~~3> after the cell update procedure has completed successfully:~~

~~4> proceed as below.~~

~~1> transmit a failure response message as specified in TS 25.304 subclause 8.2.2.9, setting the information elements as specified below:~~

~~2> include the IE "RRC transaction identifier"; and~~

~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~

~~2> clear that entry;~~

~~2> set the IE "failure cause" to "physical channel failure".~~

~~1> set the variable ORDERED_RECONFIGURATION to FALSE;~~

~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

~~...~~

~~If the CELL_UPDATE_CONFIRM message:~~

~~— does not include "RB information elements"; and~~

~~— does not include "Transport channel information elements"; and~~

~~— does not include "Physical channel information elements"; and~~

~~— includes "CN information elements"; or~~

~~— includes the IE "Ciphering mode info"; or~~

- includes the IE "Integrity protection mode info"; or
- includes the IE "New C-RNTI"; or
- includes the IE "New U-RNTI";

the UE shall:

- 1> transmit a ~~UTRAN MOBILITY INFORMATION CONFIRM~~ as response message using ~~AM RLC~~.

...

The UE shall:

- 1> in case of reception of a ~~RADIO BEARER RELEASE~~ message:

...

- 2> transmit a ~~RADIO BEARER RELEASE FAILURE~~ as response message on the ~~DCCH~~ using ~~AM RLC~~.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7, 8.5.4.

8.2.3.12.3 Test purpose

To confirm that the UE transmits a ~~RADIO BEARER RELEASE FAILURE~~ message after it completes a cell update procedure following a physical channel failure during the radio bearer release procedure.

8.2.3.12.4 Method of test

Initial Condition

System Simulator: 2 cells—Cell 1 and 2 are active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

Table 8.2.3.12

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA-RF Channel Number		Ch. 4		Ch. 4	
CPICH E _c (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.3.12 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a ~~RADIO BEARER RELEASE~~ message to the UE, but it does not configure the specified LI in accordance with the settings in the message. 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. The SS configures its downlink transmission power settings according to columns "T1" in table 8.2.3.12. The UE shall find cell 2 and transmits CELL_UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit a ~~CELL_UPDATE_CONFIRM~~ message on downlink DCCH. The UE then transmit a ~~UTRAN~~

~~MOBILITY INFORMATION CONFIRM~~ message on the DCCH using AM RLC. The UE transmits a ~~RADIO BEARER RELEASE FAILURE~~ message on the DCCH using AM RLC, setting IE "failure cause" to "physical channel failure".

~~Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO-BEARER-RELEASE	
2				The SS does not configure the specified L1 in accordance with the settings in the message and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.3.12.
3		←	Void	
4		→	CELL-UPDATE	The UE finds a new cell 2 and enter CELL_FACH state. This message includes the value "cell reselection" set in IE "Cell update cause".
5		←	CELL-UPDATE-CONFIRM	See message content.
6		→	UTRAN-MOBILITY-INFORMATION-CONFIRM	
7		→	RADIO-BEARER-RELEASE-FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

RADIO-BEARER-RELEASE (Step 1)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Clause 9 of TS 34.108.

CELL-UPDATE (Step 4)

The contents of CELL-UPDATE message is identical as "Contents of CELL-UPDATE message" as found in Clause 9 of TS 34.108 with the following exceptions:

Information Element	Value/remark
U-RNTI	
-SRNC Identity	Assigned previously in cell 1
-S-RNTI	Assigned previously in cell 1
Cell Update Cause	"cell reselection"

CELL-UPDATE-CONFIRM (Step 5)

Use the same message type found in clause Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/Remarks
New-C-RNTI	'1010 1010 1010 1010'

UTRAN-MOBILITY-INFORMATION-CONFIRM (Step 6)

Only the message type is checked.

RADIO BEARER RELEASE FAILURE (Step 7)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.3.12.5 Test requirement

After step 3 the UE shall transmit a CELL_UPDATE message on the uplink CCCH with IE "Cell update cause" set to "cell reselection".

After step 5 UE shall transmit a UTRAN_MOBILITY_INFORMATION_CONFIRM message on the DCCH using AM RLC.

After step 6 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

8.2.3.13 VoidRadio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.3.13.1 Definition

8.2.3.13.2 Conformance requirement

If the received message is any of the messages:

— RADIO BEARER RELEASE; or

...

the UE shall:

2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or

...

3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS;

...

3> else:

4> reject the transaction; and

4> if the IE "Message Type" of the received message is not present in the table "Rejected transactions" in the variable TRANSACTIONS;

5> store the IE "Message type" and the IE "RRC transaction identifier" of the received message in the table "Rejected transactions" in the variable TRANSACTIONS.

...

If the table "Rejected transactions" in the variable TRANSACTIONS is set due to the received message and the variable PROTOCOL_ERROR_REJECT is set to FALSE, the UE shall:

1> not apply the configuration contained in the received reconfiguration message;

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

- ~~2> include the IE "RRC transaction identifier"; and~~
- ~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and~~
- ~~2> clear that entry;~~
- ~~2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".~~
- ~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

The UE shall:

- ~~1> in case of reception of a RADIO BEARER RELEASE message:~~

~~---~~

- ~~2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.9, 8.2.2.12, 8.6.3.11.~~

~~8.2.3.13.3~~ ————— ~~Test purpose~~

~~To confirm that if the UE receives a RADIO BEARER RELEASE message during a reconfiguring procedure due to a radio bearer message other than a RADIO BEARER RELEASE message, it shall keep its configuration as if the RADIO BEARER RELEASE message had not been received and complete the reconfiguration procedure according to the previously received message.~~

~~8.2.3.13.4~~ ————— ~~Method of test~~

Initial Condition

~~System Simulator: 1 cell.~~

~~UE: PS_DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.~~

Test Procedure

~~The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a RADIO BEARER RELEASE message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the RADIO BEARER RELEASE message, the UE shall keep the configuration as if it had not received the RADIO BEARER RELEASE message and shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the RADIO BEARER RELEASE FAILURE message, the UE reconfigures the new physical channel parameters upon the activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	The UE receives any message other than RADIO BEARER RELEASE. (e.g. RADIO BEARER SETUP)
2		←	RADIO BEARER RELEASE	
3		→	RADIO BEARER RELEASE FAILURE	The UE does not change the configuration due to the reception of RADIO BEARER RECONFIGURATION message.
4		→	RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A. Information element(s) to be changed are listed below:

Information Element	Value/remark
Activation Time	Not present
Uplink DPCH Info — Scrambling code number	4

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

The contents of RADIO BEARER SETUP message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A. Information element(s) to be changed are listed below:

Information Element	Value/remark
Activation Time	Current CFN [current CFN mod 8 + 8]
Uplink DPCH timeslots and codes — First timeslot code list	Assigned by SS

RADIO BEARER RELEASE (Step 2) (FDD)

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_FACH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time Info Uplink DPCH Info — Scrambling code number	Not Present 2

RADIO BEARER RELEASE (Step 2) (TDD)

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_FACH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time Info -Uplink DPCH timeslots and codes -First timeslot code list	Current CFN [current CFN mod 8 + 8] A different code combination to that used in step 1.

RADIO BEARER RELEASE FAILURE

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Incompatible simultaneous reconfiguration

8.2.3.13.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".

After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using the new physical channel parameters reconfigured as a result of the RADIO BEARER RECONFIGURATION message.

8.2.3.14 Void Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.3.14.1 Definition

8.2.3.14.2 Conformance requirement

If the received reconfiguration message contains a protocol error causing the variable `PROTOCOL_ERROR_REJECT` to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable `TRANSACTIONS`; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to the cause value "protocol error";
 - 2> include the IE "Protocol error information" with contents set to the value of the variable `PROTOCOL_ERROR_INFORMATION`.

If the variable `INVALID_CONFIGURATION` is set to TRUE the UE shall:

- 1> keep the configuration existing before the reception of the message;
- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable `TRANSACTIONS`; and

- ~~3> clear that entry.~~
- ~~2> set the IE "failure cause" to "invalid configuration".~~
- ~~1> set the variable INVALID_CONFIGURATION to FALSE;~~
- ~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

The UE shall:

- ~~1> in case of reception of a RADIO BEARER RELEASE message:~~
- ~~...~~
- ~~2> transmit a RADIO BEARER RELEASE FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.13, 8.2.2.11, 8.2.2.9.~~

~~8.2.3.14.3 Test purpose~~

~~To confirm that the UE transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC if it receives an invalid RADIO BEARER RELEASE message which does not include any IEs except IE "Message Type".~~

~~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 including some IEs set to give an invalid configuration.~~

~~8.2.3.14.4 Method of test~~

Initial Condition

~~System Simulator: 1 cell.~~

~~UE: PS_DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.~~

Test Procedure

~~The UE is in CELL_FACH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits an invalid RADIO BEARER RELEASE message, which contains an unexpected critical message extension, to the UE. The UE keeps the old configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, which shall indicate the value "protocol error" in IE "failure cause" and also "Message extension not comprehended" in IE "Protocol error cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. SS transmits a RADIO BEARER RELEASE message including some IEs set to give an invalid configuration. The UE keeps current configuration and transmits a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b	→		MEASUREMENT REPORT	
4		←	RADIO BEARER RELEASE	See specific message content.
2		→	RADIO BEARER RELEASE FAILURE	The UE shall not change its current configuration.
2a	→		MEASUREMENT REPORT	
3		←	RADIO BEARER RELEASE	This message includes IE set to give an invalid configuration.
4				The UE does not change its configuration
5		→	RADIO BEARER RELEASE FAILURE	The IE "failure cause" shall be set to "invalid configuration"
6		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	4
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	RACH or CPCH
— UL Target Transport Channel ID	Not Present
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b, 2a and 6)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
CHOICE measurement	Traffic volume measured results list
Traffic volume measurement results	
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	2
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	3
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER RELEASE (Step 1)

Use the RADIO BEARER RELEASE message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'01H

RADIO BEARER RELEASE FAILURE (Step 2)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	
Failure cause	Protocol error
Protocol error information	
Protocol error cause	Message extension not comprehended

RADIO BEARER RELEASE (Step 3) (FDD)

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_FACH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
Default DPCH Offset Value	512
DPCH frame offset	1024

RADIO BEARER RELEASE (Step 3) (TDD)

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_FACH in PS" found in Annex A with the following exceptions:

Information Element	Value/remark
PRACH TFCS	Present

RADIO BEARER RELEASE FAILURE (Step 5)

The contents of RADIO BEARER RELEASE FAILURE message in this test case is the same as the RADIO BEARER RELEASE FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Invalid configuration

8.2.3.14.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 1 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting "protocol error" in IE "failure cause" and also indicating "Message extension not comprehended" in IE "Protocol error cause".

After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 3 the UE shall transmit a RADIO BEARER RELEASE FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration".

After step 5, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

8.2.4.2 ~~Void~~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~~

If the UTRAN instructs the UE to use a configuration, which it does not support and/or if the received message causes the variable UNSUPPORTED_CONFIGURATION to be set to TRUE, the UE shall:

- 1> ~~transmit a failure response as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~
 - 2> ~~include the IE "RRC transaction identifier"; and~~
 - 2> ~~set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
 - 2> ~~clear that entry;~~
 - 2> ~~set the IE "failure cause" to "configuration unsupported".~~
- 1> ~~set the variable UNSUPPORTED_CONFIGURATION to FALSE;~~
- 1> ~~continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

The UE shall:

- 1> ~~in case of reception of a TRANSPORT_CHANNEL_RECONFIGURATION message:~~
 - ...
 - 2> ~~transmit a TRANSPORT_CHANNEL_RECONFIGURATION_FAILURE as response message on the DCCH using AM RLC.~~

Reference

3GPP TS 25.331 clause 8.2.2.6, 8.2.2.9.

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: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT_CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT_REPORT message back to SS. The SS transmits a TRANSPORT_CHANNEL_RECONFIGURATION message, which includes configuration parameters unsupported by the UE. The UE transmits a TRANSPORT_CHANNEL

~~RECONFIGURATION FAILURE~~ message on the DCCH using AM RLC, reporting the event "configuration unsupported" in IE "failure-cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	TRANSPORT CHANNEL RECONGURATION	Including configuration unsupported by the UE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the settings used by the transport channels.
3		→	MEASUREMENT REPORT	

~~Specific Message Contents~~

~~MEASUREMENT CONTROL (Step 0a)~~

~~Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:~~

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	DCH
— UL Target Transport Channel ID	5
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

~~MEASUREMENT REPORT (Step 0b and 3)~~

~~Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:~~

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
CHOICE measurement	Traffic volume measured results list
Traffic volume measurement results	
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	2
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	3
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

~~TRANSPORT CHANNEL RECONFIGURATION (FDD) (Step 1)~~

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Frequency info	
UARFCN uplink (Nu)	0
UARFCN downlink (Nd)	950

~~TRANSPORT CHANNEL RECONFIGURATION (TDD) (Step 1)~~

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Frequency info	
UARFCN (Nt)	0

~~TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 2)~~

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Configuration unsupported

8.2.4.2.5 ~~Test requirement~~

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

~~After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, indicating "configuration unsupported" in IE "failure cause".~~

~~After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.~~

8.2.4.5 ~~Void~~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~~

~~If the received message is any of the messages:~~

~~— TRANSPORT_CHANNEL_RECONFIGURATION; or~~

~~...~~

~~the UE shall:~~

~~2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or~~

~~...~~

~~3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS;~~

~~...~~

~~3> else:~~

~~4> reject the transaction; and~~

~~4> if the IE "Message Type" of the received message is not present in the table "Rejected transactions" in the variable TRANSACTIONS;~~

~~5> store the IE "Message type" and the IE "RRC transaction identifier" of the received message in the table "Rejected transactions" in the variable TRANSACTIONS.~~

~~...~~

~~If the table "Rejected transactions" in the variable TRANSACTIONS is set due to the received message and the variable PROTOCOL_ERROR_REJECT is set to FALSE, the UE shall:~~

~~1> not apply the configuration contained in the received reconfiguration message;~~

~~1> transmit a failure response message as specified in subclause TS 25.331 8.2.2.9, setting the information elements as specified below:~~

~~2> include the IE "RRC transaction identifier"; and~~

~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and~~

~~2> clear that entry;~~

~~2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".~~

~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

~~The UE shall:~~

~~1> in case of reception of a TRANSPORT_CHANNEL_RECONFIGURATION message:~~

~~...~~

~~2> transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.9, 8.2.2.12, 8.6.3.11.~~

~~8.2.4.5.3 Test purpose~~

~~To confirm that if the UE receives a TRANSPORT CHANNEL RECONFIGURATION message during a reconfiguring procedure due to a radio bearer message other than a TRANSPORT CHANNEL RECONFIGURATION, it shall keep its configuration as if the TRANSPORT CHANNEL RECONFIGURATION message had not been received and complete the reconfiguration procedure according to the previously received message.~~

~~8.2.4.5.4 Method of test~~

Initial Condition

~~System Simulator: 1 cell.~~

~~UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.~~

Test Procedure

~~The UE is in CELL_DCH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the TRANSPORT CHANNEL RECONFIGURATION message, the UE shall keep the configuration as if it had not received the TRANSPORT CHANNEL RECONFIGURATION message and shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the TRANSPORT CHANNEL RECONFIGURATION FAILURE message, the UE reconfigures the new physical configuration parameters upon the activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RECONFIGURATION	Including IE "Uplink DPCH info" for FDD mode
2		←	TRANSPORT CHANNEL RECONFIGURATION	Sent before the time specified in IE "Activation Time Info" of message in step 1 has elapsed.
3		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change the configuration due to the reception of TRANSPORT CHANNEL RECONFIGURATION message.
4		→	RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

~~For RADIO BEARER RECONFIGURATION in step 1, use the message sub type indicated as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:~~

Information Element	Value/remark
Activation-Time Uplink-DPCH info ———Scrambling code number	Current-CFN-[current-CFN mod 8 + 8] 4

RADIO-BEARER RECONFIGURATION (Step 1) (TDD)

For RADIO-BEARER RECONFIGURATION in step 1, use the message sub-type indicated as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation-Time Uplink-DPCH timeslots and codes ———First timeslot code list	Current-CFN-[current-CFN mod 8 + 8] Assigned-by-SS

TRANSPORT CHANNEL RECONFIGURATION (Step 2) (FDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type indicated as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation-Time Uplink-DPCH info ———Scrambling code number	Current-CFN-[current-CFN mod 8 + 8] 2

TRANSPORT CHANNEL RECONFIGURATION (Step 2) (TDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type indicated as as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation-Time Uplink-DPCH timeslots and codes ———First timeslot code list	Current-CFN-[current-CFN mod 8 + 8] A different code combination that used previously.

TRANSPORT CHANNEL RECONFIGURATION FAILURE

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure-cause	Incompatible simultaneous reconfiguration

8.2.4.5.5 ——— Test requirement

After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure-cause" set to "Incompatible simultaneous reconfiguration".

After step 3 the UE transmit a RADIO-BEARER RECONFIGURATION COMPLETE message on the new coniguration specified in step 1.

8.2.4.6 ~~Void~~Transport channel reconfiguration from CELL_DCH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.4.6.1 ~~Definition~~

8.2.4.6.2 ~~Conformance requirement~~

If the received reconfiguration message contains a protocol error causing the variable `PROTOCOL_ERROR_REJECT` to be set to `TRUE` according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable `TRANSACTIONS`; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to the cause value "protocol error";
 - 2> include the IE "Protocol error information" with contents set to the value of the variable `PROTOCOL_ERROR_INFORMATION`.

If the variable `INVALID_CONFIGURATION` is set to `TRUE` the UE shall:

- 1> keep the configuration existing before the reception of the message;
- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable `TRANSACTIONS`; and
 - 3> clear that entry.
 - 2> set the IE "failure cause" to "invalid configuration".
- 1> set the variable `INVALID_CONFIGURATION` to `FALSE`;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The UE shall:

- 1> in case of reception of a `TRANSPORT_CHANNEL_RECONFIGURATION` message:
 - ...
 - 2> transmit a `TRANSPORT_CHANNEL_RECONFIGURATION_FAILURE` as response message on the DCCH using AM RLC.

Reference

~~3GPP TS 25.331 clause 8.2.2.13, 8.2.2.11, 8.2.2.9.~~

~~8.2.4.6.3 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 which does not include any IEs except IE "Message Type".~~

~~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 including some IEs set to give an invalid configuration.~~

~~8.2.4.6.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: CS_DCCH+DTCH_DCH (state 6-9) or PS_DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.~~

~~Test Procedure~~

~~The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits an invalid TRANSPORT CHANNEL RECONFIGURATION message to the UE, which contains an unexpected critical message extension. 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 "Message extension not comprehended" in IE "Protocol error cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. SS transmits a TRANSPORT CHANNEL RECONFIGURATION message including some IEs set to give an invalid configuration. The UE keeps current configuration and transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	TRANSPORT CHANNEL RECONFIGURATION	See specific message content.
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not change its configuration.
2a		→	MEASUREMENT REPORT	
3		←	TRANSPORT CHANNEL RECONFIGURATION	This message includes IE set to give an invalid configuration
4				The UE does not change its configuration
5		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "invalid configuration"
6		→	MEASUREMENT REPORT	

~~Specific Message Contents~~

~~MEASUREMENT CONTROL (Step 0a)~~

~~Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:~~

Information Element	Value/Remark
Measurement Identity	4
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	DCH
— UL Target Transport Channel ID	5
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b, 2a and 6)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
- CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the TRANSPORT CHANNEL RECONFIGURATION message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'01'H

~~TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 2)~~

~~The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:~~

Information Element	Value/remark
Failure-cause	
—— Failure-cause	Protocol error
—— Protocol error information	
—— Protocol error cause	Message extension not comprehended

~~TRANSPORT CHANNEL RECONFIGURATION (Step 3) (FDD)~~

~~Use the message sub-type titled as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:~~

Information Element	Value/remark
—— Default DPCH Offset Value	512
—— DPCH frame offset	1024

~~TRANSPORT CHANNEL RECONFIGURATION (Step 3) (TDD)~~

~~Use the message sub-type titled as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Annex A with the following exceptions:~~

Information Element	Value/remark
—— PRACH TFCS	Present

~~TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 5)~~

~~The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:~~

Information Element	Value/remark
Failure-cause	Invalid configuration

~~8.2.4.6.5 Test requirement~~

~~After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.~~

~~After step 1 the UE shall 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 "Message extension not comprehended" in IE "Protocol error cause".~~

~~After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.~~

~~After step 4 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure-cause" to "invalid configuration".~~

~~After step 5, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.~~

8.2.4.11 ~~Void~~Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.4.11.1 ~~Definition~~

8.2.4.11.2 ~~Conformance requirement~~

If the UTRAN instructs the UE to use a configuration, which it does not support and/or if the received message causes the variable UNSUPPORTED_CONFIGURATION to be set to TRUE, the UE shall:

- 1> ~~transmit a failure response as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~
 - 2> ~~include the IE "RRC transaction identifier"; and~~
 - 2> ~~set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
 - 2> ~~clear that entry;~~
 - 2> ~~set the IE "failure cause" to "configuration unsupported".~~
- 1> ~~set the variable UNSUPPORTED_CONFIGURATION to FALSE;~~
- 1> ~~continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

The UE shall:

- 1> ~~in case of reception of a TRANSPORT_CHANNEL_RECONFIGURATION message:~~
 - ...
 - 2> ~~transmit a TRANSPORT_CHANNEL_RECONFIGURATION_FAILURE as response message on the DCCH using AM RLC.~~

Reference

3GPP TS 25.331 clause 8.2.2.6, 8.2.2.9.

8.2.4.11.3 ~~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.

8.2.4.11.4 ~~Method of test~~

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. SS then send a MEASUREMENT_CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT_REPORT message back to SS. The SS transmits a TRANSPORT_CHANNEL_RECONFIGURATION message, which includes configuration parameters unsupported by the UE, to the UE. The UE shall transmit a TRANSPORT_CHANNEL_RECONFIGURATION_FAILURE message on the DCCH using AM RLC, setting "configuration unsupported" in IE

"failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	TRANSPORT CHANNEL RECONGURATION	The message includes configuration unsupported by the UE
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE shall not change its configuration.
3		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	RACH or GPCH
— UL Target Transport Channel ID	Not Present
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 3)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
CHOICE measurement	Traffic volume measured results list
Traffic volume measurement results	
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	2
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	3
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
RB identity	4
RLC buffer payload	Check to see if this IE is present
RLC buffer payload average	Check to see if this IE is absent
RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

~~TRANSPORT CHANNEL RECONFIGURATION (FDD) (Step 1)~~

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Frequency info	
UARFCN uplink (Nu)	0
UARFCN downlink (Nd)	950

~~TRANSPORT CHANNEL RECONFIGURATION (TDD) (Step 1)~~

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Frequency info	
UARFCN (Nt)	0

~~TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 2)~~

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	Configuration unsupported

8.2.4.11.5 ~~Test requirement~~

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

After step 1 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC. The UE shall set "configuration unsupported" in IE "failure cause" of the message.

After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.

8.2.4.12 ~~Void~~ Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and successful reversion to old channel)

8.2.4.12.1 ~~Definition~~

8.2.4.12.2 ~~Conformance requirement~~

When a physical-dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

...

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

The UE shall:

1> in case of reception of a TRANSPORT_CHANNEL_RECONFIGURATION message:

...

2> transmit a TRANSPORT_CHANNEL_RECONFIGURATION_FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

8.2.4.12.3 ~~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 channel according to a TRANSPORT_CHANNEL_RECONFIGURATION message.

8.2.4.12.4 ~~Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.~~

~~Test Procedure~~

~~The UE is in CELL_FACH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. SS transmits a TRANSPORT CHANNEL RECONFIGURATION message, which includes the new transport channel parameters, to the UE. However, SS keeps its current physical channel configuration. Hence, the UE shall experience a failure in the reconfiguration process. After T312 expires, 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". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
0a	←		MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b	→		MEASUREMENT REPORT	
1	←		TRANSPORT CHANNEL RECONGURATION	Message includes IE "Downlink DPCH Info" and IE "Uplink DPCH Info"
2				SS does not reconfigure the channel causing the UE to detect a physical channel failure.
3	→		TRANSPORT CHANNEL RECONFIGURATION FAILURE	After T312 expires the UE shall revert to the old configuration and transmit this message.
4	→		MEASUREMENT REPORT	

~~Specific Message Contents~~

~~MEASUREMENT CONTROL (Step 0a)~~

~~Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:~~

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Setup
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	RACH or CPCH
— UL Target Transport Channel ID	Not Present
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 4)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
— CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	1
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Clause 9 of TS 34.108.

TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 2)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the message found in Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Failure-cause	Physical channel failure

8.2.4.12.5 ~~Test requirement~~

~~After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

~~After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" in IE "failure-cause".~~

~~After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

8.2.4.13 ~~Void~~ Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Physical channel failure and cell re-selection)

8.2.4.13.1 ~~Definition~~

8.2.4.13.2 ~~Conformance requirement~~

~~When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.~~

~~If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".~~

~~...~~

~~If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:~~

~~1> revert to the configuration prior to the reception of the message (old configuration);~~

~~...~~

~~1> if the old configuration does not include dedicated physical channels (CELL_FACH state):~~

~~2> select a suitable UTRA cell according to TS 25.304;~~

~~2> if the UE selects another cell than the cell the UE camped on upon reception of the reconfiguration message:~~

~~3> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "Cell reselection";~~

~~3> after the cell update procedure has completed successfully:~~

~~4> proceed as below.~~

~~1> transmit a failure response message as specified in TS 25.304 subclause 8.2.2.9, setting the information elements as specified below:~~

~~2> include the IE "RRC transaction identifier"; and~~

~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~

~~2> clear that entry;~~

~~2> set the IE "failure cause" to "physical channel failure".~~

~~1> set the variable ORDERED_RECONFIGURATION to FALSE;~~

~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

~~...~~

~~If the CELL_UPDATE_CONFIRM message:~~

- ~~— does not include "RB information elements"; and~~
- ~~— does not include "Transport channel information elements"; and~~
- ~~— does not include "Physical channel information elements"; and~~
- ~~— includes "CN information elements"; or~~
- ~~— includes the IE "Ciphering mode info"; or~~
- ~~— includes the IE "Integrity protection mode info"; or~~
- ~~— includes the IE "New C-RNTI"; or~~
- ~~— includes the IE "New U-RNTI";~~

~~the UE shall:~~

~~1> transmit a UTRAN_MOBILITY_INFORMATION_CONFIRM as response message using AM RLC.~~

~~...~~

~~The UE shall:~~

- ~~1> in case of reception of a TRANSPORT_CHANNEL_RECONFIGURATION message:~~
 - ~~2> transmit a TRANSPORT_CHANNEL_RECONFIGURATION_FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7, 8.5.4.~~

8.2.4.13.3 ~~Test purpose~~

~~To confirm that the UE transmits a TRANSPORT_CHANNEL_RECONFIGURATION_FAILURE message after it completes a cell update procedure, when the UE cannot reconfigure the new channel before timer T312 expires.~~

8.2.4.13.4 ~~Method of test~~

Initial Condition

~~System Simulator: 2 cells—Cell 1 and 2 are active.~~

~~UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108 in cell 1.~~

Test Procedure

Table 8.2.4.13

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA-RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	-75	-75	-60

Table 8.2.4.13 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_FACH state in cell 1. The SS transmits a TRANSPORT_CHANNEL_RECONFIGURATION message to the UE in cell 1. The message includes new configuration parameters. However, the SS does not reconfigure the specified configuration. At the same time, the SS configures its downlink transmission power settings according to columns "T1" in table 8.2.4.13. As a result, the UE cannot synchronise with the SS on the new DPCH before T312 expires. The UE initiates the cell re-selection procedure and transmits a CELL_UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2. The SS shall transmit a CELL_UPDATE_CONFIRM message on downlink CCCH after receiving a CELL_UPDATE message. The UE then transmit a UTRAN_MOBILITY_INFORMATION_CONFIRM message on the DCCH using AM RLC. The UE transmits a TRANSPORT_CHANNEL_RECONFIGURATION_FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause".

NOTE:— If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT_CHANNEL_RECONFIGURATION	
2				The SS does not reconfigure L1 and transport channel in accordance with the settings in the message, and applies the downlink transmission power settings, according to the values in columns "T1" of table 8.2.4.13.
3			Void	
4				The UE shall find cell 2, camp onto it.
5		→	CELL_UPDATE	This message include the value "cell reselection" set in IE "Cell update cause".
6		←	CELL_UPDATE_CONFIRM	See message content.
7		→	UTRAN_MOBILITY_INFORMATION_CONFIRM	
8		→	TRANSPORT_CHANNEL_RECONFIGURATION_FAILURE	The IE "failure cause" shall be set to "physical channel failure"

~~Specific Message Contents~~

~~TRANSPORT CHANNEL RECONFIGURATION (Step 1)~~

~~Use the message sub-type titled "Packet to CELL_DCH from CELL_FACH in PS" in Clause 9 of TS 34.108.~~

~~CELL UPDATE (Step 5)~~

~~The contents of CELL UPDATE message is identical as the message found in Clause 9 of TS 34.108 with the following exceptions:~~

Information Element	Value/remark
U-RNTI	Assigned previously in cell 1
-SRNC Identity	Assigned previously in cell 1
-S-RNTI	Assigned previously in cell 1
Cell Update Cause	"cell reselection"

~~CELL UPDATE CONFIRM (Step 6)~~

~~Use the same message type found in clause Clause 9 of TS 34.108, with the following exceptions:~~

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

~~UTRAN MOBILITY INFORMATION CONFIRM (Step 7)~~

~~Only the message type is checked:~~

~~TRANSPORT CHANNEL RECONGURATION FAILURE (Step 8)~~

~~The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the message found in Clause 9 of TS 34.108, with the following exceptions:~~

Information Element	Value/remark
Failure-cause	"physical channel failure"

~~8.2.4.13.5 Test requirement~~

~~After step 4 the UE shall transmit a CELL UPDATE message on the uplink CCCH with IE "Cell update cause" set to "cell reselection" in cell 2.~~

~~After step 6 UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC.~~

~~After step 7 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure-cause" to "physical channel failure".~~

~~8.2.4.14 [Void](#) Transport Channel Reconfiguration from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)~~

~~8.2.4.14.1 Definition~~

~~8.2.4.14.2 Conformance requirement~~

~~If the received message is any of the messages:~~

~~— TRANSPORT CHANNEL RECONFIGURATION; or~~

...

the UE shall:

2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or

...

3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS;

...

3> else:

4> reject the transaction; and

4> if the IE "Message Type" of the received message is not present in the table "Rejected transactions" in the variable TRANSACTIONS:

5> store the IE "Message type" and the IE "RRC transaction identifier" of the received message in the table "Rejected transactions" in the variable TRANSACTIONS.

...

If the table "Rejected transactions" in the variable TRANSACTIONS is set due to the received message and the variable PROTOCOL_ERROR_REJECT is set to FALSE, the UE shall:

1> not apply the configuration contained in the received reconfiguration message;

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The UE shall:

1> in case of reception of a TRANSPORT_CHANNEL_RECONFIGURATION message:

...

2> transmit a TRANSPORT_CHANNEL_RECONFIGURATION_FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.9, 8.2.2.12, clause 8.6.3.11.

8.2.4.14.3 ~~Test purpose~~

To confirm that if the UE receives a TRANSPORT_CHANNEL_RECONFIGURATION message during a reconfiguring procedure due to a radio bearer message other than a TRANSPORT_CHANNEL_RECONFIGURATION, it shall keep its configuration as if the TRANSPORT_CHANNEL_RECONFIGURATION message had not been received and complete the reconfiguration procedure according to the previously received message.

8.2.4.14.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a TRANSPORT CHANNEL RECONFIGURATION message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the TRANSPORT CHANNEL RECONFIGURATION message, the UE shall keep its current configuration as if it had not received the TRANSPORT CHANNEL RECONFIGURATION message and shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the SS acknowledges the TRANSPORT CHANNEL RECONFIGURATION FAILURE message, the UE reconfigures the new physical channel parameters upon the activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1	←		RADIO BEARER RECONFIGURATION	
2	←		TRANSPORT CHANNEL RECONFIGURATION	
3		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not reconfigure according to the TRANSPORT CHANNEL RECONFIGURATION message.
4		→	RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.
5		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 1) (FDD)

For RADIO BEARER RECONFIGURATION in step 1, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A with the following exceptions

Information Element	Value/remark
Activation Time Info	Not present
Uplink DPCH info	
Scrambling code number	4

RADIO BEARER RECONFIGURATION (Step 1) (TDD)

For RADIO BEARER RECONFIGURATION in step 1, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" found in Annex A with the following exceptions

Information Element	Value/remark
Activation Time	Current CFN [current CFN mod 8 + 8]
Uplink DPCH timeslots and codes	
First timeslot code list	Assigned by SS

~~TRANSPORT CHANNEL RECONFIGURATION (Step 2) (FDD)~~

~~For TRANSPORT CHANNEL RECONFIGURATION in step 2, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:~~

Information Element	Value/remark
Activation Time Info	Not Present
Uplink DPCH info	
— Scrambling code number	2

~~TRANSPORT CHANNEL RECONFIGURATION (Step 2) (TDD)~~

~~For TRANSPORT CHANNEL RECONFIGURATION in step 2, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:~~

Information Element	Value/remark
Activation Time	Not Present
— Uplink DPCH timeslots and codes	
— First timeslot code list	A different code combination that used previously.

~~TRANSPORT CHANNEL RECONFIGURATION FAILURE~~

~~The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:~~

Information Element	Value/remark
Failure cause	Incompatible simultaneous reconfiguration

~~8.2.4.14.5 — Test requirement~~

~~After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "Incompatible simultaneous reconfiguration".~~

~~After step 3 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message.~~

~~8.2.4.15 [Void](#) Transport channel reconfiguration from CELL_FACH to CELL_DCH: Failure (Invalid message reception and Invalid configuration)~~

~~8.2.4.15.1 — Definition~~

~~8.2.4.15.2 — Conformance requirement~~

~~If the received reconfiguration message contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:~~

- ~~1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below;~~
- ~~2> include the IE "RRC transaction identifier"; and~~
- ~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and~~
- ~~2> clear that entry;~~
- ~~2> set the IE "failure cause" to the cause value "protocol error";~~

- 2> include the IE "Protocol error information" with contents set to the value of the variable `PROTOCOL_ERROR_INFORMATION`.

If the variable `INVALID_CONFIGURATION` is set to `TRUE` the UE shall:

- 1> keep the configuration existing before the reception of the message;
- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable `TRANSACTIONS`; and
 - 3> clear that entry.
 - 2> set the IE "failure cause" to "invalid configuration".
- 1> set the variable `INVALID_CONFIGURATION` to `FALSE`;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The UE shall:

- 1> in case of reception of a `TRANSPORT_CHANNEL_RECONFIGURATION` message:
 - ...
 - 2> transmit a `TRANSPORT_CHANNEL_RECONFIGURATION_FAILURE` as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.13, 8.2.2.11, 8.2.2.9.

8.2.4.15.3 ——— Test purpose

To confirm that the UE transmits a `TRANSPORT_CHANNEL_RECONFIGURATION_FAILURE` message on the DCCH using AM RLC, if it receives an invalid `TRANSPORT_CHANNEL_RECONFIGURATION` message which does not include any IEs except IE "Message Type".

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 including some IEs set to give an invalid configuration.

8.2.4.15.4 ——— Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in `CELL_FACH` state. SS then send a `MEASUREMENT_CONTROL` message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit `MEASUREMENT_REPORT` message back to SS. The SS transmits an invalid `TRANSPORT_CHANNEL_RECONFIGURATION` message, which contains an unexpected critical message extension, to the UE. 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 "Message extension not comprehended" in IE "Protocol error cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. SS transmits TRANSPORT CHANNEL RECONFIGURATION message including some IEs set to give an invalid configuration. The UE keeps its current configuration and transmits a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	TRANSPORT CHANNEL RECONFIGURATION	See specific message content.
2		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The UE does not change its configuration.
2a		→	MEASUREMENT REPORT	
3		←	TRANSPORT CHANNEL RECONFIGURATION	This message includes IEs which is set to give an invalid configuration
4				The UE does not change its configuration.
5		→	TRANSPORT CHANNEL RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "invalid configuration"
6		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	RACH or CPCH
— UL Target Transport Channel ID	Not Present
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b, 2a and 6)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
—CHOICE measurement	Traffic volume measured results list
—Traffic volume measurement results	
—RB identity	4
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	2
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	3
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
—RB identity	4
—RLC buffer payload	Check to see if this IE is present
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

TRANSPORT CHANNEL RECONFIGURATION (Step 1)

Use the TRANSPORT CHANNEL RECONFIGURATION message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'01'H

TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 2)

The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure cause	
—Failure cause	Protocol error
—Protocol error information	
—Protocol error cause	Message extension not comprehended

TRANSPORT CHANNEL RECONFIGURATION (Step 3) (FDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
—Default DPCH Offset Value	512
—DPCH frame offset	1024

~~TRANSPORT CHANNEL RECONFIGURATION (Step 3) (TDD)~~

~~The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:~~

Information Element	Value/remark
PRACH TFCS	Present

~~TRANSPORT CHANNEL RECONFIGURATION FAILURE (Step 5)~~

~~The contents of TRANSPORT CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the TRANSPORT CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:~~

Information Element	Value/remark
Failure-cause	Invalid configuration

~~8.2.4.15.5 Test requirement~~

~~After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

~~After step 1 the UE shall 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 "Message extension not comprehended" in IE "Protocol error cause".~~

~~After step 2, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

~~After step 4 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration".~~

~~After step 5, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

8.2.6.3 ~~Void~~Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Failure (Physical channel failure and reversion to old channel)

8.2.6.3.1 ~~Definition~~

8.2.6.3.2 ~~Conformance requirement~~

~~When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in-syne" indications. On receiving N312 "in-syne" indications, the physical channel is considered established and the timer T312 is stopped and reset.~~

~~If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".~~

~~...~~

~~If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:~~

~~1> revert to the configuration prior to the reception of the message (old configuration);~~

~~...~~

~~1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~

~~2> include the IE "RRC transaction identifier"; and~~

~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~

~~2> clear that entry;~~

~~2> set the IE "failure cause" to "physical channel failure".~~

~~1> set the variable ORDERED_RECONFIGURATION to FALSE;~~

~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

~~...~~

~~The UE shall:~~

~~1> in case of reception of a PHYSICAL_CHANNEL_RECONFIGURATION message:~~

~~...~~

~~2> transmit a PHYSICAL_CHANNEL_RECONFIGURATION_FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.~~

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 before timer T312 expiry.~~

~~8.2.6.3.4 Method of test~~

~~Initial Condition~~

~~System Simulator: 1 cell.~~

~~UE: CS_DCCH+DTCH_DCH (state 6-9) or PS_DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.~~

~~Test Procedure~~

~~The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE which includes new DL scrambling code. However, the SS keeps its current dedicated physical channel configuration. The UE fails to synchronise with the SS on the new physical channel and after T312 timer expires 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". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.~~

~~Expected sequence~~

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	PHYSICAL CHANNEL RECONFIGURATION	Including a new DL scrambling code for FDD and First timeslot code list for TDD.
2				The SS does not reconfigure the physical channel so that the UE fails to synchronise on the new physical channel.
3		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	After T312 expires, the UE shall revert to the old configuration and transmits this message.
4		→	MEASUREMENT REPORT	

~~Specific Message Contents~~

~~MEASUREMENT CONTROL (Step 0a)~~

~~Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:~~

Information Element	Value/Remark
Measurement Identity	7
Measurement Command	Setup
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	DCH
— UL Target Transport Channel ID	5
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 4)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	7
Measured Results	
— CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	1
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (FDD) (Step 1)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
wnlink information for each radio links	

Choice mode	FDD
Primary CPICH info	
Primary scrambling code	Set to different value than default setting in TS34.108 clause 6.1 (FDD)
PDSCH with SHO-DCH info	Not Present
PDSCH code mapping	Not Present
Downlink DPCH info for each RL	
CHOICE mode	FDD
Primary CPICH usage for channel estimation	Primary CPICH may be used
DPCH frame offset	Set to value : Default DPCH Offset Value mod 38400
Power offset $P_{Pilot-DPDCH}$	0
Secondary CPICH info	Not Present
DL channelisation code	
Secondary scrambling code	5
Spreading factor	Reference to TS34.108 clause 6.10 Parameter Set
Code number	0
Scrambling code change	No change
TPC combination index	0
SSDT Cell Identity	Not Present
Closed loop timing adjustment mode	Not Present
SCCPCH information for FACH	Not Present

PHYSICAL CHANNEL RECONFIGURATION (TDD) (Step 1)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN [current CFN mod 8 + 8]
Uplink DPCH timeslots and codes	
First timeslot code list	Assigned by SS
Downlink information common for all radio links	
Downlink DPCH info common for all RL	
Timing Indicator	Maintain

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 2)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Failure-cause	Physical channel failure

8.2.6.3.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 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".

After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

8.2.6.4 ~~Void~~Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Failure (Physical channel failure and cell reselection)

8.2.6.4.1 ~~Definition~~

8.2.6.4.2 ~~Conformance requirement~~

If the received message caused the UE to be in CELL_DCH state and the UE failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

- 1> revert to the configuration prior to the reception of the message (old configuration);
- 1> if the old configuration includes dedicated physical channels (CELL_DCH state) and the UE is unable to revert to the old configuration:
 - 2> initiate a cell update procedure according to TS 25.331 subclause 8.3.1, using the cause "radio link failure";
 - 2> after the cell update procedure has completed successfully:
 - 3> proceed as below.
- ...
- 1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:
 - 2> include the IE "RRC transaction identifier"; and
 - 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to "physical channel failure".
- 1> set the variable ORDERED_RECONFIGURATION to FALSE;
- 1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

...

If the CELL_UPDATE_CONFIRM message:

- does not include "RB information elements"; and
- does not include "Transport channel information elements"; and
- includes "Physical channel information elements";

the UE shall:

- 1> transmit a PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE as response message using AM RLC.

...

The UE shall:

- 1> in case of reception of a PHYSICAL_CHANNEL_RECONFIGURATION message:

...

- 2> transmit a PHYSICAL_CHANNEL_RECONFIGURATION_FAILURE as response message on the DCCH using AM RLC.

Reference

~~3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.3.1.7.~~

~~8.2.6.4.3 Test purpose~~

~~To confirm that the UE transmits a PHYSICAL_CHANNEL_RECONFIGURATION_FAILURE message after UE completes a cell update procedure when the UE fails to synchronise on the old physical channel after the UE cannot synchronise on the new physical channel according to the received PHYSICAL_CHANNEL_RECONFIGURATION message.~~

~~8.2.6.4.4 Method of test~~

Initial Condition

~~System Simulator: 1 cell.~~

~~UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.~~

Test Procedure

~~The UE is in CELL_DCH state. The SS transmits a PHYSICAL_CHANNEL_RECONFIGURATION message to the UE, which includes new UL scrambling code, but the SS does not configure the new physical channel and release the old configuration. The UE fails to synchronise on the new dedicated physical channel and tries to revert to the old configuration. But the SS already deleted the old physical channel configuration and the UE cannot revert to the old configuration. The UE transmits a CELL_UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit a CELL_UPDATE_CONFIRM message on downlink CCCH after receiving CELL_UPDATE message. The UE transmits a PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits PHYSICAL_CHANNEL_RECONFIGURATION_FAILURE message on the DCCH using AM RLC, setting the value "physical channel failure" to IE "failure cause".~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1			Void	
2			Void	
3		←	PHYSICAL_CHANNEL RECONFIGURATION	The message includes new UL scrambling code for FDD and First timeslot code list for TDD.
4				SS does not configure any dedicated physical channel and 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.
5		→	CELL UPDATE	This message includes the value "radio link failure" set in IE "Cell update cause".
6		←	CELL UPDATE CONFIRM	This message includes IE "Physical channel information elements".
7				The SS configures the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
8		→	PHYSICAL_CHANNEL RECONFIGURATION COMPLETE	
9		→	PHYSICAL_CHANNEL RECONFIGURATION FAILURE	The IE "failure cause" shall be set to "physical channel failure"

Specific Message Contents

PHYSICAL_CHANNEL RECONFIGURATION (Step 3) (FDD)

The contents of PHYSICAL_CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink-DPCH info —— Scrambling code number	4
Downlink information common for all radio links —— Downlink-DPCH info common for all-RL —— Timing Indicator	Maintain

PHYSICAL_CHANNEL RECONFIGURATION (Step 3) (TDD)

The contents of PHYSICAL_CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non-speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Activation Time	Current CFN-[current CFN mod 8 + 8]
Uplink-DPCH timeslots and codes —— First timeslot code list	Assigned by SS
Downlink information common for all radio links —— Downlink-DPCH info common for all-RL —— Timing Indicator	Maintain

CELL UPDATE (Step 5)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in Clause 9 of TS 34.108 for FDD or TDD with the following exceptions:

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	"radio link failure"
Cell Update Cause	

CELL UPDATE CONFIRM (Step 6) (FDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Clause 9 of TS 34.108 with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 4
RRC State indicator	CELL_DCH
UplinkDPCH Info	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to initial condition

CELL UPDATE CONFIRM (Step 6) (TDD)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in Clause 9 of TS 34.108 with the following exceptions:

Information Element	Value/remark
U-RNTI	Same as CELL UPDATE message in step 4
RRC State Indicator	CELL_DCH
Uplink DPCH timeslots and codes	Same as RADIO BEARER SETUP message used to move to initial condition
Downlink information for each radio links	Same as RADIO BEARER SETUP message used to move to initial condition

PHYSICAL CHANNEL RECONGURATION FAILURE (Step 9)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Failure cause	"physical channel failure"

8.2.6.4.5 Test requirement

After step 4 the UE shall transmits a CELL UPDATE message using RLC TM mode on the uplink CCCH with IE "Cell update cause" set to "radio link failure".

After step 7 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 8 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, setting the IE "failure cause" to "physical channel failure".

8.2.6.10 ~~Void~~Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Unsupported configuration)

8.2.6.10.1 ~~Definition~~

8.2.6.10.2 ~~Conformance requirement~~

~~If the UTRAN instructs the UE to use a configuration, which it does not support and/or if the received message causes the variable UNSUPPORTED_CONFIGURATION to be set to TRUE, the UE shall:~~

- ~~1> transmit a failure response as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:~~
 - ~~2> include the IE "RRC transaction identifier"; and~~
 - ~~2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and~~
 - ~~2> clear that entry;~~
 - ~~2> set the IE "failure cause" to "configuration unsupported".~~
- ~~1> set the variable UNSUPPORTED_CONFIGURATION to FALSE;~~
- ~~1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.~~

~~The UE shall:~~

- ~~1> in case of reception of a PHYSICAL_CHANNEL_RECONFIGURATION message:~~
 - ~~...~~
 - ~~2> transmit a PHYSICAL_CHANNEL_RECONFIGURATION_FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clause 8.2.2.6, 8.2.2.9~~

8.2.6.10.3 ~~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.~~

8.2.6.10.4 ~~Method of test~~

Initial Condition

~~System Simulator: 1 cell~~

~~UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108~~

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL_CHANNEL_RECONFIGURATION message to the UE to invoke the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE message using AM RLC. SS then send a MEASUREMENT_CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT_REPORT message back to SS. The SS transmits a PHYSICAL_CHANNEL_RECONFIGURATION message to the UE, which includes unsupported frequency for the UE. The UE shall transmit a PHYSICAL_CHANNEL_RECONFIGURATION_FAILURE message on the DCCH using AM RLC, setting "configuration unsupported" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT_REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL_CHANNEL_RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3		→	PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE	
3a		←	MEASUREMENT_CONTROL	SS requests UE to perform periodical traffic volume measurement.
3b		→	MEASUREMENT_REPORT	
4		←	PHYSICAL_CHANNEL_RECONFIGURATION	Includes unsupported frequencies for the UE
5		→	PHYSICAL_CHANNEL_RECONFIGURATION_FAILURE	The UE shall not change the physical channel configuration, this message shall be sent using the old configuration.
6		→	MEASUREMENT_REPORT	

Specific Message Contents

PHYSICAL_CHANNEL_RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A.

MEASUREMENT_CONTROL (Step 3a)

Use the MEASUREMENT_CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	4
Measurement Command	Modify
Measurement reporting mode	
— Measurement Report Transfer Mode	Acknowledged mode-RLC
— Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
— Traffic volume measurement object list	
— Uplink transport channel type	RACH or CPCH
— UL Target Transport Channel ID	Not Present
— Traffic volume measurement quantity	
— Measurement quantity	RLC Buffer Payload
— Time Interval to take an average or a variance	Not Present
— Traffic volume reporting quantity	
— RLC Buffer Payload for each RB	True
— Average of RLC Buffer Payload for each RB	False
— Variance of RLC Buffer Payload for each RB	False
— Measurement validity	
— UE state	All states
— CHOICE Reporting criteria	Periodical Reporting Criteria
— Amount of reporting	Infinity
— Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 3b and 6)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	4
Measured Results	
— CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	2
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	3
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
— RB identity	4
— RLC buffer payload	Check to see if this IE is present
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

PHYSICAL CHANNEL RECONFIGURATION (Step 4) (FDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Frequency info	
UARFCN uplink (Nu)	0
UARFCN downlink (Nd)	950

~~PHYSICAL CHANNEL RECONFIGURATION (Step 4) (TDD)~~

~~The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:~~

Information Element	Value/remark
Frequency info	
UARFCN (Nt)	0

~~PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 5)~~

~~The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:~~

Information Element	Value/remark
Failure cause	Configuration unsupported

~~8.2.6.10.5 Test requirement~~

~~After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.~~

~~After step 3a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

~~After step 4 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC, the IE "failure cause" shall be set to "configuration unsupported".~~

~~After step 5, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on RACH at every 8s interval.~~

8.2.6.13 ~~Void~~Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Failure (Incompatible simultaneous reconfiguration)

8.2.6.13.1 ~~Definition~~

8.2.6.13.2 ~~Conformance requirement~~

If the received message is any of the messages:

— PHYSICAL_CHANNEL_RECONFIGURATION; or

...

the UE shall:

2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or

...

3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS;

...

3> else:

4> reject the transaction; and

4> if the IE "Message Type" of the received message is not present in the table "Rejected transactions" in the variable TRANSACTIONS:

5> store the IE "Message type" and the IE "RRC transaction identifier" of the received message in the table "Rejected transactions" in the variable TRANSACTIONS.

...

If the table "Rejected transactions" in the variable TRANSACTIONS is set due to the received message and the variable PROTOCOL_ERROR_REJECT is set to FALSE, the UE shall:

1> not apply the configuration contained in the received reconfiguration message;

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Rejected transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "incompatible simultaneous reconfiguration".

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The UE shall:

1> in case of reception of a PHYSICAL_CHANNEL_RECONFIGURATION message:

...

~~2> transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE as response message on the DCCH using AM RLC.~~

Reference

~~3GPP TS 25.331 clauses 8.2.2.9, 8.2.2.12, 8.6.3.11.~~

~~8.2.6.13.3~~ Test purpose

~~To confirm that if the UE receives a PHYSICAL CHANNEL RECONFIGURATION message during a reconfiguring procedure due to a radio bearer message other than a PHYSICAL CHANNEL RECONFIGURATION, it shall keep its configuration as if the PHYSICAL CHANNEL RECONFIGURATION message had not been received and complete the reconfiguration procedure according to the previously received message.~~

~~8.2.6.13.4~~ Method of test

Initial Condition

~~System Simulator: 1 cell~~

~~UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108~~

Test Procedure

~~The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. The SS transmits a RADIO BEARER RECONFIGURATION message to the UE. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message before the "activation time" indicated in the RADIO BEARER RECONFIGURATION message expires. When the UE receives the PHYSICAL CHANNEL RECONFIGURATION message, the UE shall keep its configuration as if it had not received the PHYSICAL CHANNEL RECONFIGURATION message and shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure cause" set to "incompatible simultaneous reconfiguration". After the UE transmits the PHYSICAL CHANNEL RECONFIGURATION FAILURE message, the UE reconfigures the new physical channel parameters upon the activation time and transmits a RADIO BEARER RECONFIGURATION COMPLETE message on DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE enters CELL_FACH state.
4		←	RADIO BEARER RECONFIGURATION	
5		←	PHYSICAL CHANNEL RECONFIGURATION	Sent before the elapse of the frame number specified in IE "Activation time" of the message dispatched in step 4.
6		→	PHYSICAL CHANNEL RECONFIGURATION FAILURE	The UE does not change the configuration due to the reception of PHYSICAL CHANNEL RECONFIGURATION message.
7		→	RADIO BEARER RECONFIGURATION COMPLETE	This message is on DCCH using AM RLC.
8		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in Annex A.

RADIO BEARER RECONFIGURATION (Step 4) (FDD)

For RADIO BEARER RECONFIGURATION in step 1, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation Time Info	Not present
Uplink DPCH info	
Scrambling code number	4

RADIO BEARER RECONFIGURATION (Step 4) (TDD)

For RADIO BEARER RECONFIGURATION in step 1, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions

Information Element	Value/remark
Activation Time	Current CFN [current CFN mod 8 + 8]
Uplink DPCH timeslots and codes	
First timeslot code list	Assigned by SS

PHYSICAL CHANNEL RECONFIGURATION (Step 5) (FDD)

For PHYSICAL CHANNEL RECONFIGURATION in step 5, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation-Time Info Uplink-DPCH info ——Scrambling code number	Not Present 2

PHYSICAL CHANNEL RECONFIGURATION (Step 5) (TDD)

For PHYSICAL CHANNEL RECONFIGURATION in step 5, use the message sub-type indicated as "Packet to CELL_DCH from CELL_FACH in PS" as found in Annex A with the following exceptions:

Information Element	Value/remark
Activation-Time -Uplink-DPCH timeslots and codes -First timeslot code list	Not present Different as assigned previously

PHYSICAL CHANNEL RECONFIGURATION FAILURE (Step 6)

The contents of PHYSICAL CHANNEL RECONFIGURATION FAILURE message in this test case is the same as the PHYSICAL CHANNEL RECONFIGURATION FAILURE message as found in Annex A, with the following exceptions:

Information Element	Value/remark
Failure-cause	Incompatible simultaneous reconfiguration

8.2.6.13.5 —— Test requirement

After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.

After step 5 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION FAILURE message on the DCCH using AM RLC with IE "failure-cause" set to "Incompatible simultaneous reconfiguration".

After step 6 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

CHANGE REQUEST

34.123-1 CR 487 # rev **-** # Current version: **5.3.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# CR to 34.123-1 REL-5; Correction to package 4 RRC test case 8.2.1.4 according to 25.331 CR 1820		
Source:	# Ericsson		
Work item code:	# TEI	Date:	# 05/05/2003
Category:	# F	Release:	# REL-5
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# At TSG-RAN#19, CR 1820 to TS 25.331 was approved. CR 1820 makes a clarification when physical channel failure applies during reconfiguration. The physical channel establishment criteria during a reconfiguration is only applicable when the reconfiguration involves synchronisation procedure A and not e.g. in case of spreading factor change. Synchronisation procedure A is typically performed at hard handover. This test case includes a physical channel failure that make use of a reconfiguration where synchronisation procedure A is not used. Therefore, with the clarification in TS 25.331 a physical channel failure would not be triggered.
Summary of change:	# In the test case 8.2.1.4: In order to make the UE to use the synchronisation procedure A, a hard handover (intra-frequency) is performed from cell 1 to cell 2. The reconfiguration fails since the SS does not configure the physical channel in cell 2.
Consequences if not approved:	# The test case would not work.

Clauses affected:	# 8.2.1.4						
Other specs affected:	<table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px;">Y</td> <td style="border: 1px solid black; padding: 2px;">N</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">#</td> <td style="border: 1px solid black; padding: 2px;">X</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">#</td> <td style="border: 1px solid black; padding: 2px;">X</td> </tr> </table> Other core specifications # Test specifications #	Y	N	#	X	#	X
Y	N						
#	X						
#	X						

O&M Specifications

Other comments: ⌘ Affects REL-5, REL-4 and R99.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

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

8.2.1.4.2 Conformance requirement

When a physical dedicated channel establishment is initiated by the UE, the UE shall start a timer T312 and wait for layer 1 to indicate N312 "in sync" indications. On receiving N312 "in sync" indications, the physical channel is considered established and the timer T312 is stopped and reset.

If the timer T312 expires before the physical channel is established, the UE shall consider this as a "physical channel establishment failure".

NOTE: The criteria defined in this subclause only apply in case the UE performs synchronisation procedure A (FDD only).

...

If the received message caused the UE to be in CELL_DCH state and the UE [according to subclause 8.5.4](#) failed to establish the dedicated physical channel(s) indicated in the received message the UE shall:

1> revert to the configuration prior to the reception of the message (old configuration);

...

1> transmit a failure response message as specified in TS 25.331 subclause 8.2.2.9, setting the information elements as specified below:

2> include the IE "RRC transaction identifier"; and

2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

2> clear that entry;

2> set the IE "failure cause" to "physical channel failure".

1> set the variable ORDERED_RECONFIGURATION to FALSE;

1> continue with any ongoing processes and procedures as if the reconfiguration message was not received.

The UE shall:

1> in case of reception of a RADIO BEARER SETUP message:

...

2> transmit a RADIO BEARER SETUP FAILURE as response message on the DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2.7, 8.2.2.9, 8.5.4.

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 on the DCCH using AM RLC, if the UE fails to reconfigure the radio bearer according to the RADIO BEARER SETUP message before timer T312 expires.

Initial Condition

System Simulator: ~~1-cell~~2 cells. – Cell 1 is active and cell 2 is inactive.

UE: CS-DCCH_DCH (state 6-5) or PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the domain(s) supported by the UE.

Test Procedure

Table 8.2.1.4

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-60	OFF	-75
P-CCPCH RSCP (TDD)	dBm	-60	-60	OFF	-75

Table 8.2.1.4 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The UE is in CELL_DCH state in cell 1. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. Then the SS configures its downlink transmission power settings according to column "T1" in table 8.2.1.4. The SS transmits a RADIO BEARER SETUP message to the UE specifying a configuration in cell 2 and SS keeps its old dedicated channel configuration in cell 1. Then after T312 expiry, the UE reverts to the old configuration and transmits a RADIO BEARER SETUP FAILURE message on the DCCH in cell 1 using AM RLC which is set to "physical channel failure" in IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1		←	RADIO BEARER SETUP	The SS keeps its old L1 configuration <u>in cell 1</u> and <u>does not configure a physical channel in cell 2</u> after transmitting this message.
2				The UE does not configure the new radio access bearer and reverts to the old configuration.
3		→	RADIO BEARER SETUP FAILURE	UE shall transmit this message using the old configuration.
4		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	Setup
Measurement reporting mode	Acknowledged mode RLC
- Measurement Report Transfer Mode	Periodical Reporting
- Periodical Reporting / Event Trigger Reporting Mode	
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b and 4)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

RADIO BEARER SETUP (Step 1)

The contents of the RADIO BEARER SETUP message in this test case is indicated as "Non speech to CELL_DCH from CELL_DCH in CS", "Speech to CELL_DCH from CELL_DCH in CS" or "Packet to CELL_DCH from

CELL_DCH in PS" as found in clause 9 of TS 34.108, with the following exceptions. ~~The occurrence of physical channel failure requires that the RADIO BEARER SETUP message includes a change of the physical channel configuration e.g. spreading factor. E.g. this means the new configuration should be different from "Conversational/ speech / UL:12.2 DL:12.2 kbps / CS-RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH" since the physical channel configuration is the same as for the initial Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH.~~

<u>Information Element</u>	<u>Value/remark</u>
<u>Downlink information for each radio link list</u> <u>- Downlink information for each radio links</u> <u>- CHOICE mode</u> <u>- Primary CPICH info</u> <u>- Primary CPICH scrambling code</u>	<u>FDD</u> <u>Ref. to the Default setting for cell 2 in TS34.108 clause 6.1 (FDD)</u>

RADIO BEARER SETUP FAILURE (Step 3)

The contents of RADIO BEARER SETUP FAILURE message in this test case is the same as the RADIO BEARER SETUP FAILURE message as found in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Failure cause	Physical channel failure

8.2.1.4.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 the UE shall transmit a RADIO BEARER SETUP FAILURE message on the DCCH using AM RLC which is set to "physical channel failure" in IE "failure cause".

After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

CR-Form-v7

CHANGE REQUEST

34.123-1 CR 489 # rev **-** # Current version: **5.3.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# Corrections to Package 3 RRC test cases (clause 8.3)		
Source:	# Panasonic, Siemens		
Work item code:	# TEI	Date:	# 28/04/2003
Category:	# F	Release:	# Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change: #	<ol style="list-style-type: none"> 1. According to TS25.331v540 clause 10.3.7.33, IE "Cell info" must be present for the serving cell in SIB 11. in TC 8.3.1.23 and 8.3.1.24 of the current test spec, this IE is missing for the serving cell. 2. Editorial mistakes.
Summary of change: #	<ol style="list-style-type: none"> 1. <u>TC 8.3.1.23</u> <ul style="list-style-type: none"> • IE "Cell info" is added for the serving cell in SIB 11 (cell 1, 2 and 3), for FDD and TDD. • Missing sub-IEs of "Cell info" for neighbouring cells are added. 2. <u>TC 8.3.1.24</u> <ul style="list-style-type: none"> • IE "Cell info" is added for the serving cell in SIB 11 (cell 1, 2 and 3), for FDD and TDD. • Missing sub-IEs of "Cell info" for neighbouring cells are added. • SIB 12 for cell 2 (FDD) is removed because it is not needed. In SIB 11 for cell 2 (FDD), IE "SIB 12 indicator" is set to FALSE.
Consequences if not approved: #	# This test case could fail good UE.

Clauses affected:	# 8.3.1.23, 8.3.1.24								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="width: 20px; text-align: center;">#</td> <td style="width: 20px; text-align: center;">X</td> </tr> <tr> <td style="width: 20px; text-align: center;">#</td> <td style="width: 20px; text-align: center;">X</td> </tr> </table>	Y	N	#	X	#	X	Other core specifications	#
Y	N								
#	X								
#	X								
		Test specifications	#						

O&M Specifications

Other comments: ⌘ Affects R'99, Rel-4 and Rel-5 UEs.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modifications>

8.3.1.23 Cell Update: HCS cell reselection in CELL_FACH

8.3.1.23.1 Definition

8.3.1.23.2 Conformance requirement

1. The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is defined by:

$$H_s = Q_{meas,s} - Q_{hcs_s}$$

$$H_n = Q_{meas,n} - Q_{hcs_n} - TO_n * L_n$$

...

2. The cell-ranking criterion R is defined by:

$$R_s = Q_{meas,s} + Q_{hyst_s}$$

$$R_n = Q_{meas,n} - Q_{offset_{s,n}} - TO_n * (1 - L_n)$$

where:

$$TO_n = TEMP_OFFSET_n * W(PENALTY_TIME_n - T_n)$$

$$L_n = 0 \quad \text{if } HCS_PRIO_n = HCS_PRIO_s$$

$$L_n = 1 \quad \text{if } HCS_PRIO_n \neq HCS_PRIO_s$$

$$W(x) = 0 \quad \text{for } x < 0$$

$$W(x) = 1 \quad \text{for } x \geq 0$$

TEMP_OFFSET_n applies an offset to the H and R criteria for the duration of PENALTY_TIME_n after a timer T_n has started for that neighbouring cell.

The timer T_n is implemented for each neighbouring cell. T_n shall be started from zero when one of the following conditions becomes true:

- if HCS_PRIO_n <> HCS_PRIO_s and

$$Q_{meas,n} > Q_{hcs_n}$$

Or

- if HCS_PRIO_n = HCS_PRIO_s and

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH RSCP in the serving cell, and:

$$Q_{\text{meas},n} > Q_{\text{meas},s} + Q_{\text{offset}1_{s,n}}$$

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No in the serving cell, and:

$$Q_{\text{meas},n} > Q_{\text{meas},s} + Q_{\text{offset}2_{s,n}}$$

- for all other serving and neighbour cells:

$$Q_{\text{meas},n} > Q_{\text{meas},s} + Q_{\text{offset}1_{s,n}}$$

T_n for the associated neighbour cell shall be stopped as soon as any of the above conditions are no longer fulfilled. Any value calculated for TO_n is valid only if the associated timer T_n is still running else TO_n shall be set to zero.

At cell-reselection, a timer T_n is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer T_n for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer T_n shall be continued to be run for the corresponding cells but the criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.

...

3. The cell selection criterion S used for cell reselection is fulfilled when:

for FDD cells:	$S_{\text{rxlev}} > 0$ AND $S_{\text{qual}} > 0$
for TDD cells:	$S_{\text{rxlev}} > 0$
for GSM cells:	$S_{\text{rxlev}} > 0$

Where :

$S_{\text{qual}} = Q_{\text{qualmeas}} - Q_{\text{qualmin}}$
$S_{\text{rxlev}} = Q_{\text{rxlevmeas}} - Q_{\text{rxlevmin}} - P_{\text{compensation}}$

...

4. The UE shall perform ranking of all cells that fulfil the S criterion among

- all cells that have the highest HCS_PRIO among those cells that fulfil the criterion $H \geq 0$. Note that this rule is not valid when UE high-mobility is detected.
- all cells, not considering HCS priority levels, if no cell fulfil the criterion $H \geq 0$. This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

5. If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval $T_{reselection}$.
- more than 1 second has elapsed since the UE camped on the current serving cell.

...

6. The *cell reselection* process in Connected Mode is the same as *cell reselection evaluation process* used for idle mode, described in subclause 5.2.6 of 25.304.

7. A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:

3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or

3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:

4> perform cell update using the cause "cell reselection".

Reference

3GPP TS 25.304 clause 5.2.6.1.4

3GPP TS 25.304 clause 5.4.3

3GPP TS 25.331 clause 8.3.1

8.3.1.23.3 Test purpose

1. To confirm that the UE can read HCS related SIB information and act upon all HCS parameters in CELL_FACH state.
2. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell in CELL_FACH state.
3. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.23.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 is active with downlink transmission power shown in Column To in Table 8.3.1.23-1. Cell 2 and 3 are switched off.

UE: CS-CELL_FACH_Initial (state 6-2) or PS-CELL_FACH_Initial (state 6-4) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE

Specific Message Content

For system information blocks [3](#), [4](#), and [11](#) ~~& 12~~ for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
- Cell selection and re-selection info	FDD
- CHOICE mode	0 dB
- Sintersearch	35 dB
- SsearchHCS	This parameter is configurable
- RAT List	Not Present
- S _{limit,SearchRAT}	-20 dB
- Qqualmin	-115 dBm
- Qrxlevmin	5 (gives actual value of 10 dB)
- Qhyst1s	0 dB
- Qhyst2s	
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
- Cell selection and re-selection info	TDD
- CHOICE mode	47 dB
- SsearchHCS	
- RAT List	This parameter is configurable
- Qrxlevmin	-103 dBm
- Qhyst1s	5 (gives actual value of 10 dB)
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	used
- Use of HCS	
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
<ul style="list-style-type: none"> - SIB 12 indicator - Measurement control system information - Use of HCS - Intra-frequency cell info list - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CCPCH info - Cell parameters ID 	<p>FALSE</p> <p>used</p> <p>1</p> <p>Not Present</p> <p>Not Present</p> <p>FALSE</p> <p>TDD</p> <p>Reference clause 6.1.4 in TS34.108: Default settings for cell No.1 (TDD)</p>
<ul style="list-style-type: none"> - Primary CCPCH TX power - Timeslot list - Burst type - Cell Selection and Re-selection info - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CCPCH info - Cell parameters ID 	<p>Not Present</p> <p>Not Present</p> <p>Not Present</p> <p>Not Present</p> <p>2</p> <p>Not Present0dB</p> <p>Not Present</p> <p>TRUE</p> <p>TDD</p> <p>Reference clause 6.1.4 in TS34.108: Default settings for cell No.2 (TDD)</p>
<ul style="list-style-type: none"> - Primary CCPCH TX power - Timeslot list - Burst type - Cell Selection and Re-selection info - Qoffset_{1s,n} - Maximum allowed UL TX power - HCS neighbouring cell information - HCS_Priority - Q_HCS -HCS Cell Reselection Information <ul style="list-style-type: none"> - Penalty Time -Temporary Offset - CHOICE mode - Qrxlevmin - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CCPCH info - Cell parameters ID 	<p>Not Present</p> <p>Not Present</p> <p>Not Present</p> <p>Not Present</p> <p>-20 dB</p> <p>30 dBm</p> <p>Present</p> <p>7</p> <p>40 (results in actual value of -75)</p> <p>40</p> <p>inf</p> <p>TDD</p> <p>-103 dBm</p> <p>3</p>
<ul style="list-style-type: none"> - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CCPCH info - Cell parameters ID - Primary CCPCH TX power - Timeslot list - Burst type - Cell Selection and Re-selection info - Qoffset_{1s,n} - Maximum allowed UL TX power - HCS neighbouring cell information - HCS_Priority - Q_HCS -HCS Cell Reselection Information <ul style="list-style-type: none"> - Penalty Time -Temporary Offset - CHOICE mode - Qrxlevmin 	<p>Not Present0dB</p> <p>Not Present</p> <p>TRUE</p> <p>TDD</p> <p>Reference clause 6.1.4 in TS34.108: Default settings for cell No.3 (TDD)</p> <p>Not Present</p> <p>Not Present</p> <p>Not Present</p> <p>-20dB</p> <p>30 dBm</p> <p>Present</p> <p>7</p> <p>40 (results in actual value of -75)</p> <p>40</p> <p>inf</p> <p>TDD</p> <p>-103 dBm</p>

Test Procedure

Table 8.3.1.23-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
Cell id in system information		1			2			3		
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
HCS Priority		6			7			7		
CPICH Ec (FDD)	dBm /3.84 MHz	-60	-60	-60	-80	-80	-70	-80	-70	-70
P-CCPCH RSCP (TDD)	dBm	-60	-60	-60	-80	-80	-70	-80	-70	-70
H* (During penalty time)		15	15	5	-inf	-inf	5	-inf	-inf	5
H* (After PenaltyTime)		15	15	15	-5	-5	5	-5	5	5
R* (During PenaltyTime)		n.a.	n.a.	n.a.	n.a.	n.a.	-inf	n.a.	n.a.	-60
R* (After PenaltyTime)		n.a.	n.a.	n.a.	n.a.	n.a.	-50	n.a.	n.a.	-60

* this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the CELL_FACH state, camping onto cell 1. SS configures Cell 2 and 3 with power levels given in column "T0" and starts to broadcast BCCH on the primary CCPCH in cell 2 & 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.1.23-1. The UE shall find cell 3 to be more suitable for service and hence perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. After the completion of cell reselection, the UE shall transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 3 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 "RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall stay in CELL_FACH state. SS then sets downlink transmission power settings according to columns "T2" in table 8.3.1.23-1. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection to cell 2 after the power levels have been changed. 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 "RRC State Indicator" set to "CELL_FACH", to the UE on the downlink DCCH. Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. UE shall stay in CELL_FACH state.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state in cell 1
2		←	BCCH	SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.23-1. The SS starts to broadcast BCCH on the primary CCPCH in cell 2 and Cell 3. The UE shall find still find Cell 1 best for service even after penalty time of 40 seconds, and shall remain in Cell 1 in CELL_FACH State
3				SS changes the power levels as per column 'T1' in the table 8.3.1.23-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 1 as best for service and remain in cell 1. After Penalty time of 40 Seconds, UE shall find Cell 3 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 3.
4		→	CELL UPDATE	Value "cell reselection" shall be indicated in IE "Cell update cause" Received in Cell 3
5		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH".
6		→	UTRAN MOBILITY INFORMATION CONFIRM	
7				SS changes the power levels as per column 'T2' in the table 8.3.1.23-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 3 as best for service and remain in cell 3. After Penalty time of 40 Seconds, UE shall find Cell 2 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
8		→	CELL UPDATE	Received in Cell 2
9		←	CELL UPDATE CONFIRM	IE "RRC State Indicator" is set to "CELL_FACH".
10		→	UTRAN MOBILITY INFORMATION CONFIRM	

Specific Message Contents

The contents of system information block 4 and 11 messages are identical as system information block 4 and 11 messages as found in 34.108 clause 6.1 with the following exceptions:

Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	FDD
- CHOICE mode	0 dB
- Sintersearch	35 dB
- SsearchHCS	This parameter is configurable
- RAT List	Not Present
- S _{limit,SearchRAT}	-20 dB
- Qqualmin	-115 dBm
- Qrxlevmin	5 (gives actual value of 10 dB)
- Qhyst1s	0 dB
- Qhyst2s	
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	TDD
- CHOICE mode	0 dB
- Sintersearch	47 dB
- SsearchHCS	
- RAT List	This parameter is configurable
- Qrxlevmin	-103 dBm
- Qhyst1s	5 (gives actual value of 10 dB)
- HCS Serving cell information	
-HCS Priority	7
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	used
- Use of HCS	
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	used
- Use of HCS	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.2 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present 0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.1 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20 dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
- Q_HCS	39 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present 0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.3 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	used
- Use of HCS	
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	12
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	67
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	24
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	67
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	used
- Use of HCS	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.3 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present 0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.1 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20 dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present 0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.2 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

CELL UPDATE

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
Cell Update Cause	Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 5 and 9)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

8.3.1.23.5 Test requirement

After step 3 the UE shall reselect to cell 3 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 5 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

After step 7 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 9 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC.

8.3.1.24 Cell Update: HCS cell reselection in CELL_PCH

8.3.1.24.1 Definition

8.3.1.24.2 Conformance requirement

1. The quality level threshold criterion H for hierarchical cell structures is used to determine whether prioritised ranking according to hierarchical cell re-selection rules shall apply, and is defined by:

$$H_s = Q_{meas,s} - Q_{hcs_s}$$

$$H_n = Q_{meas,n} - Q_{hcs_n} - TO_n * L_n$$

...

2. The cell-ranking criterion R is defined by:

$$R_s = Q_{meas,s} + Q_{hyst_s}$$

$$R_n = Q_{meas,n} - Q_{offset_{s,n}} - TO_n * (1 - L_n)$$

where:

$$TO_n = TEMP_OFFSET_n * W(PENALTY_TIME_n - T_n)$$

$$L_n = 0 \quad \text{if } HCS_PRIO_n = HCS_PRIO_s$$

$$L_n = 1 \quad \text{if } HCS_PRIO_n \neq HCS_PRIO_s$$

$$W(x) = 0 \quad \text{for } x < 0$$

$$W(x) = 1 \quad \text{for } x \geq 0$$

TEMP_OFFSET_n applies an offset to the H and R criteria for the duration of PENALTY_TIME_n after a timer T_n has started for that neighbouring cell.

The timer T_n is implemented for each neighbouring cell. T_n shall be started from zero when one of the following conditions becomes true:

- if HCS_PRIO_n ≠ HCS_PRIO_s and

$$Q_{meas,n} > Q_{hcs,n}$$

Or

- if HCS_PRIO_n = HCS_PRIO_s and

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH RSCP in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset1,s,n}$$

- for serving FDD and neighbour FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No in the serving cell, and:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset2,s,n}$$

- for all other serving and neighbour cells:

$$Q_{meas,n} > Q_{meas,s} + Q_{offset1,s,n}$$

T_n for the associated neighbour cell shall be stopped as soon as any of the above conditions are no longer fulfilled. Any value calculated for TO_n is valid only if the associated timer T_n is still running else TO_n shall be set to zero.

At cell-reselection, a timer T_n is stopped only if the corresponding cell is not a neighbour cell of the new serving cell, or if the criteria given above for starting timer T_n for the corresponding cell is no longer fulfilled with the parameters of the new serving cell. On cell re-selection, timer T_n shall be continued to be run for the corresponding cells but the criteria given above shall be evaluated with parameters broadcast in the new serving cell if the corresponding cells are neighbours of the new serving cell.

...

3. The cell selection criterion S used for cell reselection is fulfilled when:

for FDD cells: $Srxlev > 0$ AND $Squal > 0$

for TDD cells: $Srxlev > 0$

for GSM cells: $Srxlev > 0$

Where :

$$S_{qual} = Q_{qualmeas} - Q_{qualmin}$$

$$S_{rxlev} = Q_{rxlevmeas} - Q_{rxlevmin} - P_{compensation}$$

...

4. The UE shall perform ranking of all cells that fulfil the S criterion among

- all cells that have the highest HCS_PRIO among those cells that fulfil the criterion $H \geq 0$. Note that this rule is not valid when UE high-mobility is detected.
- all cells, not considering HCS priority levels, if no cell fulfil the criterion $H \geq 0$. This case is also valid when it is indicated in system information that HCS is not used, that is when serving cell does not belong to a hierarchical cell structure.

The cells shall be ranked according to the R criteria.

The best ranked cell is the cell with the highest R value.

5. If an FDD cell is ranked as the best cell and the quality measure for cell selection and re-selection is set to CPICH RSCP, the UE shall perform cell re-selection to that FDD cell.

In all cases, the UE shall reselect the new cell, only if the following conditions are met:

- the new cell is better ranked than the serving cell during a time interval $T_{reselection}$.
- more than 1 second has elapsed since the UE camped on the current serving cell.

...

6. The *cell reselection* process in Connected Mode is the same as *cell reselection evaluation process* used for idle mode, described in subclause 5.2.6 of 25.304.

7. A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

...

1> Re-entering service area:

...

1> RLC unrecoverable error:

...

1> Cell reselection:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:

3> if the UE is in CELL_FACH or CELL_PCH state and the UE performs cell re-selection; or

3> if the UE is in CELL_FACH state and the variable C_RNTI is empty:

4> perform cell update using the cause "cell reselection".

Reference

3GPP TS 25.304 clause 5.2.6.1.4

3GPP TS 25.304 clause 5.4.3

3GPP TS 25.331 clause 8.3.1

8.3.1.24.3 Test purpose

1. To confirm that the UE can read HCS related SIB information and act upon all HCS parameters in CELL_PCH state.
2. To confirm that the UE executes a cell update procedure after the successful reselection of another UTRA cell in CELL_PCH state.
3. To confirm that the UE sends the correct uplink response message when executing cell update procedure due to cell reselection.

8.3.1.24.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 is active with downlink transmission power shown in Column To in table 8.3.1.24-1. Cell 2 and 3 are switched off.

UE: CELL_PCH (state 6-12) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Specific Message Content

For system information blocks 4 and 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

Contents of System Information Block type 4 (FDD)

Information Element	Value/remark
- Cell selection and re-selection info	
- CHOICE mode	FDD
- Sintersearch	0 dB
- SsearchHCS	35 dB
- RAT List	This parameter is configurable
- S _{limit,SearchRAT}	Not Present
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Qhyst1s	5 (gives actual value of 10 dB)
- Qhyst2s	0 dB
- HCS Serving cell information	
-HCS Priority	6
- Q HCS	40 (results in actual value of -75)
- TcrMax	Not Present

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD)

Information Element	Value/remark
- Cell selection and re-selection info	TDD
- CHOICE mode	47 dB
- SsearchHCS	This parameter is configurable
- RAT List	-103 dBm
- Qrxlevmin	5 (gives actual value of 1 dB)
- Qhyst1s	6
- HCS Serving cell information	40 (results in actual value of -75)
- HCS Priority	Not Present
- Q HCS	
- TcrMax	

Contents of System Information Block type 11 (FDD) (Cell 1)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	used
- Use of HCS	
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 1)

Information Element	Value/remark
<ul style="list-style-type: none"> - SIB 12 indicator - Measurement control system information - Use of HCS - Intra-frequency cell info list - New intra-frequency cells - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CCPCH info - Cell parameters ID 	<p>FALSE</p> <p>used</p> <p>1</p> <p>Not Present</p> <p>Not Present</p> <p>FALSE</p> <p>TDD</p> <p>Reference clause 6.1.4 in TS34.108: Default settings for cell No.1 (TDD)</p>
<ul style="list-style-type: none"> - Primary CCPCH TX power - Timeslot list - Burst type - Cell Selection and Re-selection info - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CCPCH info - Cell parameters ID 	<p>Not Present</p> <p>Not Present</p> <p>Not Present</p> <p>Not Present</p> <p>2</p> <p>Not Present0dB</p> <p>Not Present</p> <p>TRUE</p> <p>TDD</p> <p>Reference clause 6.1.4 in TS34.108: Default settings for cell No.2 (TDD)</p>
<ul style="list-style-type: none"> - Primary CCPCH TX power - Timeslot list - Burst type - Cell Selection and Re-selection info - Qoffset_{1s,n} - Maximum allowed UL TX power - HCS neighbouring cell information - HCS_Priority - Q_HCS -HCS Cell Reselection Information - Penalty Time -Temporary Offset - CHOICE mode - Qrxlevmin - Intra-frequency cell id - Cell info - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CCPCH info - Cell parameters ID 	<p>Not Present</p> <p>Not Present</p> <p>Not Present</p> <p>Not Present</p> <p>-20 dB</p> <p>30 dBm</p> <p>Present</p> <p>7</p> <p>40 (results in actual value of -75)</p> <p>40</p> <p>inf</p> <p>TDD</p> <p>-103 dBm</p> <p>3</p>
<ul style="list-style-type: none"> - Cell individual offset - Reference time difference to cell - Read SFN indicator - CHOICE mode - Primary CCPCH info - Cell parameters ID - Primary CCPCH TX power - Timeslot list - Burst type - Cell Selection and Re-selection info - Qoffset_{1s,n} - Maximum allowed UL TX power - HCS neighbouring cell information - HCS_Priority - Q_HCS -HCS Cell Reselection Information - Penalty Time -Temporary Offset - CHOICE mode - Qrxlevmin 	<p>Not Present0dB</p> <p>Not Present</p> <p>TRUE</p> <p>TDD</p> <p>Reference clause 6.1.4 in TS34.108: Default settings for cell No.3 (TDD)</p> <p>Not Present</p> <p>Not Present</p> <p>Not Present</p> <p>-20dB</p> <p>30 dBm</p> <p>Present</p> <p>7</p> <p>40 (results in actual value of -75)</p> <p>40</p> <p>inf</p> <p>TDD</p> <p>-103 dBm</p>

Test Procedure

Table 8.3.1.24-1

Parameter	Unit	Cell 1			Cell 2			Cell 3		
		T0	T1	T2	T0	T1	T2	T0	T1	T2
Cell id in system information		1			2			3		
UTRA RF Channel Number		Ch. 1			Ch. 1			Ch. 1		
HCS Priority		6			7			7		
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-60	-60	-80	-80	-70	-80	-70	-70
P-CCPCH RSCP (TDD)	dBm	-61	-61	-61	-80	-80	-67	-80	-73	-73
H* (During penalty time)		15	15	5	-inf	-inf	5	-inf	-inf	5
H* (After PenaltyTime)		15	15	15	-5	-5	5	-5	5	5
R* (During PenaltyTime)		n.a.	n.a.	n.a.	n.a.	n.a.	-inf	n.a.	n.a.	-60
R* (After PenaltyTime)		n.a.	n.a.	n.a.	n.a.	n.a.	-50	n.a.	n.a.	-60

* this parameter is calculated internally in the UE and is only shown for clarification of the test procedure.

The UE is in the CELL_PCH state, camping onto cell 1. SS configures Cell 2 and 3 with power levels given in column "TO" and starts to broadcast BCCH on the primary CCPCH in cell 2 & 3. UE shall remain camped on the Cell 1 even after expiry of penalty time i.e. 40 seconds. SS sets downlink transmission power settings according to columns "T1" in table 8.3.1.24-1. The UE shall find cell 3 to be more suitable for service and hence perform a cell reselection to cell 3 after at-least 40 Seconds (Penalty Time) after the power levels have been changed. After the completion of cell reselection, the UE shall move to CELL_FACH state and transmit a CELL UPDATE message to the SS on the uplink CCCH of cell 3 and set IE "Cell update cause" to "Cell Reselection". After SS receives this message, it transmits a CELL UPDATE CONFIRM message, which includes the IE "RRC State Indicator" set to "CELL_PCH", to the UE on the downlink CCCH. UE shall return to CELL_PCH state in Cell 3 and will not transmit anything on PRACH. SS then sets downlink transmission power settings according to columns "T2" in table 8.3.1.24-1. The UE shall find cell 2 to be more suitable for service and hence perform a cell reselection to cell 2 after the power levels have been changed. After the completion of cell reselection, the UE shall move to CELL_FACH state and 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 "RRC State Indicator" set to "CELL_PCH", to the UE on the downlink DCCH. UE shall return to CELL_PCH state in Cell 2 and will not transmit anything on PRACH.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_PCH state in cell 1
2		←	BCCH	SS applies the downlink transmission power settings, according to the values in columns "T0" of table 8.3.1.24-1. The SS starts to broadcast BCCH on the primary CCPCH in cell 2 and Cell 3. The UE shall find still find Cell 1 best for service even after penalty time of 40 seconds, and shall remain in Cell 1 in CELL_PCH State
3				SS changes the power levels as per column 'T1' in the table 8.3.1.24-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 1 as best for service and remain in cell 1. After Penalty time of 40 Seconds, UE shall find Cell 3 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 3.
4		→	CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection". Received in Cell 3
5		←	CELL UPDATE CONFIRM	Message sent on CCCH with IE "RRC State Indicator" is set to "CELL_PCH".
7				SS changes the power levels as per column 'T2' in the table 8.3.1.24-1. For the time equal to Penalty time 40 Seconds, after the change in power levels, the UE shall still find Cell 3 as best for service and remain in cell 3. After Penalty time of 40 Seconds, UE shall find Cell 2 better for service and perform a reselection. SS waits for the maximum duration required for the UE to camp to cell 2.
8		→	CELL UPDATE	The UE moves to CELL_FACH state and transmits this message with the IE "Cell update cause" set to "cell reselection". Received in Cell 2
9		←	CELL UPDATE CONFIRM	Message sent on DCCH with IE "RRC State Indicator" is set to "CELL_PCH".

Specific Message Contents

The contents of system information block 4 and 11 messages are identical as system information block 4 and 11 messages as found in 34.108 clause 6.1 with the following exceptions:

Contents of System Information Block type 4 (FDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	FDD
- CHOICE mode	0 dB
- Sintersearch	35 dB
- SsearchHCS	This parameter is configurable
- RAT List	Not Present
- S _{limit,SearchRAT}	-20 dB
- Qqualmin	-115 dBm
- Qrxlevmin	5 (gives actual value of 10 dB)
- Qhyst1s	0 dB
- Qhyst2s	
- HCS Serving cell information	7
-HCS Priority	40 (results in actual value of -75)
- Q HCS	Not Present
- TcrMax	

Contents of System Information Block type 4 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2 and 3)

Information Element	Value/remark
- Cell selection and re-selection info	TDD
- CHOICE mode	<u>0 dB</u>
- <u>Sintersearch</u>	47 dB
- SsearchHCS	<u>This parameter is configurable</u>
- <u>RAT List</u>	<u>-103 dBm</u>
- <u>Qrxlevmin</u>	5 (gives actual value of 10 dB)
- Qhyst1s	
- HCS Serving cell information	7
-HCS Priority	40 (results in actual value of -75)
- Q HCS	Not Present
- TcrMax	

Contents of System Information Block type 11 (FDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	used
- Use of HCS	
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
- Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	40 (results in actual value of -75)
-HCS Cell Reselection Information	
- Penalty Time	40
-Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 2)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	
- Use of HCS	used
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	<u>2</u>
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.2 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present 0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.1 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20 dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present 0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.3 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	TDD

- Qrxlevmin	-103 dBm
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~~Contents of System Information Block type 12 in connected mode (FDD) (Cell 2)~~

Information Element	Value/remark
Measurement control system information	
Use of HCS	used
Cell_selection_and_reselection_quality_measure	CPICH RSCP
Intra-frequency measurement system information	
Intra-frequency measurement identity	4
Intra-frequency cell info list	
CHOICE intra-frequency cell removal	Remove no intra-frequency cells
New intra-frequency cells	
Intra-frequency cell id	4
Cell info	
Cell individual offset	0dB
Reference time difference to cell	Not Present
Read SFN indicator	TRUE
CHOICE mode	FDD
Primary CPICH info	
Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1
Primary CPICH TX power	Not Present
TX Diversity indicator	FALSE
Cell Selection and Re-selection info	
Qoffset1_{s,n}	-20 dB
Qoffset2_{s,n}	Not Present
Maximum allowed UL TX power	33 dBm
HCS neighbouring cell information	Present
HCS_Priority	-7
Q_HCS	40 (results in actual value of -75)
HCS Cell Reselection Information	
Penalty Time	40
Temporary Offset	inf
CHOICE mode	FDD
Qqualmin	-20 dB
Qrxlevmin	-115 dBm
Intra-frequency cell id	2
Cell info	
Cell individual offset	0dB
Reference time difference to cell	Not Present
Read SFN indicator	TRUE
CHOICE mode	FDD
Primary CPICH info	
Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1
Primary CPICH TX power	Not Present
TX Diversity indicator	FALSE
Cell Selection and Re-selection info	
Qoffset1_{s,n}	-20 dB
Qoffset2_{s,n}	Not Present
Maximum allowed UL TX power	33 dBm
HCS neighbouring cell information	Present
HCS_Priority	-6
Q_HCS	40 (results in actual value of -75)
HCS Cell Reselection Information	
Penalty Time	-40
Temporary Offset	inf
CHOICE mode	FDD
Qqualmin	-20 dB
Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (FDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	used
- Use of HCS	
- Intra-frequency measurement system information	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.3 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	12
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.1 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm
- Intra-frequency cell id	24
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	FDD
- Primary CPICH info	
- Primary scrambling code	Refer to clause titled "Default settings for cell No.2 (FDD)" in clause 6.1.4
- Primary CPICH TX power	Not Present
- TX Diversity indicator	FALSE
- Cell Selection and Re-selection info	
- Qoffset1 _{s,n}	-20 dB
- Maximum allowed UL TX power	33 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	FDD
- Qqualmin	-20 dB
- Qrxlevmin	-115 dBm

Contents of System Information Block type 11 (3.84 Mcps TDD and 1.28 Mcps TDD) (Cell 3)

Information Element	Value/remark
- SIB 12 indicator	FALSE
- Measurement control system information	used
- Use of HCS	
- Intra-frequency cell info list	
- New intra-frequency cells	
- Intra-frequency cell id	3
- Cell info	
- Cell individual offset	Not Present
- Reference time difference to cell	Not Present
- Read SFN indicator	FALSE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.3 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	Not Present
- Intra-frequency cell id	1
- Cell info	
- Cell individual offset	Not Present 0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.1 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20 dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	7
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm
- Intra-frequency cell id	2
- Cell info	
- Cell individual offset	Not Present 0dB
- Reference time difference to cell	Not Present
- Read SFN indicator	TRUE
- CHOICE mode	TDD
- Primary CCPCH info	
- Cell parameters ID	Reference clause 6.1.4 in TS34.108: Default settings for cell No.2 (TDD)
- Primary CCPCH TX power	Not Present
- Timeslot list	Not Present
- Burst type	Not Present
- Cell Selection and Re-selection info	
- Qoffset _{1s,n}	-20dB
- Maximum allowed UL TX power	30 dBm
- HCS neighbouring cell information	Present
- HCS_Priority	6
- Q_HCS	40 (results in actual value of -75)
- HCS Cell Reselection Information	
- Penalty Time	40
- Temporary Offset	inf
- CHOICE mode	TDD
- Qrxlevmin	-103 dBm

CELL UPDATE

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
Cell Update Cause	Check to see if set to 'Cell Re-selection'

CELL UPDATE CONFIRM (Step 5 and 8)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

8.3.1.24.5 Test requirement

After step 3 the UE shall reselect to cell 3 and then it shall transmit a CELL UPDATE message which, sets the value "cell reselection" in IE "Cell update cause".

After step 6 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".

<End of Modifications>

CHANGE REQUEST

34.123-1 CR 490 # rev - # Current version: **5.3.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Corrections to low priority RRC test cases (clause 8.2)		
Source:	# Panasonic		
Work item code:	# TEI	Date:	# 28/04/2003
Category:	# F	Release:	# Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change: #	<ol style="list-style-type: none"> 1. It is impossible to PER-encode COUNTER CHECK message with only IE "Message Type". A better approach to simulate error over air interface is to use "Unexpected critical message extension" cause. 2. IE "Frequency Info" is left out by mistake in TC 8.2.1.25 in the current test specifications. Since testing a successful synchronized inter-frequency HHO is the key purpose of the test case, this IE should be signaled to the UE using RADIO BEARER SETUP message. 3. In default SIB 11/12, "measurement identity" of 1 is assigned to Intra-frequency measurement. According to clause 8.4.1.2 of TS25.331 v3e0 (quoted below): <p style="margin-left: 20px;">... UTRAN should not use "modify" to change the type of measurement stored in the variable MEASUREMENT_IDENTITY for a given measurement identity.</p> <p style="margin-left: 20px;">This clause is violated, if the UTRAN sends MEASUREMENT CONTROL message to UE, with measurement identity "1", measurement command set to "modify", and measurement type other than "Intra-frequency measurement". For example, traffic volume measurement (TVM). While the UE behaviour upon receiving such MEASUREMENT CONTROL is not clearly specified, it is not the intention of the test case to test such UE behaviour. Therefore, it is proposed to resolve this issue by changing "measurement command" to "Setup", without affecting the test purpose.</p> 4. Editorial errors.
Summary of change: #	<ol style="list-style-type: none"> 1. TC 8.2.1.17

- IE "Secondary scrambling code" is not a sub-IE of Uplink DPCH info. It is corrected to IE "Scrambling code number".
2. TC 8.2.1.18
 - IE "Secondary scrambling code" is not a sub-IE of Uplink DPCH info. It is corrected to IE "Scrambling code number".
 3. TC 8.2.1.25
 - IE "Frequency Info" is included and set to UARFCN of target cell (cell 6) in RADIO BEARER SETUP message (step 5).
 4. TC 8.2.2.32
 - In step 2, 3 & 4, correct clauses are referenced. Wrong procedures are corrected.
 5. TC 8.2.2.34
 - At the end of the test, the UE shall moved to URA_PCH state. Procedure C.5 is called, and Test Requirement is updated accordingly.
 6. TC 8.2.3.16
 - IE "Secondary scrambling code" is not a sub-IE of Uplink DPCH info. It is corrected to IE "Scrambling code number".
 7. TC 8.2.3.17
 - IE "Secondary scrambling code" is not a sub-IE of Uplink DPCH info. It is corrected to IE "Scrambling code number".
 8. TC 8.2.3.22
 - In Test Requirement, the UE shall remained in cell 1, not cell 6.
 9. TC 8.2.3.23
 - At the end of the test, the UE shall moved to URA_PCH state. Procedure C.5 is called.
 10. TC 8.2.3.28
 - In step 3 & 4 of Expected Sequence, correct precedures are called.
 11. TC 8.2.4.18
 - IE "Secondary scrambling code" is not a sub-IE of Uplink DPCH info. It is corrected to IE "Scrambling code number".
 - Statements in Specific Message Contents are updated.
 12. TC 8.2.4.19
 - IE "Secondary scrambling code" is not a sub-IE of Uplink DPCH info. It is corrected to IE "Scrambling code number".
 - Statements in Specific Message Contents are updated.
 13. TC 8.2.5.4
 - The specific message contents and test requirements sub-clauses are changed to simulate "Unexpected critical message extension" errors. Consequently, RRC STATUS is replaced by TRANSPORT FORMAT COMBINATION CONTROL FAILURE message in step 3.
 - In MEASUREMENT CONTROL message (step 0a), IE "Measurement Command" is changed to "Setup".
 - IEs with the same values as the default messages are deleted.
 14. TC 8.2.6.17
 - IE "Secondary scrambling code" is not a sub-IE of Uplink DPCH info. It is corrected to IE "Scrambling code number".
 - Statements in Specific Message Contents are updated.

15. TC 8.2.6.18

- IE "Secondary scrambling code" is not a sub-IE of Uplink DPCH info. It is corrected to IE "Scrambling code number".
- Statements in Specific Message Contents are updated.

16. TC 8.2.6.29

- In MEASUREMENT CONTROL (step 2), IE "Read SFN Indicator" is set to FALSE.
- In PHYSICAL CHANNEL RECONFIGURATION (step 5), IE "Downlink compressed mode method" is set to "SF/2 or Not present depending on UE capability". IE "Uplink compressed mode method" is added.
- In PHYSICAL CHANNEL RECONFIGURATION (step 8), IE "Downlink DPCH info common for all RL" is added.

17. TC 8.2.6.32

- Test Procedure is corrected to be consistent with the comments in Expected Sequence.

Consequences if not approved: ☼ This test case could fail good UE.

Clauses affected: ☼ 8.2.1.17, 8.2.1.18, 8.2.1.25, 8.2.2.32, 8.2.2.34, 8.2.3.16, 8.2.3.17, 8.2.3.22, 8.2.3.23, 8.2.3.28, 8.2.4.18, 8.2.4.19, 8.2.5.4, 8.2.6.17, 8.2.6.18, 8.2.6.29, 8.2.6.32

Other specs affected:	☼	<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td>X</td><td></td></tr><tr><td>X</td><td></td></tr><tr><td>X</td><td></td></tr></table>	Y	N	X		X		X		Other core specifications	☼
	Y	N										
	X											
X												
X												
		Test specifications										
		O&M Specifications										

Other comments: ☼ Affects R'99, Rel-4 and Rel-5 UEs.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☼ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modifications>**8.2.1.17 Radio Bearer Establishment for transition from CELL_DCH to CELL_DCH: success (Subsequently received)****8.2.1.17.1 Definition****8.2.1.17.2 Conformance requirement**

If the IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- RADIO BEARER SETUP; or

...

the UE shall:

- 2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL_UPDATE_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or
- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE:
 - 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:
 - 4> ignore the transaction; and
 - 4> continue with any ongoing processes and procedures as the message was not received;
 - 4> and end the procedure.
 - 3> else:
 - ...

Reference

3GPP TS 25.331 clause 8.6.3.11.

8.2.1.17.3 Test purpose

To confirm that if the UE receives a new RADIO BEARER SETUP message before the UE completes the configuration of the radio bearer according to a previous RADIO BEARER SETUP message, it ignores the new RADIO BEARER SETUP message and configures according to the previous RADIO BEARER SETUP message received.

8.2.1.17.4 Method of test**Initial Condition**

System Simulator: 1 cell.

UE: CS-DCCH_DCH (state 6-5) or PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS transmits a RADIO BEARER SETUP message to the UE before the UE completes the configuration of the radio bearer according to the RADIO BEARER SETUP message prior to this new message. The UE ignores the new RADIO BEARER SETUP message and configures according to the former RADIO BEARER SETUP message. On completion of radio bearer configuration, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	The "Secondary scrambling code number" is set to "1" for FDD mode.
2		←	RADIO BEARER SETUP	SS send this message before the expiry of activation time specified in RADIO BEARER SETUP message of step 1. For FDD the IE "Secondary scrambling code number" is set to "2" and for TDD mode a different code combination to that used in step 11 is used.
3		→	RADIO BEARER SETUP COMPLETE	The UE ignores the RADIO BEARER SETUP message in step 2 and completes configuration according to the RADIO BEARER SETUP message in step 1.
4		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 1) (FDD)

For RADIO BEARER SETUP in step 1, use the message sub-type indicated as "Non speech to CELL_DCH from CELL_DCH in CS" or "Speech to CELL_DCH from CELL_DCH in CS" or "Packet to CELL_DCH from CELL_DCH in PS" found in Annex A or the RADIO BEARER SETUP message as found in clause 9 of TS 34.108, with the exception of the following Information Elements:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256
- Uplink DPCH Info	
- Secondary scrambling code number	1

RADIO BEARER SETUP (Step 1) (TDD)

For RADIO BEARER SETUP in step 1, use the message sub-type indicated as "Non speech in CS" found in Annex A or the RADIO BEARER SETUP message as found in clause 9 of TS 34.108, with the exception of the following Information Elements:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256
- Uplink DPCH timeslots and codes	
- First timeslot code list	Assigned in step 1

RADIO BEARER SETUP (Step 2) (FDD)

For RADIO BEARER SETUP in step 2, use the message sub-type indicated as "Non speech [to CELL_DCH from CELL_DCH in CS](#)" or "[Speech to CELL_DCH from CELL_DCH in CS](#)" or "[Packet to CELL_DCH from CELL_DCH in PS](#)" ~~found in Annex A or the RADIO BEARER SETUP message~~ as found in clause 9 of TS 34.108, with the exception of the following:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present
- Uplink DPCH Info	
- Secondary sScrambling code number	2

RADIO BEARER SETUP (Step 2) (TDD)

For RADIO BEARER SETUP in step 2, use the message sub-type indicated as "Non speech in CS" ~~found in Annex A or the RADIO BEARER SETUP message~~ as found in clause 9 of TS 34.108, with the exception of the following:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present
- Uplink DPCH timeslots and codes	
- First timeslot code list	A different code combination to that used in step 1.

8.2.1.17.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC.

8.2.1.18 Radio Bearer Establishment for transition from CELL_FACH to CELL_DCH: Success (Subsequently received)

8.2.1.18.1 Definition

8.2.1.18.2 Conformance requirement

If the IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- RADIO BEARER SETUP; or

...

the UE shall:

- 2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL_UPDATE_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or
- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE:
 - 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:
 - 4> ignore the transaction; and

- 4> continue with any ongoing processes and procedures as the message was not received;
- 4> and end the procedure.

3> else:

Reference

3GPP TS 25.331 clause 8.6.3.11.

8.2.1.18.3 Test purpose

To confirm that if the UE receives a new RADIO BEARER SETUP message before the UE completes the configuration of the radio bearer according to a previous RADIO BEARER SETUP message, it ignores the new RADIO BEARER SETUP message and configures according to the previous RADIO BEARER SETUP message received.

8.2.1.18.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH_FACH (state 6-8) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. The SS transmits a RADIO BEARER SETUP message, requesting the UE to setup radio bearers using DPCH physical channels. SS transmits another RADIO BEARER SETUP message before the activation time specified in the first message has lapsed. The UE ignores the new RADIO BEARER SETUP message and configures the radio bearers according to the former RADIO BEARER SETUP message. On completion of radio bearer configuration, the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER SETUP	The "Secondary sScrambling code number" is set to "1" for FDD mode.
2		←	RADIO BEARER SETUP	For FDD mode the IE "Secondary sScrambling code number" is set to "2" and for TDD mode a different code combination to that used in step 1 is used.
3		→	RADIO BEARER SETUP COMPLETE	The UE ignores the RADIO BEARER SETUP message in step 2 and confirms configuration according to the RADIO BEARER SETUP message in step 1.
4		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 1) (FDD)

For this message, use the message sub-type entitled "Packet to CELL_DCH from CELL_FACH in PS" in [\[9\] TS34.108 clause 9Annex A](#).

~~Information element(s) to be changed are listed below:~~

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not present
- Uplink DPCH Info	
- Secondary sScrambling code <u>number</u>	1

RADIO BEARER SETUP (Step 1) (TDD)

For RADIO BEARER SETUP in step 1, use the message sub-type indicated as "Non speech in CS" ~~found in Annex A or the RADIO BEARER SETUP message~~ as found in clause 9 of TS 34.108, with the exception of the following Information Elements:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256
- Uplink DPCH timeslots and codes	
- First timeslot code list	Assigned in step 1

RADIO BEARER SETUP (for Step 2) (FDD)

For this message, use the message sub-type entitled "Packet to CELL_DCH from CELL_FACH in PS" in [\[9\] TS34.108 clause 9 Annex A](#), with the following exceptions: ~~Information element(s) to be changed are listed below:~~

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present
- Uplink DPCH Info	
- Secondary sScrambling code <u>number</u>	2

RADIO BEARER SETUP (Step 2) (TDD)

For RADIO BEARER SETUP in step 2, use the message sub-type indicated as "Non speech in CS" ~~found in Annex A or the RADIO BEARER SETUP message~~ as found in clause 9 of TS 34.108, with the exception of the following:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present
- Uplink DPCH timeslots and codes	
- First timeslot code list	A different code combination to that used in step 1.

8.2.1.18.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC specified in step 1.

After step 3 the UE shall communicate with the SS on the radio bearer specified in the RADIO BEARER SETUP message in step 1.

<End of Modifications>

<Start of Modifications>**8.2.1.25 Radio Bearer Establishment for transition from CELL_FACH to CELL_FACH (Frequency band modification): Success****8.2.1.25.1 Definition****8.2.1.25.2 Conformance requirement**

If the UE receives:

-a RADIO BEARER SETUP message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency;

2> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):

3> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";

3> when the cell update procedure completed successfully:

4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER SETUP message, the UE shall:

1> transmit a RADIO BEARER SETUP COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.1.25.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_FACH according to the RADIO BEARER SETUP message.

2. To confirm that the UE transmits RADIO BEARER SETUP COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.1.25.4 Method of test**Initial Condition**

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS".

Test Procedure

Table 8.2.1.25

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.1.25 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.25. SS asks operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER SETUP message including IE "Frequency info" set to frequency information of cell 6 and no IE "Primary CPICH info" for FDD and no IE "Primary CCPCH info" for TDD. The UE selects cell 6 and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". The UE remains CELL_FACH state. The UE transmits a RADIO BEARER SETUP COMPLETE message using AM RLC after completes configuration according to receiving RADIO BEARER SETUP message. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.1.25. SS requests operator to make an outgoing call.
2	←→		SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3	←→		SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.1.25.
5	←		RADIO BEARER SETUP	Including IE "Frequency info" set to frequency information of cell 6 and no IE "Primary CPICH info" for FDD and no IE "Primary CCPCH info" for TDD.
6	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
7	←		CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
8	→		UTRAN MOBILITY INFORMATION CONFIRM	
9	→		RADIO BEARER SETUP COMPLETE	The UE sends this message on a common physical channel in cell 6.
10	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER SETUP (Step 5) [\(FDD\)](#)

The contents of RADIO BEARER SETUP message in this test case are identical the message sub-type indicated by "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink (Nd)	Not present Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links	Not present

CELL UPDATE (Step 6)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 7)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

UTRAN MOBILITY UPDATE CONFIRM (Step 8)

The contents of UTRAN MOBILITY UPDATE CONFIRM message are identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

8.2.1.25.5 Test requirement

After step 5 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 7 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 8 the UE shall transmit a RADIO BEARER SETUP COMPLETE message on the DCCH using AM RLC in cell 6.

After step 9 the UE shall be in CELL_FACH state in cell 6.

<End of Modifications>**<Start of Modifications>**

8.2.2.32 Radio Bearer Reconfiguration for transition from CELL_FACH to CELL_FACH (Frequency band modification): Success

8.2.2.32.1 Definition

8.2.2.32.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RECONFIGURATION message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

- 1> handle the message as if IE "RB information to reconfigure" was absent.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304 on that frequency;
 - 2> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 3> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
 - 3> when the cell update procedure completed successfully:

4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

- 1> transmit a RADIO BEARER RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.2.32.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_FACH according to the RADIO BEARER RECONFIGURATION message.
2. To confirm that the UE transmits RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.2.32.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS".

Test Procedure

Table 8.2.2.32

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.32 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.32. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE shall select cell 6 and transmits a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC after it completes configuration according to the received RADIO BEARER RECONFIGURATION message. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.32. SS requests operator to make an outgoing call.
2	←→		SS executes procedure P6 (clause 7.4.2.2.23) specified in TS 34.108.	
3	←→		SS executes procedure P109 (clause 7.4.2.4.23) specified in TS 34.108.	
4	←→		SS executes procedure P1413 (clause 7.4.2.6.23) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.32.
6	←		RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.
7	→		RADIO BEARER RECONFIGURATION COMPLETE	The UE sends this message on a common physical channel in cell 6.
8	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 6) (FDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN uplink(Nu) - UARFCN downlink(Nd)	Same uplink UARFCN as used for cell 6 Same downlink UARFCN as used for cell 6
Downlink information for each radio links - Primary CPICH info - Primary Scrambling Code	Set to same code as used for cell 6

RADIO BEARER RECONFIGURATION (Step 6) (TDD)

The contents of RADIO BEARER RECONFIGURATION message in this test case are identical the message sub-type indicated by "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info - UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links - Primary CCPCH info - Cell parameters ID	As used for cell 6

8.2.2.32.5 Test requirement

After step 6 the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 6.

After step 7 the UE shall be in CELL_FACH state of cell 6.

<End of Modifications>**<Start of Modifications>**

8.2.2.34 Radio Bearer Reconfiguration for transition from CELL_FACH to URA_PCH (Frequency band modification): Success

8.2.2.34.1 Definition

8.2.2.34.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RECONFIGURATION message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

- 1> handle the message as if IE "RB information to reconfigure" was absent.

In case the procedure was triggered by reception of a RADIO BEARER RECONFIGURATION message, the UE shall:

- 1> transmit a RADIO BEARER RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.

- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9
- 1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause TS25.331 8.3.1 is fulfilled:
 - 2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";
 - 2> when the URA update procedure is successfully completed:
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.2.34.3 Test purpose

1. To confirm that the UE transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_FACH to URA_PCH according to the RADIO BEARER RECONFIGURATION message.
3. To confirm that the UE selects a common physical channel in a different frequency.

8.2.2.34.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 are active

UE: Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.2.34

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-55	-72	Off	-55
P-CCPCH RSCP (TDD)	dBm	-55	-72	Off	-55

Table 8.2.2.34 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.34. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. For FDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to

Primary Scrambling Code assigned to P-CPICH of cell 6. For TDD mode, the SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RECONFIGURATION message including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CCPCH info" set to cell 6 parameters. The UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message using AM RLC and enter URA_PCH state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	System Information Block type 11	The UE is in idle mode and camped on cell 1. The contents of System Information Block type 11 message are different from the default settings and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.2.34. SS requests operator to make an outgoing call.
2		↔	SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3		↔	SS executes procedure P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4		↔	SS executes procedure P14 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.2.34.
6		←	RADIO BEARER RECONFIGURATION	Including IE "Frequency info" set to frequency information of cell 6 and IE "Primary CPICH info" set to Primary Scrambling Code assigned to P-CPICH of cell 6 for FDD mode or IE "Primary CCPCH info" set to cell 6 parameters.
7		→	RADIO BEARER RECONFIGURATION COMPLETE	The UE transmit this message on the common physical channel. n cell 1.
8				The SS waits for 5 s.
9		↔	CALL C.5	If the test result of C.54 indicates that UE is in URA_PCH state, the test passes, otherwise it fails

Specific Message Contents

RADIO BEARER RECONFIGURATION (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
- UARFCN uplink (Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink (Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio link	
- Primary CPICH info	
- Primary scrambling code	Set to same code as used for cell 6

RADIO BEARER RECONFIGURATION (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	
- UARFCN (Nt)	Same UARFCN as used for cell 6
Downlink information for each radio links	
- Primary CCPCH info	
- Cell parameters ID	As used for cell 6

8.2.2.34.5 Test requirement

After step 6 the UE shall transmits a RADIO BEARER RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in ~~CELL_PCH~~URA_PCH state in cell 6.

<End of Modifications>

<Start of Modifications>

8.2.3.16 Radio Bearer Release for transition from CELL_DCH to CELL_DCH: Success (Subsequently received)

8.2.3.16.1 Definition

8.2.3.16.2 Conformance requirement

If the IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- RADIO BEARER RELEASE; or

...

the UE shall:

- 2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL_UPDATE_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or

- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE:
- 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:
 - 4> ignore the transaction; and
 - 4> continue with any ongoing processes and procedures as the message was not received;
 - 4> and end the procedure.
- 3> else:
 - ...

Reference

3GPP TS 25.331 clause 8.6.3.11.

8.2.3.16.3 Test purpose

To confirm that if the UE receives a new RADIO BEARER RELEASE message before the UE releases the radio bearer according to a previous RADIO BEARER RELEASE message it ignore the new RADIO BEARER RELEASE message and configures according to the previous RADIO BEARER RELEASE message received.

8.2.3.16.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. When the SS transmits a RADIO BEARER RELEASE message to the UE before the UE releases the radio access bearer, the UE ignores the second RADIO BEARER RELEASE message and releases the radio bearer according to the previous RADIO BEARER RELEASE message received. Finally, the UE shall transmit RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	For FDD, the SS sets its UL scrambling code number to "1".
2		←	RADIO BEARER RELEASE	Message sent before the expiry of "activation time" specified in message in step 1. For FDD, the IE " Secondary sScrambling code number " is set to "2". For TDD the code combination assigned is different from that assigned in stage 1.
3		→	RADIO BEARER RELEASE COMPLETE	The UE ignores the RADIO BEARER RELEASE message in step 2 and release radio bearer according to the RADIO BEARER RELEASE message in step 1.
4		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 1) (FDD)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type title "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [\[9\] TS 34.108 clause 9Annex A](#), with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256
- Uplink DPCH Info - Secondary sScrambling code number	1

RADIO BEARER RELEASE (Step 1) (TDD)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type title "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [\[9\] TS 34.108 clause 9Annex A](#), with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256
Uplink DPCH timeslots and codes - First timeslot code list	Assigned by SS

RADIO BEARER RELEASE (Step 2) (FDD)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type title "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [\[9\] TS 34.108 clause 9Annex A](#), with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH Info - Secondary sScrambling code number	Not Present 2

RADIO BEARER RELEASE (Step 2) (TDD)

The contents of RADIO BEARER RELEASE message in this test case is identical to the message sub-type title "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [\[9\] TS 34.108 clause 9 Annex A](#), with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.3.16.5 Test requirement

After step 2 the UE shall transmit an RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC.

8.2.3.17 Radio Bearer Release for transition from CELL_FACH to CELL_DCH: Success (Subsequently received)

8.2.3.17.1 Definition

8.2.3.17.2 Conformance requirement

If the IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- RADIO BEARER RELEASE; or

...

the UE shall:

- 2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL_UPDATE_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or
- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE:
 - 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:
 - 4> ignore the transaction; and
 - 4> continue with any ongoing processes and procedures as the message was not received;
 - 4> and end the procedure.
 - 3> else:

Reference

3GPP TS 25.331 clause 8.6.3.11.

8.2.3.17.3 Test purpose

To confirm that if the UE receives a new RADIO BEARER RELEASE message before the UE releases the radio bearer according to a previous RADIO BEARER RELEASE message, it ignores the new RADIO BEARER RELEASE message and configures according to the previous RADIO BEARER RELEASE message received.

8.2.3.17.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state. When the SS transmits a RADIO BEARER RELEASE message to the UE before the UE releases the radio access bearer, the UE ignores the second RADIO BEARER RELEASE message and releases the radio bearers according to the previous RADIO BEARER RELEASE message received. Finally, the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC. SS calls for generic procedure C.3 2 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	RADIO BEARER RELEASE	For FDD, the SS sets its UL scrambling code to "1".
2		←	RADIO BEARER RELEASE	For TDD the IE "Secondary scrambling code" is set to "2". For TDD, the code combination assigned is different from that assigned in stage 1.
3		→	RADIO BEARER RELEASE COMPLETE	The UE ignores the RADIO BEARER RELEASE message in step 2 and release radio bearers according to the RADIO BEARER RELEASE message in step 1.
4		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 1) (FDD)

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_FACH in PS" found in [\[9\] TS 34.108 clause 9Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time Info - Uplink DPCH Info	Not present
- Secondary sScrambling code number	1

RADIO BEARER RELEASE (Step 1) (TDD)

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" as found in [\[9\] TS 34.108 clause 9Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time Info Uplink DPCH timeslots and codes - First timeslot code list	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256 Assigned by SS

RADIO BEARER RELEASE (Step 2) (FDD)

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_FACH in PS" found in [\[9\] TS 34.108 clause 9](#)~~Annex A~~ with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH Info - Secondary s Scrambling code number	Not Present 2

RADIO BEARER RELEASE (Step 2) (TDD)

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_FACH in PS" found in [\[9\] TS 34.108 clause 9](#)~~Annex A~~ with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.3.17.5 Test requirement

After step 2 the UE shall transmit an RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC.

<End of Modifications>

<Start of Modifications>

8.2.3.22 Radio Bearer Release for transition from CELL_FACH to CELL_PCH: Success

8.2.3.22.1 Definition

8.2.3.22.2 Conformance requirement

If the UE receives:

-a RADIO BEARER RELEASE message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

- 1> transmit a RADIO BEARER RELEASE COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters CELL_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9
- 1> if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info", and the UE selected another cell than indicated by this IE:
 - 2> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure is successfully completed:
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.3, 8.5 and 8.6.

8.2.3.22.3 Test purpose

1. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_FACH to CELL_PCH according to the RADIO BEARER RELEASE message.
3. To confirm that the UE releases the radio access bearer and selects a common physical channel.

8.2.2.22.4 Method of test

Initial Condition

System Simulator: 1 cell– Cell 1 is active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state of cell 1. The SS transmits a RADIO BEARER RELEASE message. The UE shall release all radio access bearer and enter CELL_PCH state after it transmits a RADIO BEARER RELEASE COMPLETE message using AM RLC. Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in CELL_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_FACH state of cell 1.
2	←		RADIO BEARER RELEASE	
3		→	RADIO BEARER RELEASE COMPLETE	The UE transmits this message on uplink DCCH using AM RLC.
4				The SS waits for 5 s.
5	↔		CALL C.4	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 2)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN DRX cycle length coefficient	3

8.2.3.22.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on uplink DCCH using AM RLC.

After step 4 the UE shall be in CELL_PCH state in cell [16](#).

8.2.3.23 Radio Bearer Release for transition from CELL_FACH to URA_PCH: Success

8.2.3.23.1 Definition

8.2.3.23.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RELEASE message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

- 1> transmit a RADIO BEARER RELEASE COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS5.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9
- 1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS5.331 subclause 8.3.1 is fulfilled:
 - 2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";
 - 2> when the URA update procedure is successfully completed:
- 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.3, 8.5 and 8.6.

8.2.3.23.3 Test purpose

1. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_FACH to URA_PCH according to the RADIO BEARER RELEASE message.
3. To confirm that the UE releases the radio access bearer and selects a common physical channel.

8.2.3.23.4 Method of test

Initial Condition

System Simulator: 1 cell– Cell 1 is active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state of cell 1. The SS transmits a RADIO BEARER RELEASE message. The UE shall release all radio access bearers and enter URA_PCH state after it transmits a RADIO BEARER RELEASE COMPLETE message using AM RLC. Upon completion of the procedure, the SS calls for generic procedure C.54 to check that UE is in URA_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_FACH state of cell 1.
2		←	RADIO BEARER RELEASE	
3		→	RADIO BEARER RELEASE COMPLETE	The UE transmits this message on uplink DCCH using AM RLC.
4				The SS waits for 5 s.
5		↔	CALL C.5	If the test result of C.54 indicates that UE is in CELL URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 2)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3

8.2.2.23.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on uplink DCCH using AM RLC.

After step 4 the UE shall be in URA_PCH state.

<End of Modifications>

<Start of Modifications>

8.2.3.28 Radio Bearer Release for transition from CELL_FACH to CELL_FACH (Frequency band modification): Success

8.2.3.28.1 Definition

8.2.3.28.2 Conformance requirement

If the UE receives:

- a RADIO BEARER RELEASE message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency;

2> if the received reconfiguration message included the IE "Primary CPICH info", and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info":

3> initiate a cell update procedure according to TS25.331 subclause 8.3.1 using the cause "cell reselection";

3> when the cell update procedure completed successfully:

4> proceed as below.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.3.28.3 Test purpose

1. To confirm that the UE transits from CELL_FACH to CELL_FACH according to the RADIO BEARER RELEASE message.
2. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC on a common physical channel in a different frequency.

8.2.3.28.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive.

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS".

Test Procedure

Table 8.2.3.28

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.3.28 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.28. SS requests operator to make an outgoing call. The SS and UE execute procedure P6. Next The SS and the UE execute procedure P10 and then execute procedure P14. The SS switches its downlink transmission power settings to columns "T1" and transmits a RADIO BEARER RELEASE message including IE "Frequency info" set to frequency information of cell 6 and no IE "Primary CPICH info". The UE shall select cell 6 and initiates CELL UPDATE procedure with IE "Cell update cause" set to "cell reselection". The UE shall transmit a RADIO BEARER RELEASE COMPLETE message using AM RLC after it completes reconfiguration according to the received RADIO BEARER RELEASE message. Upon completion of the procedure, the SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.3.28. SS requests operator to make an outgoing call.
2	←→		SS executes procedure P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3	←→		SS executes procedure P106 (clause 7.4.2.4.2) specified in TS 34.108.	
4	←→		SS executes procedure P146 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.3.28.
6	←		RADIO BEARER RELEASE	Including IE "Frequency info" set to frequency information of cell 6 and no IE "Primary CPICH info" set to Primary Scrambling Code
7	→		CELL UPDATE	The IE "Cell update cause" is set to "cell reselection".
8	←		CELL UPDATE CONFIRM	Including the IE "New C-RNTI"
9	→		UTRAN MOBILITY INFORMATION CONFIRM	
10	→		RADIO BEARER RELEASE COMPLETE	The UE sends this message on a common physical channel in cell 6.
11	←→		CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 6)

The contents of RADIO BEARER RELEASE message in this test case are identical the message sub-type indicated by "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
Frequency info	
- UARFCN uplink(Nu)	Same uplink UARFCN as used for cell 6
- UARFCN downlink(Nd)	Same downlink UARFCN as used for cell 6
Downlink information for each radio links	Not present

CELL UPDATE (Step 7)

The contents of CELL UPDATE message are identical as "Contents of CELL UPDATE message" as found in [9] TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
Cell Update Cause	"cell reselection"

CELL UPDATE CONFIRM (Step 8)

The contents of CELL UPDATE CONFIRM message are identical as "CELL UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9. with the following exceptions:

Information Element	Value/remark
New C-RNTI	0000 0000 0000 0001B

UTRAN MOBILITY UPDATE CONFIRM (Step 9)

The contents of UTRAN MOBILITY UPDATE CONFIRM message is identical as "UTRAN MOBILITY UPDATE CONFIRM message" as found in [9] TS 34.108 clause 9.

8.2.3.28.5 Test requirement

After step 6 the UE shall transmit a CELL UPDATE message on the CCCH in cell 6.

After step 8 the UE shall transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the DCCH using AM RLC in cell 6.

After step 9 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on the DCCH using AM RLC in cell 6.

After step 10 the UE shall be in CELL_FACH state in cell 6.

<End of Modifications>**<Start of Modifications>**8.2.4.18 Transport Channel Reconfiguration from CELL_DCH to CELL_DCH:
Success (Subsequently received)

8.2.4.18.1 Definition

8.2.4.18.2 Conformance requirement

If the IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- TRANSPORT CHANNEL RECONFIGURATION; or

...

the UE shall:

- 2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL_UPDATE_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or
- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE:
 - 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:
 - 4> ignore the transaction; and
 - 4> continue with any ongoing processes and procedures as the message was not received;
 - 4> and end the procedure.
 - 3> else:

...

Reference

3GPP TS 25.331 clause 8.6.3.11.

8.2.4.18.3 Test purpose

To confirm that if the UE receives a TRANSPORT CHANNEL RECONFIGURATION message before the UE configures the radio bearer according to the previous TRANSPORT CHANNEL RECONFIGURATION message it ignores the second TRANSPORT CHANNEL RECONFIGURATION message and configures according to the previous TRANSPORT CHANNEL RECONFIGURATION message.

8.2.4.18.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. When the SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to the UE before the activation time specified in the previous TRANSPORT CHANNEL RECONFIGURATION message elapses, the UE ignores the new TRANSPORT CHANNEL RECONFIGURATION message and configures according to the previous TRANSPORT CHANNEL RECONFIGURATION message. Finally, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	For FDD, the " Secondary sScrambling code number" is set to "1" and for TDD, the code combination is assigned by SS.
2		←	TRANSPORT CHANNEL RECONFIGURATION	SS send this message before the expiry of "activation time" specified in TRANSPORT CHANNEL SETUP message of step 1. For FDD the IE " Secondary sScrambling code number" is set to "2". For TDD the code combination assigned is different from that assigned in stage 1.
3		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE ignores the TRANSPORT CHANNEL RECONFIGURATION message in step 2 and configures according to the TRANSPORT CHANNEL RECONFIGURATION message in step 1.
4		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (FDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION messages in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [\[9\] TS 34.108 clause 9Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256
- Uplink DPCH Info	
- Scrambling code number	1

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (TDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION messages in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [\[9\] TS 34.108 clause 9Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256 Assigned in step 1

TRANSPORT CHANNEL RECONFIGURATION (Step 2)

The contents of TRANSPORT CHANNEL RECONFIGURATION messages in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [\[9\] TS 34.108 clause 9Annex-A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH Info - Scrambling code number	Not Present 2

TRANSPORT CHANNEL RECONFIGURATION (Step 2) (TDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION messages in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [\[9\] TS 34.108 clause 9Annex-A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.4.18.5 Test requirement

After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCCH using AM RLC.

8.2.4.19 Transport Channel Reconfiguration from CELL_FACH to CELL_DCH: Success (Subsequently received)

8.2.4.19.1 Definition

8.2.4.19.2 Conformance requirement

If the IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- TRANSPORT CHANNEL RECONFIGURATION; or
- ...

the UE shall:

- 2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL_UPDATE_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or

- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable `PROTOCOL_ERROR_REJECT` to be set to `TRUE`:
- 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable `TRANSACTIONS`:
 - 4> ignore the transaction; and
 - 4> continue with any ongoing processes and procedures as the message was not received;
 - 4> and end the procedure.
- 3> else:

Reference

3GPP TS 25.331 clause 8.6.3.11.

8.2.4.19.3 Test purpose

To confirm that if the UE receives a `TRANSPORT CHANNEL RECONFIGURATION` message before the UE configures the radio bearer according to the previous `TRANSPORT CHANNEL RECONFIGURATION` message it ignores the second `TRANSPORT CHANNEL RECONFIGURATION` message and configures according to the previous `TRANSPORT CHANNEL RECONFIGURATION` message.

8.2.4.19.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in `CELL_FACH` state. When the SS transmits a `TRANSPORT CHANNEL RECONFIGURATION` message to the UE before the activation time specified in the previous `TRANSPORT CHANNEL RECONFIGURATION` message elapses, the UE ignores the new `TRANSPORT CHANNEL RECONFIGURATION` message and configures according to the previous `TRANSPORT CHANNEL RECONFIGURATION` message. Finally, the UE shall transmit a `TRANSPORT CHANNEL RECONFIGURATION COMPLETE` message on the DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in `CELL_DCH` state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	TRANSPORT CHANNEL RECONFIGURATION	For FDD, the "Secondary Scrambling code number" is set to "1" and for TDD, the code combination is assigned by SS.
2		←	TRANSPORT CHANNEL RECONFIGURATION	For FDD the IE "Secondary Scrambling code number" is set to "2". For TDD the code combination assigned is different that assigned in stage 1.
3		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE ignores the TRANSPORT CHANNEL RECONFIGURATION message in step 2 and configures according to the TRANSPORT CHANNEL RECONFIGURATION message in step 1.
4		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (FDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" found in [9] TS 34.108 clause 9Annex-A with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time Info - Uplink DPCH Info - Scrambling code number	Not present 1

TRANSPORT CHANNEL RECONFIGURATION (Step 1) (TDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" found in [9] TS 34.108 clause 9Annex-A with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256 Assigned in step 1

TRANSPORT CHANNEL RECONFIGURATION (Step 2) (FDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" found in [9] TS 34.108 clause 9Annex-A with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH Info - Scrambling code number	Not Present 2

TRANSPORT CHANNEL RECONFIGURATION (Step 2) (TDD)

The contents of TRANSPORT CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" found in [\[9\] TS 34.108 clause 9 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present
- Uplink DPCH timeslots and codes - First timeslot code list	A different code combination to that used in step 1.

8.2.4.19.5 Test requirement

After step 2 the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

<End of Modifications>**<Start of Modifications>**

8.2.5.4 Transport format combination control in CELL_DCH: Failure (Invalid message reception and Invalid configuration)

8.2.5.4.1 Definition

8.2.5.4.2 Conformance requirement

If the TRANSPORT FORMAT COMBINATION CONTROL message contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the uplink DCCH using AM RLC setting the information elements as specified below:
 - 2> set the IE "RRC transaction identifier" in the TRANSPORT FORMAT COMBINATION CONTROL FAILURE message to the value of "RRC transaction identifier" in the entry for the TRANSPORT FORMAT COMBINATION CONTROL message in the table "Rejected transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to the cause value "protocol error";
 - 2> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION.
- 1> when the TRANSPORT FORMAT COMBINATION CONTROL FAILURE message has been submitted to lower layers for transmission:
 - 2> continue with any ongoing processes and procedures as if the invalid TRANSPORT FORMAT COMBINATION CONTROL message has not been received;
 - 2> and the procedure ends.

If the variable INVALID_CONFIGURATION is set to TRUE due to the received TRANSPORT FORMAT COMBINATION CONTROL message the UE shall:

- 1> if the TRANSPORT FORMAT COMBINATION CONTROL message was received on AM RLC:
 - 2> keep the TFC subset existing before the TRANSPORT FORMAT COMBINATION CONTROL message was received;
 - 2> transmit a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC;
 - 2> set the IE "RRC transaction identifier" in the TRANSPORT FORMAT COMBINATION CONTROL FAILURE message to the value of "RRC transaction identifier" in the entry for the TRANSPORT FORMAT COMBINATION CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to "invalid configuration";
 - 2> when the TRANSPORT FORMAT COMBINATION CONTROL FAILURE message has been submitted to lower layers for transmission the procedure ends.
- 1> if the TRANSPORT FORMAT COMBINATION CONTROL message was received on UM RLC:
 - 2> ignore the TRANSPORT FORMAT COMBINATION CONTROL message.

Reference

3GPP TS 25.331 clause 8.2.5.4, 8.2.5.5

8.2.5.4.3 Test purpose

To confirm after the UE receives an invalid TRANSPORT FORMAT COMBINATION CONTROL message [which contains an unexpected critical message extension](#), it transmits a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message and keeps the TFC subset as if no TRANSPORT FORMAT COMBINATION CONTROL message has been received.

To confirm that the UE transmits a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC if it receives a TRANSPORT FORMAT COMBINATION CONTROL message including ~~some IEs set to give~~ an invalid configuration.

8.2.5.4.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: DCCH+DTCH_DCH (state 6-9 or state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in CELL_DCH state. SS then send a MEASUREMENT CONTROL message to UE. The UE shall perform periodical traffic volume measurement according to this message and then transmit MEASUREMENT REPORT message back to SS. The SS transmits an invalid TRANSPORT FORMAT COMBINATION CONTROL message which [contains an unexpected critical message extension](#)~~does not include any IEs except IE "Message Type"~~. The UE shall transmit a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message which is set to "[Message extension not comprehended](#) ~~ASN.1 violation or encoding error~~" in IE "Protocol error cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically. SS transmits a TRANSPORT FORMAT COMBINATION CONTROL message including some IEs set to get an invalid configuration. The UE keeps its current configuration and transmits a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC, setting the value "invalid configuration" to IE "failure cause". UE shall continue its traffic volume measurement and send MEASUREMENT REPORT messages back to SS periodically.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0a		←	MEASUREMENT CONTROL	SS requests UE to perform periodical traffic volume measurement.
0b		→	MEASUREMENT REPORT	
1				UE is in CELL_DCH state with a DCH for a signalling radio bearer and a DCH for a radio access bearer.
2		←	TRANSPORT FORMAT COMBINATION CONTROL	See specific message content.
3		→	<u>TRANSPORT FORMAT COMBINATION CONTROL FAILURE</u> RRG STATUS	The UE shall not change its configuration <u>because Message extension not comprehended</u>
3a		→	MEASUREMENT REPORT	
4		←	TRANSPORT FORMAT COMBINATION CONTROL	This message includes IEs set to give an invalid configuration.
5		→	TRANSPORT FORMAT COMBINATION CONTROL FAILURE	The UE shall not change its configuration
6		→	MEASUREMENT REPORT	

Specific Message Contents

MEASUREMENT CONTROL (Step 0a)

Use the MEASUREMENT CONTROL message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/Remark
Measurement Identity	1
Measurement Command	<u>Setup</u> Modify
Measurement reporting mode	
- Measurement Report Transfer Mode	Acknowledged mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Periodical Reporting
Additional measurement list	Not Present
CHOICE measurement type	Traffic Volume Measurement
- Traffic volume measurement object list	
- Uplink transport channel type	DCH
- UL Target Transport Channel ID	5
- Traffic volume measurement quantity	
- Measurement quantity	RLC Buffer Payload
- Time Interval to take an average or a variance	Not Present
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	True
- Average of RLC Buffer Payload for each RB	False
- Variance of RLC Buffer Payload for each RB	False
- Measurement validity	
- UE state	All states
- CHOICE Reporting criteria	Periodical Reporting Criteria
- Amount of reporting	Infinity
- Reporting interval	8000
DPCH compressed mode status	Not Present

MEASUREMENT REPORT (Step 0b, 3a and 6)

Check to see if the same message type found in [9] TS 34.108 Clause 9 is received, with the following exceptions:

Information Element	Value/Remarks
Measurement identity	1
Measured Results	
- CHOICE measurement	Traffic volume measured results list
- Traffic volume measurement results	
- RB identity	1
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	2
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	3
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
- RB identity	4
- RLC buffer payload	Check to see if this IE is present
- RLC buffer payload average	Check to see if this IE is absent
- RLC buffer payload variance	Check to see if this IE is absent
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

TRANSPORT FORMAT COMBINATION CONTROL (Step 2)

[Use the same message sub-type found in \[9\] TS 34.108 clause 9, with the following exceptions:](#)

Information Element	Value/remark
All IEs Critical extensions	Not Present 01'H

RRC STATUS (Step 3)

Information Element	Value/remark
Message Type	
Protocol Error Information	
Protocol Error Cause	ASN.1 violation or encoding

[TRANSPORT FORMAT COMBINATION CONTROL FAILURE \(Step 3\)](#)

[The same message found in TS 34.108 clause 9 shall be transmitted by the UE, with the following exceptions:](#)

Information Element	Value/remark
RRC transaction identifier	Checked to see if it is set to identical value of the same IE in the downlink TRANSPORT FORMAT COMBINATION CONTROL message.
Failure cause	
- Failure cause	Protocol error
- Protocol error information	
- Protocol error cause	Message extension not comprehended

TRANSPORT FORMAT COMBINATION CONTROL (Step ~~5~~4)

Use the same message sub-type titled "TRANSPORT FORMAT COMBINATION CONTROL" in ~~Annex A~~[\[9\] TS34.108 clause 9](#), with following exceptions:

Information Element	Value/remark
TrCH information elements -DPCH/PUSCH TFCS uplink in uplink - Restricted TrCH information - Uplink transport channel type - Restricted UL TrCH identity - Allowed TFI	DCH 15 (for RACH transport channel identity) 0

TRANSPORT FORMAT COMBINATION CONTROL FAILURE (Step 65)

Information Element	Value/remark
Message Type	"TRANSPORT FORMAT COMBINATION CONTROL FAILURE"
RRC transaction identifier	Checked to see if it is set to identical value of the same IE in the downlink TRANSPORT FORMAT COMBINATION CONTROL message.
Integrity check info	The presence of this IE is dependent on IXT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub IEs shall be absent.
Failure cause	Invalid configuration

8.2.5.4.5 Test requirement

After step 0a, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 2 the UE shall 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 "[Message extension not comprehended](#) ~~ASN.1 violation or encoding error~~" in IE "protocol error information".

After step 3, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

After step 4 the UE shall transmit a TRANSPORT FORMAT COMBINATION CONTROL FAILURE message on the DCCH using AM RLC, setting IE "failure cause" to "invalid configuration".

After step 5, the UE shall transmit a MEASUREMENT REPORT message on the uplink DCCH, reporting the RLC buffer payload of each RBs mapped on DCH at every 8s interval.

<End of Modifications>

<Start of Modifications>

8.2.6.17 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (code modification): Success (Subsequently received)

8.2.6.17.1 Definition

8.2.6.17.2 Conformance requirement

If the IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- PHYSICAL CHANNEL RECONFIGURATION; or

...

the UE shall:

- 2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL_UPDATE_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or
- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE:
 - 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:
 - 4> ignore the transaction; and
 - 4> continue with any ongoing processes and procedures as the message was not received;
 - 4> and end the procedure.
 - 3> else:

...

Reference

3GPP TS 25.331 clause 8.6.3.11.

8.2.6.17.3 Test purpose

To confirm that if the UE receives a PHYSICAL CHANNEL RECONFIGURATION message before the UE reconfigures the radio bearer according to the previous PHYSICAL CHANNEL RECONFIGURATION message it ignores the new PHYSICAL CHANNEL RECONFIGURATION message and reconfigures according to the previous PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.17.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE.

Test Procedure

The UE is in the CELL_DCH state. When the SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE before the activation time specified in the previous PHYSICAL CHANNEL RECONFIGURATION message elapses, the UE ignores the new PHYSICAL CHANNEL RECONFIGURATION message and reconfigures according to the previous PHYSICAL CHANNEL RECONFIGURATION message received. Finally, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	For FDD mode the "Secondary sScrambling code number" is set to "1". For TDD mode a code combination is assigned by SS.
2		←	PHYSICAL CHANNEL RECONFIGURATION	SS send this message before the expiry of "activation time" specified in PHYSICAL CHANNEL RECONFIGURATION message of step 1. For FDD, the IE "Secondary sScrambling code number" is set to "2". For TDD, the code combination assigned is different to that assigned in stage 1.
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE ignores the PHYSICAL CHANNEL RECONFIGURATION message in step 2 and confirms configuration according to the PHYSICAL CHANNEL RECONFIGURATION message in step 1.
4		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (FDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [\[9\] TS 34.108 clause 9 Annex A for FDD and Annex A for TDD](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time Info - Uplink DPCH info - Scrambling code number	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256 1

PHYSICAL CHANNEL RECONFIGURATION (Step 1) (TDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [\[9\] TS 34.108 clause 9 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256 Assigned in step 1

PHYSICAL CHANNEL RECONFIGURATION (Step 2) (FDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [\[9\] TS 34.108 clause 9 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH info - Scrambling code number	Not Present 2

PHYSICAL CHANNEL RECONFIGURATION (Step2) (TDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_DCH in PS" found in [\[9\] TS 34.108 clause 9](#)~~Annex A~~ with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	Not Present A different code combination to that used in step 1.

8.2.6.17.5 Test requirement

After step 2 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

8.2.6.18 Physical channel reconfiguration for transition from CELL_FACH to CELL_DCH: Success (Subsequently received)

8.2.6.18.1 Definition

8.2.6.18.2 Conformance requirement

If the IE "RRC transaction identifier" is included in a received message, the UE shall perform the actions below. The UE shall:

If the received message is any of the messages:

- PHYSICAL CHANNEL RECONFIGURATION; or

...

the UE shall:

- 2> if the variable ORDERED_RECONFIGURATION is set to TRUE; or
- 2> if the variable CELL_UPDATE_STARTED is set to TRUE; or
- 2> if the table "Accepted transactions" in the variable TRANSACTIONS contains an entry with an IE "Message Type" set to ACTIVE SET UPDATE; or
- 2> if the received message contains a protocol error according to TS 25.331 clause 9 causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE:
- 3> if the IE "RRC transaction identifier" of the received message is identical to the "RRC transaction identifier" stored for the same "Message Type" as the received message in the table "Accepted transactions" in the variable TRANSACTIONS:
 - 4> ignore the transaction; and
 - 4> continue with any ongoing processes and procedures as the message was not received;
 - 4> and end the procedure.

3> else:

Reference

3GPP TS 25.331 clause 8.6.3.11.

8.2.6.18.3 Test purpose

To confirm that if the UE receives a PHYSICAL CHANNEL RECONFIGURATION message before the UE reconfigures the radio bearer according to the previous PHYSICAL CHANNEL RECONFIGURATION message it ignores the new PHYSICAL CHANNEL RECONFIGURATION message and reconfigures according to the previous PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.18.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

The UE is in CELL_DCH state. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE to invoke the UE to transit from CELL_DCH to CELL_FACH. The UE shall reconfigure the common physical channel correctly according to this message. To complete this procedure, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. When the SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to the UE before the activation time specified in the previous PHYSICAL CHANNEL RECONFIGURATION message, the UE ignores the new PHYSICAL CHANNEL RECONFIGURATION message and reconfigures according to the previous PHYSICAL CHANNEL RECONFIGURATION message received. Finally, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	IE "Uplink DPCH Info" and IE "Downlink DPCH Info" are not specified.
2				UE shall perform the reconfiguration
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE enters CELL_FACH state.
4		←	PHYSICAL CHANNEL RECONFIGURATION	The "Secondary sScrambling code number" is set to "1" for FDD mode and A code combination is assigned by SS for TDD
5		←	PHYSICAL CHANNEL RECONFIGURATION	For FDD the IE "Secondary sScrambling code number" is set to "2". For TDD, the code combination assigned is different from that assigned in stage 4.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE ignores the PHYSICAL CHANNEL RECONFIGURATION message in step 5 and confirms configuration according to the PHYSICAL CHANNEL RECONFIGURATION message in step 4.
7		←→	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 1)

Use the message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [\[9\] TS 34.108 clause 9Annex A](#).

PHYSICAL CHANNEL RECONFIGURATION (Step 4) (FDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" as found in [\[9\] TS 34.108 clause 9Annex A for FDD and Annex A for TDD](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time Info - Uplink DPCH info - Scrambling code number	Not present 1

PHYSICAL CHANNEL RECONFIGURATION (Step 4) (TDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" as found in [\[9\] TS 34.108 clause 9Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time - Uplink DPCH timeslots and codes - First timeslot code list	[256+Current CFN-[current CFN mod 8 + 8]]MOD 256 Assigned in step 1

PHYSICAL CHANNEL RECONFIGURATION (Step 5) (FDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" found in [\[9\] TS 34.108 clause 9 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present
- Uplink DPCH info - Scrambling code number	2

PHYSICAL CHANNEL RECONFIGURATION (Step 5) (TDD)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type title "Packet to CELL_DCH from CELL_FACH in PS" found in [\[9\] TS 34.108 clause 9 Annex A](#) with the following exceptions:

Information Element	Value/remark
RRC transaction identifier	0
Activation Time	Not Present
- Uplink DPCH timeslots and codes - First timeslot code list	A different code combination to that used in step 1.

8.2.6.18.5 Test requirement

After step 2 the UE shall transit from CELL_DCH to CELL_FACH and transmit a PHYSICAL CHANNEL RECONFIGURATION message on the common physical channel.

After step 5 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC.

<End of Modifications>**<Start of Modifications>**

8.2.6.29 Physical channel reconfiguration for transition from CELL_DCH to CELL_DCH (Compressed mode initiation): Success

8.2.6.29.1 Definition

8.2.6.29.2 Conformance requirement

If the UE receives:

- a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

- 1> if the UE will enter the CELL_DCH state from any state other than CELL_DCH state at the conclusion of this procedure:
 - 2> perform the physical layer synchronisation procedure A as specified in TS25.214;
- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
 - 1> enter a state according to TS25.331 subclause 8.6.3.3.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE as response message on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6..

8.2.6.29.3 Test purpose

1. To confirm that the UE activates compressed mode according to a PHYSICAL CHANNEL RECONFIGURATION message.
2. To confirm that the UE response PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC after compressed mode is activated.
3. To confirm that the UE deactivates compressed mode according to a PHYSICAL CHANNEL RECONFIGURATION message.
4. To confirm that the UE response PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC after compressed mode is deactivated..

8.2.6.29.4 Method of test

Initial Condition

System Simulator: 2 cells–Cell 1 is active and cell 6 is inactive

UE: CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108, depending to the CN domain(s) supported by the UE.

Test Procedure

Table 8.2.6.29

Parameter	Unit	Cell 1				Cell 6			
		T0	T1	T2	T3	T0	T1	T2	T3
UTRA RF Channel Number		Ch. 1				Ch. 2			
CPICH Ec	dBm/3.84MHz	-60	-60	-60	-60	Off	-60	-90	-60

Table 8.2.6.29 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings from columns "T0" to "T1" or "T1" to "T2" or "T2" to "T3", whenever the description in multi-cell condition specifies the transmission power settings for cell 1 and cell 6.

The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.29. The SS transmits MEASUREMENT CONTROL message in order for the UE to perform Inter-frequency measurements and report event 2c. The SS switches its downlink transmission power setting according to columns "T1" in table 8.2.6.29, but the UE shall not transmit any MEASUREMENT REPORT messages. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which includes IE "DPCH compressed

mode info" with "TGPS Status Flag" set to "Activate". The UE shall transmit PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC. The UE shall transmit MEASUREMENT REPORT message to report event 2c with the measured CPICH RSCP value for cell 6 to the SS. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message, which includes IE"DPCH compressed mode info" with "TGPS Status Flag" set to "deactivate". The UE shall respond with the PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC. After the SS switches its downlink transmission power settings to columns "T2" in table 8.2.6.29 and 10s is passed, the SS switches its downlink transmission power settings to columns "T3" in table 8.2.6.29. The UE shall not send any MEASUREMENT REPORT messages on the uplink DCCH because the UE cannot measure the CPICH RSCP on non used frequency as the compressed mode operation has been deactivated.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_DCH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.29.
2		←	MEASUREMENT CONTROL	SS commands the UE to perform Inter-frequency measurements and to report event 2c.
3				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.29.
4				The SS checks that no MEASUREMENT REPORT messages receives for 10 s.
5		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE"DPCH compressed mode info", which include parameter "TGPS Status Flag" set to activate.
6		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
7		→	MEASUREMENT REPORT	The UE shall report event 2c with the measured CPICH RSCP value for cell 6.
8		←	PHYSICAL CHANNEL RECONFIGURATION	Including IE"DPCH compressed mode info", which include parameter "TGPS Status Flag" set to deactivate.
9		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
10				The SS switches its downlink transmission power settings to columns "T2" in table 8.2.6.29.
11				After 10 s is passed ,the SS switches its downlink transmission power settings to columns "T3" in table 8.2.6.29.
12				The SS checks that no MEASUREMENT REPORT messages receives for 10 s..

Specific Message Contents

MEASUREMENT CONTROL (Step 2)

Use the same message sub-type found in [9] TS 34.108 clause 9, with the following exceptions in the IE(s) concerned:

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency measurement object list	
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency cells	
- Inter-frequency cell id	6
- Frequency info	
- UARFCN uplink (Nu)	UARFCN of the uplink frequency for cell 6
- UARFCN downlink (Nd)	UARFCN of the downlink frequency for cell 6
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	0 chips
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 6
- Primary CPICH TX power	Not Present
- Primary CPICH TX power	
- TX Diversity Indicator	Not Present
- Cell for measurement	Not Present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- CHOICE Mode	FDD
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CHOICE Mode	FDD
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- 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	1.0 dB
- Time to trigger	10 [ms]
- Reporting cell status	
- CHOICE reported cell	Report cells within monitored and/or virtual active set on non-used frequency
- Maximum number of reported cells per reported non-used frequency	1
- Parameters required for each non-used	

frequency - Threshold non used frequency - W non-used frequency DPCH compressed mode status info	-68dbm 0 Not present
---	----------------------------

PHYSICAL CHANNEL RECONFIGURATION (Step 5)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	
- Timing Indication	Maintain
- CFN-target SFN frame offset	Not Present
- Downlink DPCH power control information	
- CHOICE Mode	FDD
-DPC Mode	0 (Single)
- CHOICE Mode	FDD
- Power offset Pilot-DPDCH	0
- DL rate matching restriction information	Not Present
- Spreading factor	Refer to the parameter set in TS 34.108
- Fixed or flexible position	Flexible
- TFCI existence	FALSE
- Number of bits for Pilot bits (SF=128, 256)	Not Present
- CHOICE mode	FDD
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	activate
- TGCFN	(Current CFN+(256 – TTI/10msec)) mod256
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	Undefined
- TGPL1	3
- TGPL2	Not Present
- RPP	mode 0
- ITP	mode 0
- CHOICE UL/DL Mode	UL and DL, UL only, or DL only, depending on UE capability DL and UL
- Downlink compressed mode method	SF/2 or Not present depending on UE capability SF/2
- Uplink compressed mode method	SF/2 or Not present depending on UE capability
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity Mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present

MEASUREMENT REPORT (Step 7)

The contents of MEASUREMENT REPORT message is the same as them found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Measurement Identity	Check to see if set to 15
Measured Results	
- CHOICE Measurement	
- Inter frequency measured results list	Check to see if set to "Inter-frequency measured results list"
- Inter frequency measurement results	
- Frequency info	

- CHOICE	FDD
- UARFCN uplink (Nu)	Check to see if set to the UARFCN of the uplink frequency for cell 6
- UARFCN downlink (Nd)	Check to see if set to the UARFCN of the downlink frequency for cell 6
- UTRA carrier RSSI	Not checked
- Inter frequency cell measurement results	
- Cell measured results	
- Cell Identity	Not checked
- Cell synchronisation information	Not checked
- CHOICE Mode	FDD
- Primary CPICH Info	Not checked
- CPICH Ec/No	Not checked
- CPICH RSCP	Check to see if it is present
- Pathloss	Not checked
Measured Results on RACH	Not checked
Additional Measured results	Not checked
- Measured Result	
Event results	Not checked

PHYSICAL CHANNEL RECONFIGURATION (Step 8)

The contents of PHYSICAL CHANNEL RECONFIGURATION message in this test case is identical to the message sub-type titled as "Speech in CS" or "Non speech in CS" or "Packet to CELL_DCH from CELL_DCH in PS" as found in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Downlink information common for all radio links	Not present
- Downlink DPCH info common for all RL	Not present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	deactivate
- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	Not present

8.2.6.29.5 Test requirement

After step 3 the UE shall not send any MEASUREMENT REPORT messages on the uplink DCCH.

After step 5 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 6 the UE shall transmit a MEASUREMENT REPORT message containing the IE "measured results" reporting cell 6's CPICH RSCP value, also report the triggering of event '2c' included in IE "Event results".

After step 8 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After 11 the UE shall not transmit any MEASUREMENT REPORT messages on the uplink DCCH.

<End of Modifications>

<Start of Modifications>**8.2.6.32 Physical channel reconfiguration for transition from CELL_DCH to URA_PCH (Frequency band modification): Success****8.2.6.32.1 Definition****8.2.6.32.2 Conformance requirement**

If the UE receives:

- a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9
- 1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:
 - 2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";
 - 2> when the URA update procedure is successfully completed:
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.5 and 8.6.

8.2.6.32.3 Test purpose

1. To confirm that the UE transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_DCH to URA_PCH according to the PHYSICAL CHANNEL RECONFIGURATION message.
3. To confirm that the UE releases the dedicated physical channel and selects a common physical channel in a different frequency.

8.2.6.32.4 Method of test

Initial Condition

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.2.6.32

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec	dBm/3.84 MHz	-55	-72	Off	-55

Table 8.2.6.32 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.32. SS requests operator to make an outgoing call. The SS and UE execute procedure P5. Next The SS and the UE execute procedure P9 and then execute procedure P13. The SS switches its downlink transmission power settings to columns "T1" and transmits a PHYSICAL CHANNEL RECONFIGURATION message ~~including with IE "Frequency info" omitted set to frequency information of cell 6.~~ The UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC and enter URA_PCH state of cell 6. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

NOTE: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The SS has configured its downlink transmission power setting according to columns "T0" in table 8.2.6.32. SS requests operator to make an outgoing call.
2		←→	SS executes procedure P5 (clause 7.4.2.2.2) specified in TS 34.108.	
3		←→	SS executes procedure P9 (clause 7.4.2.4.2) specified in TS 34.108.	
4		←→	SS executes procedure P13 (clause 7.4.2.6.2) specified in TS 34.108.	
5				The SS switches its downlink transmission power settings to columns "T1" in table 8.2.6.32.
6		←	PHYSICAL CHANNEL RECONFIGURATION	Not including IE "Frequency info"
7		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	UE transmit this message on the dedicated physical channel in cell 1
8				The SS waits for 5 s.
9		←→	CALL C.5	If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 6)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_DCH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3
Frequency info	Not present

8.2.6.32.5 Test requirement

After step 3 the UE shall transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the DCCH using AM RLC in cell 1.

After step 8 the UE shall be in URA_PCH state in cell 6.

<End of Modifications>

CR-Form-v7

CHANGE REQUEST

№ **34.123-1 CR 491** № rev - № Current version: **5.3.0** №

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the № symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	№ Corrections to low priority RRC test cases (clause 8.3)		
Source:	№ Panasonic		
Work item code:	№ TEI	Date:	№ 28/04/2003
Category:	№ F	Release:	№ Rel-5
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	№	1. In TC 8.3.3.2, a shorter value of T305 is desirable. 2. Editorial errors.
Summary of change:	№	1. <u>TC 8.3.3.2</u> <ul style="list-style-type: none"> • SIB 1 with a shorter T305 value than the default, is specified in the Method of Test. • IEs with the same values as the default messages are deleted.
Consequences if not approved:	№	This test case would take a longer time to pass a UE.

Clauses affected:	№	8.3.3.2								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications № Test specifications O&M Specifications
Y	N									
	X									
	X									
	X									
Other comments:	№	Affects R'99, Rel-4 and Rel-5 UEs.								

How to create CRs using this form:

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- 1) Fill out the above form. The symbols above marked № contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modifications>

8.3.3.2 UTRAN Mobility Information: Failure (Invalid message reception)

8.3.3.2.1 Definition

8.3.3.2.2 Conformance Requirements

If the UTRAN MOBILITY INFORMATION message contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a UTRAN MOBILITY INFORMATION FAILURE message on the uplink DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the UTRAN MOBILITY INFORMATION FAILURE message to the value of "RRC transaction identifier" in the entry for the UTRAN MOBILITY INFORMATION message in the table "Rejected transactions" in the variable TRANSACTIONS, and;
- 1> set the IE "failure cause" to the cause value "protocol error";
- 1> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION;
- 1> when the UTRAN MOBILITY INFORMATION FAILURE message has been submitted to lower layers for transmission:
 - 2> continue with any ongoing processes and procedures as if the invalid UTRAN MOBILITY INFORMATION message has not been received;
 - 2> and the procedure ends.

References

3GPP TS 25.331 clauses 8.3.3.6

8.3.3.2.3 Test Purpose

- 1. To confirm that the UE ignore the erroneous UTRAN MOBILITY INFORMATION message and report this event to the UTRAN by sending UTRAN MOBILITY INFORMATION FAILURE message, stating the appropriate failure cause and information.

8.3.3.2.4 Method of test

Initial Conditions

System Simulator: 1 cell.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Specific Message Contents

For system information block 1 (given IEs which are different from defaults given in TS34.108 clause 6.1) to be transmitted before idle update preamble.

System Information Block type 1

<u>Information Element</u>	<u>Value/remark</u>
<u>T305</u>	<u>5 minutes</u>

Test Procedure

The UE is brought to CELL_FACH state. SS waits for T305 to expire. The UE shall transmit a CELL UPDATE message. SS sends CELL UPDATE CONFIRM message to the UE on the downlink DCCH. Then SS transmits a UTRAN MOBILITY INFORMATION message, which contains an unexpected critical message extension, to the UE on the DCCH using AM-RLC mode. The UE shall respond by transmitting the UTRAN MOBILITY INFORMATION FAILURE message, indicating "protocol error" in IE "failure cause" and also "Message extension not comprehended" in IE "Protocol error information". After receiving the UTRAN MOBILITY INFORMATION FAILURE message, SS waits for T305 to expire. The UE shall transmit a CELL UPDATE message with the original U-RNTI identity assigned. SS sends 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.
1a				SS waits for a period up to timer T305 to allow the UE to start performing a cell updating procedure.
1b		→	CELL UPDATE	
1c		←	CELL UPDATE CONFIRM	
2		←	UTRAN MOBILITY INFORMATION	See specific message content.
3		→	UTRAN MOBILITY INFORMATION FAILURE	UE shall transmit this message to report the error in UTRAN MOBILITY INFORMATION 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	
6		←	CELL UPDATE CONFIRM	

Specific Message Content

UTRAN MOBILITY INFORMATION (Step 2)

Use the UTRAN MOBILITY INFORMATION message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
Critical extensions	'01'H

UTRAN MOBILITY INFORMATION FAILURE (Step 3)

Information Element	Value/remark
Message Type RRC transaction identifier Integrity check info	Not checked. The presence of this IE is dependent on IXT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub-IEs as stated below. Else, this IE and the sub-IEs shall be absent.
Failure Cause - Failure Cause - Protocol Error Information	Check to see if set to 'Protocol error' Check to see if set to Message extension not comprehended

CELL UPDATE (Step 1b and 5)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI - SRNC Identity - S-RNTI Cell update cause	Check to see if set to '0000 0000 0001'B Check to see if set to '0000 0000 0000 0000 0001'B Check to see if set to 'periodical cell updating'

CELL UPDATE CONFIRM (Step 1c and 6)

Use the same message sub-type as in TS 34.108 clause 9.

8.3.3.2.5 Test Requirement

After step 1a 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.

After step 2 the UE shall transmit UTRAN MOBILITY INFORMATION FAILURE message, indicating the value "protocol error" in IE "failure cause" and also "Message extension 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.

<End of Modifications>

CHANGE REQUEST

34.123-1 CR 493 # rev **-** # Current version: **5.3.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# CR to 34.123-1 R5; Correction of package 4 RRC test cases 8.4.1.42 and 8.4.1.43 according to 25.331 CR1838		
Source:	# Ericsson		
Work item code:	# TEI Date: # 29/04/2003		
Category:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> # F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. </td> <td style="width: 50%; vertical-align: top;"> Release: # REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) </td> </tr> </table>	# F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: # REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)
# F Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Release: # REL-5 Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)		

Reason for change:	# CR1838 to 25.331 (RP-030104) was approved at RP#19. The CR included corrections to the handling of variable TGPS_IDENTITY and IE "Triggering condition 1/2". The change have impact on conformance requirement in test cases 8.4.1.42 and 8.4.1.43. No impact identified on test procedure or test requirement.
Summary of change:	# Update of conformance requirement for test cases 8.4.1.42 and 8.4.1.43.
Consequences if not approved:	# Conformance requirement not aligned to latest core specifications.

Clauses affected:	# 8.4.1.42, 8.4.1.43											
Other specs affected:	<table style="border: none;"> <tr> <td style="border: 1px solid black; padding: 2px; text-align: center;">Y</td> <td style="border: 1px solid black; padding: 2px; text-align: center;">N</td> <td rowspan="3" style="padding-left: 10px;">Other core specifications #</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px; text-align: center;">#</td> <td style="border: 1px solid black; padding: 2px; text-align: center;">X</td> <td rowspan="3" style="padding-left: 10px;">Test specifications #</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px; text-align: center;">#</td> <td style="border: 1px solid black; padding: 2px; text-align: center;">X</td> <td rowspan="2" style="padding-left: 10px;">O&M Specifications #</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px; text-align: center;">#</td> <td style="border: 1px solid black; padding: 2px; text-align: center;">X</td> </tr> </table>	Y	N	Other core specifications #	#	X	Test specifications #	#	X	O&M Specifications #	#	X
Y	N	Other core specifications #										
#	X		Test specifications #									
#	X			O&M Specifications #								
#	X											
Other comments:	# Affects R99, REL-4 and REL-5 test cases.											

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8.4.1.42 Measurement Control and Report: Change of Compressed Mode Method

8.4.1.42.1 Definition

8.4.1.42.2 Conformance requirement

If variable INVALID_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

- 1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag") in the variable TGPS_IDENTITY):
 - 2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:
 - 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.
 - 3> [set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "inactive".](#)
 - 2> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:
 - 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

NOTE: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.

- 1> update each pattern sequence to the variable TGPS_IDENTITY according to the IE "TGPSI";
- 1> update into the variable TGPS_IDENTITY the configuration information defined by IE group "transmission gap pattern sequence configuration parameters";
- 1> after the new configuration has been taken into use:
 - 2> activate the stored pattern sequence corresponding to each IE "TGPSI" for which the "~~Current~~ TGPS status flag" in the variable TGPS_IDENTITY is set to "activate" at the time indicated by IE "TGCFN"; and
 - 2> begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;
 - 2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":
 - 3> start the concerned pattern sequence immediately at that CFN.
- 1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified in subclause 8.2.11.2.

....

Uplink and downlink compressed mode methods are described in TS 25.212. For UL "higher layer scheduling" compressed mode method and transport format combination selection, see TS 25.321.

Reference

3GPP TS 25.331 clause 8.6.6.15.

8.4.1.42.3 Test purpose

To confirm that the UE supports change of compressed mode method included in a RADIO BEARER SETUP message.

To confirm that the UE supports change of compressed mode method included in a RADIO BEARER RELEASE message.

8.4.1.42.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 on frequency f_1 , cell 4 on frequency f_2 and cell 5 on frequency f_3 .

UE: "PS-DCCH_DCH" (state 6-7) as specified in clause 7.4 of TS 34.108. Ciphering shall be activated.

This test case applies only for UEs requiring compressed mode to perform inter- frequency measurements and supporting both PS and CS domains.

Test Procedure

Table 8.4.1.42-1 illustrates the downlink power to be applied for the 3 cells, as well as the frequency and scrambling code for each cell.

Table 8.4.1.42-1a

Parameter	Unit	Cell 1					
Frequency		f_1					
Scrambling code		Scrambling code 1					
		T0	T1	T2	T3	T4	T5
CPICH Ec	dBm/3.84 MHz	-60	-70	-70	-60	-70	-70

Table 8.4.1.42-1b

Parameter	Unit	Cell 4						Cell 5					
Frequency		f_2						f_3					
Scrambling code		Scrambling code 3						Scrambling code 2					
		T0	T1	T2	T3	T4	T5	T0	T1	T2	T3	T4	T5
CPICH Ec	dBm/3.84 MHz	-95	-60	-60	-60	-60	-60	-95	-95	-60	-95	-95	-60

The UE is initially in CELL_DCH, and has only cell 1 in its active set.

The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to download compressed mode parameters in the UE but without activating compressed mode. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE.

At instant T1, the downlink power is changed according to what is shown in table 8.4.1.42-1. Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

The SS establishes a CS domain RAB and changes the compressed mode method to (from HLS to SF/2), by sending a RADIO BEARER SETUP message on DCCH using AM-RLC. The UE shall answer with a RADIO BEARER SETUP COMPLETE message.

At instant T2, the downlink power is changed according to what is shown in table 8.4.1.42-1. Frequency f_3 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

At instant T3, the downlink power is changed according to what is shown in table 8.4.1.42-1. The increased quality of the used frequency should result in clearing of the concerning TRIGGERED_2B_EVENT.

The SS establishes PS domain RAB and changes compressed mode method (from SF/2 to HLS) by sending a RADIO BEARER SETUP message on DCCH using AM-RLC. The UE shall answer with a RADIO BEARER SETUP COMPLETE message.

At instant T4, the downlink power is changed according to what is shown in table 8.4.1.42-1. Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Next, the SS releases the PS domain RAB and changes compressed mode method (from HLS to SF/2) by sending a RADIO BEARER RELEASE message on DCCH using AM-RLC. The UE shall answer with a RADIO BEARER RELEASE COMPLETE message.

At instant T5, the downlink power is changed according to what is shown in table 8.4.1.42-1. Frequency f_3 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	SS downloads compressed mode parameters (using HLS method) without activating compressed mode
2		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of compressed mode parameters
3		←	MEASUREMENT CONTROL	The SS configures inter-frequency measurements in the UE and activates compressed mode
4				The SS changes the power of the cells according to column T1 in table 8.4.1.42-1.
5		→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
6		←	RADIO BEARER SETUP	SS establishes CS domain RAB (speech) and changes to SF/2 compressed mode method
7		→	RADIO BEARER SETUP COMPLETE	The UE acknowledges the establishment of the RAB and the compressed mode method change.
8				The SS changes the power of the cells according to column T2 in table 8.4.1.42-1.
9		→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
10				The SS changes the power of the cells according to T3 in table 8.4.1.42-1 (so the UE can trigger event 2b again for both frequencies if suitable conditions arise)

11	←	RADIO BEARER SETUP	SS establishes PS domain RAB and changes compressed mode method to HLS.
12	→	RADIO BEARER SETUP COMPLETE	The UE acknowledges the establishment of the RAB and the compressed mode method change.
13			The SS changes the power of the cells according to column T4 in table 8.4.1.42-1.
14	→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
15	←	RADIO BEARER RELEASE	SS releases the PS domain RAB and changes compressed mode method to SF/2.
16	→	RADIO BEARER RELEASE COMPLETE	The UE acknowledges the release of the RAB and the compressed mode method change.
17			The SS changes the power of the cells according to column T5 in table 8.4.1.42-1.
18	→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.

Specific Message Content

All messages shall use the same content as defined in [9] TS 34.108 clause 9, with the following exceptions:

PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 1)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate

- TGCFN	Not present
- Transmission gap pattern sequence configuration parameters	FDD Measurement
- TGMP	Infinity
- TGPRC	4
- TGSN	7
- TGL1	Not Present
- TGL2	0
- TGD	3
- TGPL1	Not Present
- TGPL2	Mode 0
- RPP	Mode 0
- ITP	UL and DL, UL only or DL only (depending on the UE capability)
- CHOICE UL/DL Mode	HLS(or not sent, depending on the UE capability)
- Downlink compressed mode method	HLS(or not sent, depending on the UE capability)
- Uplink compressed mode method	HLS(or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 3)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	2 inter-frequency cells
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Inter-frequency cell id	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_3
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_3
- Cell info	

- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Not present
- Primary Scrambling Code	Scrambling code 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE
- Non frequency related cell reporting quantities	
- SFN-SFN observed time difference reporting indicator	No report
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	
- UE autonomous update	On with no reporting
- Non autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2b
- Threshold used frequency	-70 dBm
- W used frequency	0.0
- Hysteresis	1.0 dB
- Time to trigger	100 ms
- Reporting cell status	Report cells within monitored and/or virtual active set on non-used frequency
- Maximum number of reported cells per reported non-used frequency	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-65 dBm
- W non-used frequency	0
DPCH compressed mode status info	
- TGPS reconfiguration CFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$

MEASUREMENT REPORT (Step 5,14)

Information Element	Value/Remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.

<p>Measurement identity Measured Results - Inter-frequency measured results list - Frequency info - CHOICE mode - UARFCN uplink - UARFCN downlink - UTRA carrier RSSI - Inter-frequency cell measurement results - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss Measured results on RACH Additional measured results Event results - Inter-frequency measurement event results - Inter-frequency event identity - Inter-frequency cells - Frequency info - CHOICE mode - UARFCN uplink - UARFCN downlink - Non freq related measurement event results - Primary CPICH info - Primary scrambling code</p>	<p>2 FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 Check that this IE is absent Check that the value of this IE is set to 1 cell reported Check that this IE is absent Check that this IE is absent Check that this IE is absent Check that the value of this IE is set to Scrambling code 3 Check that this IE is absent Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent 2b FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 Check that the value of this IE is set to Scrambling code 3</p>
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RADIO BEARER SETUP (Step 6)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Speech to CELL_DCH from CELL_DCH in CS", with the following modifications:

Information Element	Value/Remark
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<ul style="list-style-type: none"> - DPCH compressed mode info - TGPSI - TGPS Status Flag - TGCFN - Transmission gap pattern sequence configuration parameters - TGMP - TGPRC - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITP - CHOICE UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method - Downlink frame type - DeltaSIR1 - DeltaSIRAfter1 - DeltaSIR2 - DeltaSIRAfter2 - N identify abort - T Reconfirm abort 	<p>1 Activate (Current CFN + (256 – TTI/10msec))mod 256</p> <p>FDD Measurement Infinity 4 7 Not Present 0 3 Not Present Mode 0 Mode 0 UL and DL, UL only or DL only (depending on the UE capability) SF/2(or not sent, depending on the UE capability) SF/2(or not sent, depending on the UE capability) B 2.0 1.0 Not Present Not Present Not Present Not Present</p>
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MEASUREMENT REPORT (Step 9,18)

Information Element	Value/Remark
Message Type Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
<ul style="list-style-type: none"> - Message authentication code - RRC Message sequence number 	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity Measured Results	2
<ul style="list-style-type: none"> - Inter-frequency measured results list - Frequency info -CHOICE mode <ul style="list-style-type: none"> - UARFCN uplink - UARFCN downlink 	FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3 (Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3
<ul style="list-style-type: none"> - UTRA carrier RSSI - Inter-frequency cell measurement results - Cell measured results <ul style="list-style-type: none"> - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code 	Check that this IE is absent Check that this IE is absent Check that this IE is absent
<ul style="list-style-type: none"> - CPICH Ec/N0 - CPICH RSCP - Pathloss - Frequency info -CHOICE mode <ul style="list-style-type: none"> - UARFCN uplink 	Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3) Check that this IE is absent Check that this IE is present Check that this IE is absent FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3 (Could be absent in case

<ul style="list-style-type: none"> - UARFCN downlink - UTRA carrier RSSI - Inter-frequency cell measurement results - Cell measured results <ul style="list-style-type: none"> - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss Measured results on RACH Additional measured results Event results <ul style="list-style-type: none"> - Inter-frequency measurement event results <ul style="list-style-type: none"> - Inter-frequency event identity - Inter-frequency cells <ul style="list-style-type: none"> - Frequency info -CHOICE mode <ul style="list-style-type: none"> - UARFCN uplink - UARFCN downlink - Non freq related measurement event results <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code - Frequency info <ul style="list-style-type: none"> -CHOICE mode <ul style="list-style-type: none"> - UARFCN uplink - UARFCN downlink - Non freq related measurement event results <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code 	<p>the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3 Check that this IE is absent Check that the value of this IE is set to 1 cell reported</p> <p>Check that this IE is absent Check that this IE is absent Check that this IE is absent</p> <p>Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3) Check that this IE is absent Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent</p> <p>2b</p> <p>FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3</p> <p>Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)</p> <p>FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3</p> <p>Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)</p>
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RADIO BEARER SETUP (Step 6)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Packet to CELL_DCH from CELL_DCH in PS", with the following modifications:

Information Element	Value/Remark
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<ul style="list-style-type: none"> - DPCH compressed mode info - TGPSI - TGPS Status Flag - TGCFN - Transmission gap pattern sequence configuration parameters - TGMP - TGPRC - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITP - CHOICE UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method - Downlink frame type - DeltaSIR1 - DeltaSIRAfter1 - DeltaSIR2 - DeltaSIRAfter2 - N identify abort - T Reconfirm abort 	<ul style="list-style-type: none"> 1 Activate (Current CFN + (256 – TTI/10msec))mod 256 FDD Measurement Infinity 4 7 Not Present 0 3 Not Present Mode 0 Mode 0 UL and DL, UL only or DL only (depending on the UE capability) HLS(or not sent, depending on the UE capability) HLS(or not sent, depending on the UE capability) B 2.0 1.0 Not Present Not Present Not Present Not Present
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RADIO BEARER RELEASE (Step 15)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Packet to CELL_DCH from CELL_DCH in PS", with the following modifications:

Information Element	Value/Remark
<ul style="list-style-type: none"> - DPCH compressed mode info - TGPSI - TGPS Status Flag - TGCFN - Transmission gap pattern sequence configuration parameters - TGMP - TGPRC - TGSN - TGL1 - TGL2 - TGD - TGPL1 - TGPL2 - RPP - ITP - CHOICE UL/DL Mode - Downlink compressed mode method - Uplink compressed mode method - Downlink frame type - DeltaSIR1 - DeltaSIRAfter1 - DeltaSIR2 - DeltaSIRAfter2 - N identify abort - T Reconfirm abort 	<ul style="list-style-type: none"> 1 Activate (Current CFN + (256 – TTI/10msec))mod 256 FDD Measurement Infinity 4 7 Not Present 0 3 Not Present Mode 0 Mode 0 UL and DL, UL only or DL only (depending on the UE capability) SF/2(or not sent, depending on the UE capability) SF/2(or not sent, depending on the UE capability) B 2.0 1.0 Not Present Not Present Not Present Not Present

8.4.1.42.5 Test Requirement

After step 1, the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of compressed mode parameters that were included in the PHYSICAL CHANNEL RECONFIGURATION message of step 1.

After step 4, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2 . That message shall only include cell 4 within the IE event results.

After step 6, the UE shall send a RADIO BEARER SETUP COMPLETE message to the SS to acknowledge the establishment of the RAB and the change of compressed mode method that were included in the RADIO BEARER SETUP message of step 6.

After step 8, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3 .

After step 11, the UE shall send a RADIO BEARER SETUP COMPLETE message to acknowledge the establishment of the RAB and the compressed mode method change that were included in the RADIO BEARER SETUP message of step 11.

After step 13, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2 . That message shall only include cell 4 within the IE event results.

After step 15, the UE shall send a RADIO BEARER RELEASE COMPLETE message to acknowledge the release of the RAB and the compressed mode method change that were included in the RADIO BEARER RELEASE message of step 15.

After step 17, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3 .

8.4.1.43 Measurement Control and Report: Compressed Mode Reconfiguration

8.4.1.43.1 Definition

8.4.1.43.2 Conformance requirement

If variable INVALID_CONFIGURATION has value FALSE after UE has performed the checks above, the UE shall:

- 1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag") in the variable TGPS_IDENTITY):
 - 2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:
 - 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.
 - 2> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:
 - 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.
 - 3> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "inactive".

NOTE: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.

- 1> update each pattern sequence to the variable TGPS_IDENTITY according to the IE "TGPSI";
- 1> update into the variable TGPS_IDENTITY the configuration information defined by IE group "transmission gap pattern sequence configuration parameters";
- 1> after the new configuration has been taken into use:

- 2> activate the stored pattern sequence corresponding to each IE "TGPSI" for which the "~~Current~~TGPS status flag" in the variable TGPS_IDENTITY is set to "activate" at the time indicated by IE "TGCFN"; and
- 2> begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;
- 2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":
 - 3> start the concerned pattern sequence immediately at that CFN.
- 1> monitor if the parallel transmission gap pattern sequences create an illegal overlap, and in case of overlap, take actions as specified in subclause 8.2.11.2.

If the IE "DPCCH compressed mode info" is included, and if the IE group "transmission gap pattern sequence configuration parameters" is not included, the UE shall:

- 1> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag" in the variable TGPS_IDENTITY):
 - 2> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:
 - 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use;
 - 3> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS_IDENTITY to "inactive".
 - 2> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:
 - 3> deactivate this pattern sequence at the beginning of the frame, indicated by IE "Activation time"(see subclause 8.6.3.1) received in this message, when the new configuration received in this message is taken into use.

NOTE: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.

- 1> after the new configuration has been taken into use:
 - 2> activate, at the time indicated by IE "TGCFN", the stored pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" is set to "activate"; and
 - 2> begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;
 - 2> if the new configuration is taken into use at the same CFN as indicated by IE "TGCFN":
 - 3> start the concerned pattern sequence immediately at that CFN.

For transmission gap pattern sequences stored in variable TGPS_IDENTITY, but not identified in IE "TGPSI", the UE shall:

- 1> if the received message implies a timing re-initialised hard handover (see subclause 8.3.5.1):
 - 2> deactivate such transmission gap pattern sequences at the beginning of the frame, indicated by IE "Activation time" (see subclause 8.6.3.1) received in this message; and
 - 2> set IE "Current TGPS Status Flag" in corresponding UE variable TGPS_IDENTITY to 'inactive'.
- 1> if the received message not implies a timing re-initialised hard handover (see subclause 8.3.5.1):
 - 2> continue such transmission gap pattern sequence according to IE "Current TGPS Status Flag" in the corresponding UE variable TGPS_IDENTITY.

Uplink and downlink compressed mode methods are described in [27]. For UL "higher layer scheduling" compressed mode method and transport format combination selection, see [15].

Reference

3GPP TS 25.331 clause 8.6.6.15.

8.4.1.43.3 Test purpose

To confirm that the UE supports de-activation of compressed mode included in a RADIO BEARER SETUP message.

To confirm that the UE supports reconfiguration of transport channel parameters (rate reduction PS RAB) and change of compressed mode method included in a TRANSPORT CHANNEL RECONFIGURATION message.

To confirm that the UE supports change of compressed mode included in a RADIO BEARER RELEASE message.

To confirm that the UE supports reconfiguration of transport channel parameters (rate reduction PS RAB) without performing hard handover included in a TRANSPORT CHANNEL RECONFIGURATION message.

8.4.1.43.4 Method of test

Initial Condition

System Simulator: 3 cells – Cell 1 on frequency f_1 , cell 4 on frequency f_2 and cell 5 on frequency f_3 .

UE: "CS-DCCH + DTCH_DCH" (state 6-9) as specified in clause 7.4 of TS 34.108. Ciphering shall be activated.

This test case applies only for UEs requiring compressed mode to perform inter-frequency measurements and supporting both PS and CS domains.

Test Procedure

Table 8.4.1.43-1 illustrates the downlink power to be applied for the 3 cells, as well as the frequency and scrambling code for each cell.

Table 8.4.1.43-1a

Parameter	Unit	Cell 1					
Frequency		f_1					
Scrambling code		Scrambling code 1					
		T0	T1	T2	T3	T4	T5
CPICH Ec	dBm/3.8 4 MHz	-60	-70	-70	-60	-70	-70

Table 8.4.1.43-1b

Parameter	Unit	Cell 4						Cell 5					
Frequency		f_2						f_3					
Scrambling code		Scrambling code 3						Scrambling code 2					
		T0	T1	T2	T3	T4	T5	T0	T1	T2	T3	T4	T5
CPICH Ec	dBm/3.8 4 MHz	-95	-60	-60	-95	-60	-60	-95	-95	-60	-95	-95	-60

The UE is initially in CELL_DCH, and has only cell 1 in its active set.

Next, SS transmits a PHYSICAL CHANNEL RECONFIGURATION message to download compressed mode parameters in the UE without activating compressed mode. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

The SS then sets up inter-frequency measurements (event 2b), by sending a MEASUREMENT CONTROL message to the UE.

The SS establishes a PS domain RAB and de-activates compressed mode, by sending a RADIO BEARER SETUP message on DCCH using AM-RLC. The UE shall answer with a RADIO BEARER SETUP COMPLETE message.

At instant T1, the downlink power is changed according to what is shown in table 8.4.1.43-1. The SS shall then verify that the UE does not transmit a MEASUREMENT REPORT message.

Next the SS downloads compressed mode parameters and activates compressed mode by sending a PHYSICAL CHANNEL RECONFIGURATION message on DCCH using AM-RLC. The UE shall answer with a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message.

Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Next, SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to reconfigure transport channel parameters (rate reduction PS RAB) and to change compressed mode method (to SF/2). The UE shall answer with a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message.

At instant T2, the downlink power is changed according to what is shown in table 8.4.1.43-1. Frequency f_3 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

At instant T3, the downlink power is changed according to what is shown in table 8.4.1.43-1. The increased quality of the used frequency should result in clearing of the concerning TRIGGERED_2B_EVENT.

Next, SS transmits a RADIO BEARER RELEASE message to release the CS domain RAB and change compressed mode method (from SF/2 to HLS). The UE shall answer with a RADIO BEARER RELEASE COMPLETE message.

At instant T4, the downlink power is changed according to what is shown in table 8.4.1.43-1. Frequency f_2 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Next, SS transmits a TRANSPORT CHANNEL RECONFIGURATION message to reconfigure transport channel parameters (rate increase PS RAB) – without performing hard handover. The UE shall answer with a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message.

At instant T5, the downlink power is changed according to what is shown in table 8.4.1.43-1. Frequency f_3 shall then trigger event 2b, and the UE shall transmit a MEASUREMENT REPORT message to the SS.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PHYSICAL CHANNEL RECONFIGURATION	SS downloads compressed mode parameters (using SF/2 method) without activating compressed mode.
2		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of compressed mode parameters.
3		←	MEASUREMENT CONTROL	The SS configures inter-frequency measurements in the UE and activates compressed mode.
4		←	RADIO BEARER SETUP	SS establishes PS domain RAB and de-activates compressed mode.
5		→	RADIO BEARER SETUP COMPLETE	The UE acknowledges the establishment of the RAB and the de-activation of compressed mode.
6				The SS changes the power of the cells according to column T1 in table 8.4.1.43-1.
7				SS verifies that the UE does not transmit a MEASUREMENT REPORT message to the SS.

8	←	PHYSICAL CHANNEL RECONFIGURATION	SS downloads compressed mode parameters (using HLS method) and activates compressed mode.
9	→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the downloading of compressed mode parameters and the activation of compressed mode.
10	→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
11	←	TRANSPORT CHANNEL RECONFIGURATION	SS reconfigures transport channel parameters (rate reduction PS RAB) and changes compressed mode method to SF/2. Rate should be reduced to 0 kbps – no PS RAB room left to use for gap.
12	→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the transport channel reconfiguration and the change of compressed mode method
13			The SS changes the power of the cells according to column T2 in table 8.4.1.43-1.
14	→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.
15			The SS changes the power of the cells according to T3 in table 8.4.1.43-1 (so the UE can trigger event 2b again for both frequencies).
16	←	RADIO BEARER RELEASE	SS releases the CS domain RAB (speech) and changes compressed mode method to HLS.
17	→	RADIO BEARER RELEASE COMPLETE	The UE acknowledges the release of the RAB and the compressed mode method change.
18			The SS changes the power of the cells according to column T4 in table 8.4.1.43-1.
19	→	MEASUREMENT REPORT	Frequency f_2 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.

20	←	TRANSPORT CHANNEL RECONFIGURATION	SS reconfigures transport channel parameters (rate increase PS RAB) – without performing hard handover. SS includes TGCFNs for compressed mode.
21	→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	The UE acknowledges the transport channel parameters change.
22			The SS changes the power of the cells according to column T5 in table 8.4.1.43-1.
23	→	MEASUREMENT REPORT	Frequency f_3 triggers event 2b in the UE, which sends a MEASUREMENT REPORT message to the SS.

Specific Message Content

All messages shall use the same content as defined in [9] TS 34.108 clause 9, with the following exceptions:

PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 1)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
- Downlink PDSCH information	Not Present
Downlink information common for all radio links	
- Downlink DPCH info common for all RL	Not Present
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	Deactivate
- TGCFN	Not present
- Transmission gap pattern sequence	
configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)

- Downlink compressed mode method	SF/2(or not sent, depending on the UE capability)
- Uplink compressed mode method	SF/2(or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT CONTROL (Step 3)

Information Element	Value/Remark
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodical Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	Inter-frequency measurement
- Inter-frequency cell info list	
- CHOICE inter-frequency cell removal	No inter-frequency cells removed
- New inter-frequency info list	2 inter-frequency cells
- Inter-frequency cell id	4
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_2
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_2
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Scrambling code 3
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Inter-frequency cell id	5
- Frequency info	
- UARFCN uplink (Nu)	UARFCN for the uplink corresponding to f_3
- UARFCN downlink (Nd)	UARFCN for the downlink corresponding to f_3
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE Mode	FDD
- Primary CPICH Info	Not present
- Primary Scrambling Code	Scrambling code 2
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cells for measurement	Not present
- Inter-frequency measurement quantity	
- CHOICE reporting criteria	Inter-frequency reporting criteria
- Filter Coefficient	0
- Measurement quantity for frequency quality estimate	CPICH RSCP
- Inter-frequency reporting quantity	
- UTRA Carrier RSSI	FALSE
- Frequency quality estimate	FALSE

- Non frequency related cell reporting quantities	No report
- SFN-SFN observed time difference reporting indicator	
- Cell synchronisation information reporting indicator	FALSE
- Cell Identity reporting indicator	TRUE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting cell status	Not present
- Measurement validity	
- UE State	CELL_DCH
- Inter-frequency set update	
- UE autonomous update	On with no reporting
- Non autonomous update mode	Not present
- CHOICE report criteria	Inter-frequency measurement reporting criteria
- Parameters required for each event	
- Inter-frequency event identity	2b
- Threshold used frequency	-70 dBm
- W used frequency	0.0
- Hysteresis	1.0 dB
- Time to trigger	100 ms
- Reporting cell status	Report cells within monitored and/or virtual active set on non-used frequency
- Maximum number of reported cells per reported non-used frequency	2
- Parameters required for each non-used frequency	
- Threshold non used frequency	-65 dBm
- W non-used frequency	0
DPCH compressed mode status info	
- TGPS reconfiguration CFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$
- Transmission gap pattern sequence	
- TGPSI	1
- TGPS Status Flag	Activate
- TGCFN	$(\text{Current CFN} + (256 - \text{TTI}/10\text{msec})) \bmod 256$

RADIO BEARER SETUP (Step 4)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Packet to CELL_DCH from CELL_DCH in PS", with the following modifications:

Information Element	Value/Remark
- DPCH compressed mode info	
- TGPSI	1
- TGPS Status Flag	De-activate
- TGCFN	Not present

PHYSICAL CHANNEL RECONFIGURATION MESSAGE (Step 8)

Information Element	Value/Remark
Activation time	Not Present
New U-RNTI	Not Present
New C-RNTI	Not Present
New DSCH-RNTI	Not Present
RRC State indicator	CELL_DCH
UTRAN DRX cycle length coefficient	Not Present
CN information info	Not Present
URA identity	Not Present
Downlink counter synchronisation info	Not Present
Frequency info	Not Present
Maximum allowed UL TX power	Not Present
CHOICE <i>channel requirement</i>	Not Present
CHOICE <i>mode</i>	FDD
- Downlink PDSCH information	Not Present

Downlink information common for all radio links	Not Present
- Downlink DPCH info common for all RL	1
- DPCH compressed mode info	Deactivate
- TGPSI	Not present
- TGPS Status Flag	
- TGCFN	
- Transmission gap pattern sequence	
configuration parameters	FDD Measurement
- TGMP	Infinity
- TGPRC	4
- TGSN	7
- TGL1	Not Present
- TGL2	0
- TGD	3
- TGPL1	Not Present
- TGPL2	Mode 0
- RPP	Mode 0
- ITP	UL and DL, UL only or DL only (depending on the UE capability)
- CHOICE UL/DL Mode	HLS(or not sent, depending on the UE capability)
- Downlink compressed mode method	HLS(or not sent, depending on the UE capability)
- Uplink compressed mode method	HLS(or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present
- TX Diversity mode	Not Present
- SSDT information	Not Present
- Default DPCH Offset Value	Not Present
Downlink information for each radio link	Not Present

MEASUREMENT REPORT (Step 10,19)

Information Element	Value/Remark
Message Type	
Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	2
Measured Results	
- Inter-frequency measured results list	
- Frequency info	FDD
-CHOICE mode	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance)
- UARFCN uplink	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2
- UARFCN downlink	Check that this IE is absent
- UTRA carrier RSSI	Check that the value of this IE is set to 1 cell reported
- Inter-frequency cell measurement results	

<ul style="list-style-type: none"> - Cell measured results - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss <p>Measured results on RACH Additional measured results Event results</p> <ul style="list-style-type: none"> - Inter-frequency measurement event results <ul style="list-style-type: none"> - Inter-frequency event identity - Inter-frequency cells <ul style="list-style-type: none"> - Frequency info <ul style="list-style-type: none"> -CHOICE mode <ul style="list-style-type: none"> - UARFCN uplink - UARFCN downlink - Non freq related measurement event results <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code 	<p>Check that this IE is absent Check that this IE is absent Check that this IE is absent</p> <p>Check that the value of this IE is set to Scrambling code 3 Check that this IE is absent Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent</p> <p>2b</p> <p>FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 (Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2</p> <p>Check that the value of this IE is set to Scrambling code 3</p>
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TRANSPORT CHANNEL RECONFIGURATION (Step 11)

The contents of TRANSPORT 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 34.108 [9], with the following exceptions:

Information Element	Value/remark
UL Transport channel information for all transport channels	Do not include TFCs with TF's other than TF0 for PS RAB
Added or Reconfigured UL TrCH information	Reconfigure PS RAB TFS, only include TF0
DL Transport channel information common for all transport channel	Do not include TFCs with TF's other than TF0 for PS RAB
Added or Reconfigured DL TrCH information	Reconfigure PS RAB TFS, only include TF0
Frequency info	Not Present
Maximum allowed UL TX power	Not Present

MEASUREMENT REPORT (Step 14,23)

Information Element	Value/Remark
Message Type Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Measurement identity	2
Measured Results	FDD
- Inter-frequency measured results list	Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3 (Could be absent in case the duplex distance is the default duplex distance)
- Frequency info	Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3
-CHOICE mode	Check that this IE is absent
- UARFCN uplink	
- UARFCN downlink	
- UTRA carrier RSSI	Check that this IE is absent

<ul style="list-style-type: none"> - Inter-frequency cell measurement results - Cell measured results <ul style="list-style-type: none"> - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss - Frequency info -CHOICE mode <ul style="list-style-type: none"> - UARFCN uplink - UARFCN downlink - UTRA carrier RSSI - Inter-frequency cell measurement results - Cell measured results <ul style="list-style-type: none"> - Cell Identity - SFN-SFN observed time difference - Cell synchronisation information - Primary CPICH info - Primary scrambling code - CPICH Ec/N0 - CPICH RSCP - Pathloss <p>Measured results on RACH Additional measured results Event results</p> <ul style="list-style-type: none"> - Inter-frequency measurement event results <ul style="list-style-type: none"> - Inter-frequency event identity - Inter-frequency cells <ul style="list-style-type: none"> - Frequency info -CHOICE mode <ul style="list-style-type: none"> - UARFCN uplink - UARFCN downlink - Non freq related measurement event results <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code - Frequency info -CHOICE mode <ul style="list-style-type: none"> - UARFCN uplink - UARFCN downlink - Non freq related measurement event results <ul style="list-style-type: none"> - Primary CPICH info - Primary scrambling code 	<p>Check that the value of this IE is set to 1 cell reported</p> <p>Check that this IE is absent Check that this IE is absent Check that this IE is absent</p> <p>Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3) Check that this IE is absent Check that this IE is present Check that this IE is absent</p> <p>FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3 Check that this IE is absent Check that the value of this IE is set to 1 cell reported</p> <p>Check that this IE is absent Check that this IE is absent Check that this IE is absent</p> <p>Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3) Check that this IE is absent Check that this IE is present Check that this IE is absent Check that this IE is absent Check that this IE is absent</p> <p>2b</p> <p>FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3</p> <p>Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)</p> <p>FDD Check that the value of this IE is set to UARFCN for the uplink corresponding to f_2 or f_3(Could be absent in case the duplex distance is the default duplex distance) Check that the value of this IE is set to UARFCN for the downlink corresponding to f_2 or f_3</p> <p>Check that the value of this IE is set to Scrambling code 3 (on f_2) or Scrambling code 2 (on f_3)</p>
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RADIO BEARER RELEASE (Step 16)

Use the same message sub-type found in TS 34.108 clause 9, which is entitled "Packet to CELL_DCH from CELL_DCH in PS", with the following modifications:

Information Element	Value/Remark
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- DPCH compressed mode info	1
- TGPSI	Activate
- TGPS Status Flag	(Current CFN + (256 – TTI/10msec))mod 256
- TGCFN	
- Transmission gap pattern sequence configuration parameters	
- TGMP	FDD Measurement
- TGPRC	Infinity
- TGSN	4
- TGL1	7
- TGL2	Not Present
- TGD	0
- TGPL1	3
- TGPL2	Not Present
- RPP	Mode 0
- ITP	Mode 0
- CHOICE UL/DL Mode	UL and DL, UL only or DL only (depending on the UE capability)
- Downlink compressed mode method	HLS(or not sent, depending on the UE capability)
- Uplink compressed mode method	HLS(or not sent, depending on the UE capability)
- Downlink frame type	B
- DeltaSIR1	2.0
- DeltaSIRAfter1	1.0
- DeltaSIR2	Not Present
- DeltaSIRAfter2	Not Present
- N identify abort	Not Present
- T Reconfirm abort	Not Present

8.4.1.43.5 Test Requirement

After step 1, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of the compressed mode parameters without activating compressed mode that were included in the PHYSICAL CHANNEL RECONFIGURATION message of step 1.

After step 4, the UE shall send a RADIO BEARER SETUP COMPLETE message to acknowledge the establishment of the PS domain RAB and the de- activation of compressed mode that were included in the RADIO BEARER SETUP message of step 4.

After step 6, the UE shall not transmit a MEASUREMENT REPORT message.

After step 8, the UE shall send a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the downloading of the compressed mode parameters and the activation of compressed mode that were included in the PHYSICAL CHANNEL RECONFIGURATION message of step 8.

After step 9, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2 . That message shall only include cell 4 within the IE event results.

After step 11, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the change of transport channel parameters and the change of compressed mode method that were included in the TRANSPORT CHANNEL RECONFIGURATION message of step 11.

After step 13, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3 .

After step 17, the UE shall transmit a RADIO BEARER RELEASE COMPLETE message to the SS to acknowledge the release of the RAB and the change of compressed mode method that were included in the RADIO BEARER RELEASE message of step 17.

After step 18, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_2 . That message shall only include cell 4 within the IE event results.

After step 20, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message to the SS to acknowledge the change of transport channel parameters that were included in the TRANSPORT CHANNEL RECONFIGURATION message of step 20.

After step 22, the UE shall transmit a MEASUREMENT REPORT message triggered by frequency f_3 .

CHANGE REQUEST

34.123-1 CR 498 # rev **-** # Current version: **5.3.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# Corrections to Package 3 RRC test cases (clause 8.4) (revision to T1-030561)		
Source:	# Panasonic		
Work item code:	# TEI	Date:	# 09/05/2003
Category:	# F	Release:	# Rel-5
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change: #	1. To enable loopback functionality in the UE. 2. Inter-arrival time between 2 consecutive MEASUREMENT REPORT messages in Expected Sequence is incorrect, probably due to mis-intepretation of IE "time-to-trigger" and "pending time after trigger" of MEASUREMENT CONTROL. Changes from T1-030561 IE "Filter coefficient" is MD. If the default value 0 is intended for this IE, "Not Present" should be set. This is to better reflect the real network behaviour in handling MD IE, when the default value is intended.
Summary of change: #	1. <u>TC 8.4.1.29</u> <ul style="list-style-type: none"> • Several RRC messages are added for loopback test. • MEASUREMENT REPORT message in step 4e shall be received 1100ms after step 4d. 2. <u>TC 8.4.1.30</u> <ul style="list-style-type: none"> • Several RRC messages are added for loopback test. Changes from T1-030561 In TC 8.4.1.29, IE "Filter coefficient" is set to "Not Present", which implies the default value 0.
Consequences if #	# This test case could fail good UE.

not approved:

Clauses affected:	⌘	8.4.1.29, 8.4.1.30										
Other specs affected:		<table border="1"><tr><td>Y</td><td>N</td></tr><tr><td></td><td>X</td></tr><tr><td></td><td>X</td></tr><tr><td></td><td>X</td></tr></table>	Y	N		X		X		X	Other core specifications	⌘
	Y	N										
		X										
	X											
	X											
		Test specifications										
		O&M Specifications										
Other comments:	⌘	Affects R'99, Rel-4 and Rel-5 UEs.										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modifications>**8.4.1.29 Measurement Control and Report: Event based Traffic Volume measurement in CELL_FACH state.****8.4.1.29.1 Definition****8.4.1.29.2 Conformance requirement**

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in TS 25.331 subclause 8.6 unless otherwise specified below.

The UE shall:

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":
 - 2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
 - 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":
 - ...
 - 2> for measurement type "UE positioning measurement":
 - ...
 - 2> for any other measurement type:
 - 3> if the measurement is valid in the current RRC state of the UE:
 - 4> begin measurements according to the stored control information for this measurement identity.

...

For traffic volume measurements in the UE only one quantity is compared with the thresholds. This quantity is Transport Channel Traffic Volume (which equals the sum of Buffer Occupancies of RBs multiplexed onto a transport channel) in number of bytes. Every TTI, UE measures the Transport Channel Traffic Volume for each transport channel and compares it with the configured thresholds. If the monitored Transport Channel Traffic Volume exceeds an absolute threshold, i.e. if TCTF>Reporting threshold, this is an event (event 4a) that could trigger a report. The corresponding report specifies at least which measurement ID the event that triggered the report belongs to.

In CELL_FACH state, the UE shall:

- 1> transmit a MEASUREMENT REPORT message on the uplink DCCH when the reporting criteria stored in variable MEASUREMENT_IDENTITY are met for any ongoing traffic volume measurement or UE positioning measurement that is being performed in the UE;
- 1> include a measurement report in the IE "Measured results on RACH", as specified in the IE "Intra-frequency reporting quantity for RACH reporting" and the IE "Maximum number of reported cells on RACH" in System Information Block type 12 (or "System Information Block Type 11" if "System Information Block Type 12" is not being broadcast);
- 1> include in the IE "Measured results on RACH" all requested reporting quantities for cells for which measurements are reported.

Reference

3GPP TS 25.331, clause 14.4.2.1, 3GPP TS 25.331, clause 8.4.1.3, 8.4.2.2.

8.4.1.29.3 Test Purpose

1. To verify that in CELL_FACH state when event 4a triggered at TVM set up UE sends RRC: Measurement Report with correct measurement identity and indication of UL transport channel type, radio bearer identities and corresponding RLC buffer payloads in number of bytes.
2. To verify that in CELL_FACH state when event 4a triggered after TVM set up UE sends RRC: Measurement Report with correct measurement identity and indication of UL transport channel type, radio bearer identities and corresponding RLC buffer payloads in number of bytes.
3. To confirm that the UE includes in the MEASUREMENT REPORT message, measurement report in IE "Measurement results on RACH" as specified in System Information Block type 12.

8.4.1.29.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: ~~CELL_FACH state, state 6-11~~ Idle state (State 3 or State 7) as specified in clause 7.4 of TS 34.108.

System Information Block type 11 nor 12 does not include Traffic Volume measurement system information.

Test Procedure

The UE is brought to the CELL_FACH state after a successful incoming call attempt. The SS follows the procedure in TS 34.108 clause 7.1.3 (Mobile Terminated), to set up a user RAB, but with the default RAB replaced by the one described in 34.108, clause 6.10.2.4.3.2: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH for DL and 6.10.2.4.4.1: Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH for UL. The radio bearer is placed into UE test loop mode 1 described in 34.109 clause 5.3. The System Information Block type 12 is modified compared to the default settings so that CPICH RSCP is reported for intra-frequency reporting when transmitting RACH messages. After this modification, SS configures transport channel traffic volume so as to exceed threshold and then sends to UE RRC: MEASUREMENT CONTROL message, which includes traffic volume measurement control parameters eg. uplink transport channel type and reporting threshold. Transport channel traffic volume exceeds threshold and after 'time to trigger' UE sends RRC: MEASUREMENT REPORT to SS. SS does not respond and after 'pending time after trigger' UE sends again same RRC: MEASUREMENT REPORT. SS configures UE's transport channel load decreases to zero and UE sends no MEASUREMENT REPORT message. SS configures transport channel traffic volume so as to exceed threshold again and after 'time to trigger' UE sends RRC: MEASUREMENT REPORT message to SS. After 'pending time after trigger' UE sends again same RRC: MEASUREMENT REPORT message. SS calls for generic procedure C.2 to check that UE is in CELL_FACH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PAGING TYPE1	The SS transmits the message, which includes a allocated identity (P-TMSI).
1a		→	RRC CONNECTION REQUEST	
1b		←	RRC CONNECTION SETUP	
1c		→	RRC CONNECTION SETUP COMPLETE	
1d		→	SERVICE REQUEST	
1e		←	AUTHENTICATION AND CIPHERING REQUEST	
1f		→	AUTHENTICATION AND CIPHERING RESPONSE	
1g		←	SECURITY MODE COMMAND	
1h		→	SECURITY MODE COMPLETE	
1i		←	ACTIVATE RB TEST MODE	TC
1j		→	ACTIVATE RB TEST MODE COMPLETE	
1k		←	RADIO BEARER SETUP	RRC RAB SETUP See specific message contents for this message
1l		→	RADIO BEARER SETUP COMPLETE	The UE is brought to the CELL_FACH state in the cell.
1ma		←	CLOSED UE TEST LOOP	TC UE Test Loop Mode1
1nb		→	CLOSED UE TEST LOOP COMPLETE	TC
1oc		←	MASTER INFORMATION BLOCK SYSTEM INFORMATION BLOCK TYPE 12	System Information Block type 12 is different from the default settings (see specific message contents)
1pd		←	SYSTEM INFORMATION CHANGE INDICATION	To notify the modification of SYSTEM INFORMATION BLOCK TYPE 12, this message is transmitted.
1qe				SS configures transport channel traffic volume so as to exceed threshold.
2		←	MEASUREMENT CONTROL	SS provides Traffic Volume measurement criterias to UE.
3		→	MEASUREMENT REPORT	UE reports that Traffic Volume measurement event 4A is triggered.
4		→	MEASUREMENT REPORT	UE repeats message after 1100 ms.
4a				SS configures UE's transport channel load decreases to zero
4b				SS receive no MEASUREMENT CONTROL message.
4c				SS configures transport channel traffic volume so as to exceed threshold
4d		→	MEASUREMENT REPORT	UE reports that Traffic Volume measurement event 4A is triggered.
4e		→	MEASUREMENT REPORT	UE repeats message after 1000 1100 ms.
5		←→	CALL C.2	If the test result of C.2 indicates that UE is in CELL_FACH state, the test passes, otherwise it fails.

Specific Message Content

PAGING TYPE 1 (Step 1)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>Paging record list</u> <u>Paging record</u> <u>CHOICE Used paging identity</u> - <u>Paging cause</u> - <u>CN domain identity</u> - <u>CHOICE UE Identity</u> - <u>p-TMSI</u> <u>BCCH modification info</u>	<u>Only 1 entry</u> <u>CN identity</u> <u>Terminating Call with one of the supported services</u> <u>PS Domain</u> <u>p-TMSI</u> <u>Allocated identity during the attach procedure.</u> <u>Not Present</u>

RRC CONNECTION REQUEST (Step 1a)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message type</u> <u>Initial UE identity</u> <u>Establishment Cause</u> <u>Protocol Error Indicator</u> <u>Measured results on RACH</u>	<u>Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI</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 1</u> <u>Check to see if it is set to FALSE</u> <u>Not checked.</u>

System Information Block type 12 (Step 1^{oe})

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
- Use of HCS	Not used
- Cell selection and reselection quality measure	CPICH RSCP
- Intra-frequency measurement system information	
- Intra-frequency measurement identity	5
- Intra-frequency cell info list	
- CHOICE intra-frequency cell removal	Remove no intra-frequency cells
- New intra-frequency cells	
- Intra-frequency cell id	0
- Cell info	
- Cell individual offset	0 dB
- Reference time difference to cell	Not present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 1
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- Intra-frequency Measurement quantity	
- Filter Coefficient	Not Present [⊖]
- Measurement quantity	CPICH RSCP
- Intra-frequency measurement for RACH reporting	
- SFN-SFN observed time difference	No report
- Reporting quantity	CPICH RSCP
- 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	
- Cell synchronisation information reporting indicator	FALSE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting indicator	TRUE
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range Constant	15 dB
- Cells forbidden to affect reporting range	Not Present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	0
- Replacement activation threshold	Not Present
- Time to trigger	60 ms
- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting Cell Status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency
- Maximum number of reported cells	2

- Inter-frequency measurement system information	Not Present
- Traffic volume measurement system information	Not Present

MASTER INFORMATION BLOCK (Step 1^{oe})

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/remark
MIB Value tag	2

SYSTEM INFORMATION CHANGE INDICATION (Step 1^{pe})

Information Element	Value/remark
Message Type	
BCCH modification info	
MIB Value Tag	2
BCCH Modification time	Not Present

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged Mode RLC
- Periodic Reporting / Event Trigger Reporting Mode	Event Trigger
Additional measurements list	Not Present
CHOICE measurement type	
- Traffic volume measurement object	
- Uplink transport channel type	RACH
- Traffic volume measurement quantity	
- Measurement quantity	RLC buffer payload
- Traffic volume reporting quantity	
- RLC Buffer Payload for each RB	TRUE
- Average of RLC Buffer Payload for each RB	FALSE
- Variance of RLC Buffer Payload for each RB	FALSE
- Measurement validity	
- UE state	All states except CELL_DCH
- Traffic volume measurement reporting criteria	
- Traffic volume event identity	4a
- Reporting threshold	8
- Time to trigger	100
- Pending time after trigger	1000
- Tx interruption after trigger	250

MEASUREMENT REPORT (Step 3, step 4, step 4d and step 4e)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Traffic volume measured results list"
- Traffic volume measurement results	
- RB Identity	1
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	2
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	3
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	4
- RLC Buffers Payload	Check to see if this IE is present
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
- RB Identity	20
- RLC Buffers Payload	Check to see if the value is above the threshold
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
Measured Results on RACH	
- Measurement result for current cell	Check to see if set to 'CPICH RSCP'
- CHOICE measurement quantity	Checked to see if set to within an acceptable range.
- CPICH RSCP	Checked to see if this IE is absent
- Measurement results for monitored cells	Check to see if set to 'CPICH RSCP'
Additional Measured results	Not checked
Event Results	
- Uplink transport channel type causing the event	Check to see if set to "RACH"
- UL transport channel identity	Check to see that is not set
- Traffic volume event identity	Check to see if set to "4a"

8.4.1.29.5 Test Requirement

In step 3 UE sends RRC: MEASUREMENT REPORT with correct measurement identity indication. RB identity and RLC buffers payload has reasonable values. The IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP shall be included in this message.

In step 4, 4d and 4e UE repeats message sent in step 3.

After step 3 UE is not allowed to send user data during the 'Tx interruption after trigger' timer is running.

8.4.1.30 Measurement Control and Report: Event based Traffic Volume measurement in CELL_DCH state.

8.4.1.30.1 Definition

8.4.1.30.2 Conformance requirement

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in TS 25.331 subclause 8.6 unless otherwise specified below.

The UE shall:

- 1> read the IE "Measurement command";

- 1> if the IE "Measurement command" has the value "setup":
 - 2> store this measurement in the variable MEASUREMENT_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
 - 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement":
 - ...
 - 2> for measurement type "UE positioning measurement":
 - ...
 - 2> for any other measurement type:
 - 3> if the measurement is valid in the current RRC state of the UE:
 - 4> begin measurements according to the stored control information for this measurement identity.

...

For traffic volume measurements in the UE only one quantity is compared with the thresholds. This quantity is Transport Channel Traffic Volume (which equals the sum of Buffer Occupancies of RBs multiplexed onto a transport channel) in number of bytes. Every TTI, UE measures the Transport Channel Traffic Volume for each transport channel and compares it with the configured thresholds.

If the monitored Transport Channel Traffic Volume exceeds an absolute threshold, i.e. if $TCTF > \text{Reporting threshold}$, this is an event (event 4a) that could trigger a report. The corresponding report specifies at least which measurement ID the event that triggered the report belongs to.

If the monitored Transport Channel Traffic Volume becomes smaller than an absolute threshold, i.e. if $TCTF < \text{Reporting threshold}$, this is an event (4b) that could trigger a report. The corresponding report specifies at least which measurement ID the event that triggered the report belongs to.

Reference

3GPP TS 25.331, clause 14.4.2.2, 3GPP TS 25.331, clause 8.4.1.3.

8.4.1.30.3 Test Purpose

1. To verify that in CELL_DCH state when event 4a or 4b triggered at setup TVM UE sends RRC: Measurement Report with correct measurement identity and indication of uplink transport channel type and identity, radio bearer identities and corresponding RLC buffer payloads in number of bytes.
2. To verify that in CELL_DCH state when event 4a or 4b triggered after setup TVM UE sends RRC: Measurement Report with correct measurement identity and indication of uplink transport channel type and identity, radio bearer identities and corresponding RLC buffer payloads in number of bytes.

8.4.1.30.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: ~~CELL_DCH state, state 6-10~~ [Idle state \(State 3 or State 7\)](#) as specified in clause 7.4 of TS 34.108.

System Information Block type 11 nor 12 does not include Traffic Volume measurement system information.

Test Procedure

The UE is brought to the CELL_DCH state after a successful incoming call attempt. The SS follows the procedure in TS 34.108 clause 7.1.3 (Mobile Terminated), to set up a user RAB, but with the default RAB replaced by the one described in 34.108, clause 6.10.2.4.1.26: Interactive or background / UL: 64 DL: 64 kbps / PS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH. The radio bearer is placed into UE test loop mode 1 described in TS 34.109 clause 5.3. SS

configures UE's transport channel traffic volume to exceeds threshold. SS sends to UE RRC: MEASUREMENT CONTROL messages, which includes in addition to measurement identity traffic volume measurement control parameters eg. uplink transport channel type and identity and reporting threshold for events 4a, and after 'time to trigger' UE sends RRC: MEASUREMENT REPORT message to SS. SS does not respond and after 'pending time after trigger' UE sends again same RRC: MEASUREMENT REPORT message. SS configures UE's transport channel load decreases to zero and sends UE RRC: MEASUREMENT CONTROL messages, which includes in addition to measurement identity traffic volume measurement control parameters eg. uplink transport channel type and identity and reporting threshold for event 4b. Event 4b triggers and after 'time to trigger' UE sends RRC: MEASUREMENT REPORT message to SS. SS does not respond and after 'pending time after trigger' UE sends again same RRC: MEASUREMENT REPORT message. SS increases transport channel traffic volume to exceeds threshold. Event 4a is triggered and after 'time to trigger' UE sends RRC: MEASUREMENT REPORT message to SS. SS decreases transport channel traffic volume to zero. Event 4b is triggered and after 'time to trigger' UE sends RRC: MEASUREMENT REPORT message to SS. SS calls for generic procedure C.3 to check that UE is in CELL_DCH state.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	PAGING TYPE1	The SS transmits the message, which includes a <u>allocatd identity (P-TMSI)</u> .
1a		→	RRC CONNECTION REQUEST	
1b		←	RRC CONNECTION SETUP	
1c		→	RRC CONNECTION SETUP COMPLETE	
1d		→	SERVICE REQUEST	
1e		←	AUTHENTICATION AND CIPHERING REQUEST	
1f		→	AUTHENTICATION AND CIPHERING RESPONSE	
1g		←	SECURITY MODE COMMAND	
1h		→	SECURITY MODE COMPLETE	
1i		←	ACTIVATE RB TEST MODE	TC
1j		→	ACTIVATE RB TEST MODE COMPLETE	
1k		←	RADIO BEARER SETUP	RRC RAB SETUP See specific message contents for this message
1l		→	RADIO BEARER SETUP COMPLETE	The UE is brought to the CELL_DCH state in the cell 1.
1ma		←	CLOSED UE TEST LOOP	TC UE Test Loop Mode1
1nb		→	CLOSED UE TEST LOOP COMPLETE	TC
1oe				SS configures transport channel traffic volume so as to exceed threshold
2		←	MEASUREMENT CONTROL	SS provides Traffic Volume measurement criterias (event 4a and event 4b) to UE.
3			Void	
4		→	MEASUREMENT REPORT	UE's transport channel is loaded. UE reports that Traffic Volume measurement event 4A is triggered.
5		→	MEASUREMENT REPORT	UE repeats message after 2100 ms.
5a				UE's transport channel traffic volume decreases to zero.
5b		←	MEASUREMENT CONTROL	SS provides Traffic Volume measurement criterias (event 4b) to UE.
6		→	MEASUREMENT REPORT	UE reports that Traffic Volume measurement event 4B is triggered.
7		→	MEASUREMENT REPORT	UE repeats message after 2100 ms.
7a				SS increas transport channel traffic volume so as to exceed threshold
7b		→	MEASUREMENT REPORT	IE "Measurement Identity" is set to "15".
7c				UE's transport channel traffic volume decreases to zero.
7d		→	MEASUREMENT REPORT	IE "Measurement Identity" is set to "14".
8		↔	CALL C.3	If the test result of C.3 indicates that UE is in CELL_DCH state, the test passes, otherwise it fails.

Specific Message Content

PAGING TYPE 1 (Step 1)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>Paging record list</u> <u>Paging record</u> <u>CHOICE Used paging identity</u> - <u>Paging cause</u> - <u>CN domain identity</u> - <u>CHOICE UE Identity</u> - <u>p-TMSI</u> <u>BCCH modification info</u>	<u>Only 1 entry</u> <u>CN identity</u> <u>Terminating Call with one of the supported services</u> <u>PS Domain</u> <u>p-TMSI</u> <u>Allocated identity during the attach procedure</u> <u>Not Present</u>

RRC CONNECTION REQUEST (Step 1a)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message type</u> <u>Initial UE identity</u> <u>Establishment Cause</u> <u>Protocol Error Indicator</u> <u>Measured results on RACH</u>	<u>Same as the IMSI stored in the TEST USIM card, or the registered TMSI or P-TMSI</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 1</u> <u>Check to see if it is set to FALSE</u> <u>Not checked.</u>

MEASUREMENT CONTROL (Step 2)

<u>Information Element</u>	<u>Value/remark</u>
Measurement Identity Measurement Command Measurement Reporting Mode - Measurement Reporting Transfer Mode - Periodic Reporting / Event Trigger Reporting Mode Additional measurements list CHOICE measurement type - Traffic volume measurement objects - Uplink transport channel type - UL target transport channel ID - Traffic volume measurement quantity - Measurement quantity - Traffic volume reporting quantity - RLC Buffer Payload for each RB - Average of RLC Buffer Payload for each RB - Variance of RLC Buffer Payload for each RB - Measurement validity - UE state - Traffic volume measurement reporting criteria - Uplink transport channel type - UL Transport Channel ID - Traffic volume event identity - Reporting threshold - Time to trigger - Pending time after trigger - Tx interruption after trigger - Traffic volume event identity - Reporting threshold - Time to trigger - Pending time after trigger - Tx interruption after trigger	15 Setup Acknowledged Mode RLC Event Trigger Not Present DCH 1 RLC buffer payload TRUE FALSE FALSE CELL_DCH Not present Not present 4a 256 100 2000 Not present 4b 32 100 2000 Not present

MEASUREMENT REPORT (Step 4, step 5 and step 7b)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Traffic volume measured results list"
- Traffic volume measurement results	
- RB Identity	20
- RLC Buffers Payload	Check to see if the value is above the threshold
- Average of RLC Buffer Payload	Check to see if this IE is absent
- Variance of RLC Buffer Payload	Check to see if this IE is absent
Measured Results on RACH	Not checked
Additional Measured results	Not checked
Event Results	
- Uplink transport channel type causing the event	Check to see if set to "DCH"
- UL transport channel identity	Check to see if set to "1"
- Traffic volume event identity	Check to see if set to "4a"

MEASUREMENT REPORT (Step 6, step 7 and 7d)

Information Element	Value/remark
Measurement identity	Check to see if set to 15
Measured Results	
- CHOICE measurement	Check to see if set to "Traffic volume measured results list"
- Traffic volume measurement results	
- RB identity	Check that value is 20
- RLC buffers payload	Check that value is below the threshold
Measured Results on RACH	Not checked
Additional Measured results	Not checked
Event Results	
- Uplink transport channel type causing the event	Check to see if set to "DCH"
- UL transport channel identity	Check to see if set to "1"
- Traffic volume event identity	Check to see if set to "4b"

8.4.1.30.5 Test Requirement

In steps 4, 5, 6, 7, 7b and 7d UE sends RRC: MEASUREMENT REPORT with correct measurement identity indication. RB identity and RLC buffers payload has correct values. Measurement identity, transport channel type, transport channel identity and event identity has to match with set values.

<End of Modifications>

CHANGE REQUEST

34.123-1 CR 510 # rev - # Current version: **5.3.0**

For [HELP](#) on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# Corrections to low priority RRC test cases (clause 8.1) [revision to T1-030478]		
Source:	# Panasonic		
Work item code:	# TEI	Date:	# 28/04/2003
Category:	# F	Release:	# Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change: #	<ol style="list-style-type: none"> 1. It is impossible to PER-encode COUNTER CHECK message with only IE "Message Type". A better approach to simulate error over air interface is to use "Unexpected critical message extension" cause. 2. Test case title of TC 8.1.8.1 and 8.1.8.3 are similar. 3. In TC 8.1.8.3, it is not intended to test multi-call scenario. However, starting from the current stated initial condition (state 6-9 or 6-10) and followed by a RADIO BEARER SETUP message in step 2, this unnecessarily leads to a multi-call configuration. It is proposed to start the test execution from an initial state without RAB(s). 4. IE "RAB info" in RADIO BEARER SETUP message in step 2 of TC 8.1.8.3 should match the format used in CN (as defined in TS 24.008), which includes NSAPI value ('0001' for CS domain, '0101' for PS domain). 5. Editorial errors. <p style="color: blue; margin-top: 10px;">Correction to T1-030478</p> <p>Grammatical mistakes of test cases titles as proposed in T1-030478.</p>
Summary of change: #	<ol style="list-style-type: none"> 1. <u>TC 8.1.3.7</u> <ul style="list-style-type: none"> • UE is in CELL_FACH state when it receives RRC CONNECTION RELEASE message in step 7. According to TS25.331v540 clause 8.1.4.3, RRC CONNECTION RELEASE COMPLETE shall be sent on AM DCCH.

2. TC 8.1.8.1

- Test case title is changed to “Counter check in CELL_DCH state, with symmetrical RAB”.
- The initial state of UE is clearly specified.
- The specific message contents and test requirement are changed to simulate “Unexpected critical message extension” errors.

3. TC 8.1.8.2

- The specific message contents and test requirements sub-clauses are changed to simulate “Unexpected critical message extension” errors.
- The initial state of UE is clearly specified.

4. TC 8.1.8.3

- Test case title is changed to “Counter check in CELL_DCH state, with asymmetrical RAB”.
- The initial state of UE is revised to state 6-5 or 6-7, ie without RABs configured.
- IE “RAB info” in RADIO BEARER SETUP message (step 2) is corrected.
- According to conformance requirement, if no COUNT-C exists for a radio bearer for a given direction, COUNT-C in the COUNTER CHECK RESPONSE message is set to any value. Therefore, values of IE “COUNT-C uplink” and “COUNT-C downlink” in COUNTER CHECK RESPONSE (step 5) are changed to “Check to see if it is present”. Statements requesting tester to check the COUNT-C information for RB9 in Test Procedure and Test Requirement requesting are deleted.
- Editorial.

Correction to T1-030478

In TC 8.1.8.1, “symmetrical” is changed to “symmetric” in test case title.
 In TC 8.1.8.3, “asymmetrical” is changed to “asymmetric” in test case title.

Consequences if not approved:

⌘ This test case could fail good UE.

Clauses affected:

⌘ 8.1.3.7, 8.1.8.1, 8.1.8.2, 8.1.8.3

Other specs affected:

	Y	N	
		X	Other core specifications
	X		Test specifications
		X	O&M Specifications

⌘ TS 34.123-2

Other comments:

⌘ Affects R'99, Rel-4 and Rel-5 UEs.

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modifications>**8.1.3.7 RRC Connection Release in CELL_FACH state (Frequency band modification): Success****8.1.3.7.1 Definition****8.1.3.7.2 Conformance requirement**

When the UE receives the first RRC CONNECTION RELEASE message
the UE shall:

- 1> in state CELL_FACH:
 - 2> if the RRC CONNECTION RELEASE message was received on the DCCH:
 - 3> when the successful transmission of the RRC CONNECTION RELEASE COMPLETE message has been confirmed by the lower layers:
 - 4> release all its radio resources; and
 - 4> indicate the release of the established signalling connections ; and
 - 4> pass the value of the IE "Release cause" received in the RRC CONNECTION RELEASE message to upper layers;
 - 4> enter idle mode;
 - 4> perform the actions specified in TS25.331 subclause 8.5.2 when entering idle mode.
 - a) 3> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.1.4.

8.1.3.7.3 Test purpose

To confirm that when the UE receives an RRC CONNECTION RELEASE message, the UE releases signalling radio bearer and its radio resources and goes back to the idle.

To confirm that the UE enters into idle mode withby performing cell-selection and selecting other cell than the UE selecting cell in connected mode.

8.1.3.7.4 Method of test**Initial Condition**

System Simulator: 2 cells – Cell 1 is active and cell 6 is inactive

UE: "Registered idle mode on CS" (state 2) or "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Test Procedure

Table 8.1.3.7

Parameter	Unit	Cell 1		Cell 6	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 2	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-60	off	-60
P-CCPCH RSCP (TDD)	dBm	-60	-60	off	-60

Table 8.1.3.7 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 6.

The UE is in idle mode of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.3.7. SS request operator to make an outgoing call. The SS and UE execute procedure P4 or P6. Next The SS and the UE execute procedure P8 or P10. The SS switches its downlink transmission power settings to columns "T1" and then modifies SIB 3 to indicate that cell 1 is barred. The SS transmits an RRC CONNECTION RELEASE message on DCCH. The UE shall transmit an RRC CONNECTION RELEASE COMPLETE message using ~~UM-AM~~ on DCCH and try to enter idle mode state in cell 1. On selecting cell 1 the UE reads system information block 3 and is aware that cell 1 is barred cell. Hence the UE selects cell 6 and camp on cell 6. Upon completion of the procedure, the SS calls for generic procedure C.1 to check that UE is in idle mode.

Note: If the UE fails the test because of a failure to reselect to a right cell, then the operator may re-run the test.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_FACH state of cell 1 and the SS has configured its downlink transmission power setting according to columns "T0" in table 8.1.3.7. SS requests operator to make an outgoing call.
2			SS executes procedure P4 (clause 7.4.2.1.2) or P6 (clause 7.4.2.2.2) specified in TS 34.108.	
3			SS executes procedure P8 (clause 7.4.2.3.2) or P10 (clause 7.4.2.4.2) specified in TS 34.108.	
4				The SS switches its downlink transmission power settings to columns "T1" in table 8.1.3.7.
5		←	System Information Block type 3	The SS modifies SIB 3 in cell 1 to indicate that the cell is barred.
6				The SS waits for 5 s
7		←	RRC CONNECTION RELEASE	
8		→	RRC CONNECTION RELEASE COMPLETE	
9				The SS waits for 5s
10		↔	CALL C.1	If the test result of C.1 indicates that UE is in idle mode, the test passes, otherwise it fails.

Specific Message Content

System Information Block type 3 (Step 5)

Use the same message type found in clause 6 of TS 34.108, with the following exceptions:

Information Element	Value/remark
- Cell Access Restriction	
- Cell barred	Barred
- Intra-frequency cell re-selection indicator	Not allowed
- T_{barred}	10[s]
- Cell Reserved for operator use	Not reserved
- Cell Reservation Extension	Not reserved
- Access Class Barred List	
- Access Class Barred0	barred
- Access Class Barred1	barred
- Access Class Barred2	barred
- Access Class Barred3	barred
- Access Class Barred4	barred
- Access Class Barred5	barred
- Access Class Barred6	barred
- Access Class Barred7	barred
- Access Class Barred10	barred
- Access Class Barred11	barred
- Access Class Barred12	barred
- Access Class Barred13	barred
- Access Class Barred14	barred
- Access Class Barred15	barred

8.1.3.7.5 Test requirement

After step 3 the UE shall transmit RRC CONNECTION RELEASE COMPLETE messages using AM on DCCH.

After step 9 the UE shall be in idle mode of cell 6.

<End of Modifications>**<Start of Modifications>**8.1.8.1 Counter check in CELL_DCH state, with symmetrical RAB

8.1.8.1.1 Definition

8.1.8.1.2 Conformance requirement

When the UE receives a COUNTER CHECK message it shall compare the COUNT-C MSB values received in the IE "RB COUNT-C MSB information" in the COUNTER CHECK message to the COUNT-C MSB values of the corresponding radio bearers.

The UE shall:

- 1> set the IE "RRC transaction identifier" in the COUNTER CHECK RESPONSE message to the value of "RRC transaction identifier" in the entry for the COUNTER CHECK message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry.

If:

- there is one or more radio bearer(s) using UM or AM RLC mode stored in the variable ESTABLISHED_RABS, which is (are) not included in the IE "RB COUNT-C MSB information"; or

- there is one or more radio bearer(s) included in the IE "RB COUNT-C MSB information", which is (are) not stored in the variable ESTABLISHED_RABS; or
- for any radio bearer (excluding signalling radio bearers) using UM or AM RLC mode stored in the variable ESTABLISHED_RABS and included in the IE "RB COUNT-C MSB information" with COUNT-C MSB values different from the MSB part of the COUNT-C values in the UE:

the UE shall:

- 1> include these radio bearers in the IE "RB COUNT-C information" in the COUNTER CHECK RESPONSE message. For any RB which is included in the IE "RB COUNT-C MSB information" in the COUNTER CHECK message but not stored in the variable ESTABLISHED_RABS in the UE, the MSB part of COUNT-C values in the COUNTER CHECK RESPONSE message shall be set identical to COUNT-C-MSB values in the COUNTER CHECK message. The LSB part shall be filled with zeroes.

The UE shall:

- 1> submit a COUNTER CHECK RESPONSE message to lower layers for transmission on the uplink DCCH using AM RLC.

When the COUNTER CHECK RESPONSE message has been submitted to lower layers for transmission the procedure ends.

If the UE receives a COUNTER CHECK message, which contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit an RRC STATUS message on the uplink DCCH using AM RLC;
- 1> include the IE "Identification of received message"; and
- 1> set the IE "Received message type" to COUNTER CHECK; and
- 1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the UE COUNTER CHECK message in the table "Rejected transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION;
- 1> when the RRC STATUS message has been submitted to lower layers for transmission:
 - 2> continue with any ongoing processes and procedures as if the invalid COUNTER CHECK message has not been received.

Reference

3GPP TS 25.331 clause 8.1.15.

8.1.8.1.3 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.

8.1.8.1.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: [PS-DCCH+DTCH](#)~~CELL~~_DCH state (state 6-10) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to the CELL_DCH state after a successful outgoing call attempt. The SS transmits an invalid COUNTER CHECK message. This message contains an unexpected critical message extension ~~lacks all IEs except IE "Message Type"~~. 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. The SS transmits a COUNTER CHECK message which includes a different 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

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_DCH state after an outgoing call has been established successfully.
2		←	COUNTER CHECK	See specific message contents for this message
3		→	RRC STATUS	UE shall detect a protocol error and then transmit this message.
4		←	COUNTER CHECK	See specific message content.
5		→	COUNTER CHECK RESPONSE	The message shall not include the IE "RB COUNT-C information".
6		←	COUNTER CHECK	See specific message content.
7		→	COUNTER CHECK RESPONSE	The message shall include the IE "RB COUNT-C information".
8		←	COUNTER CHECK	See specific message content.
9		→	COUNTER CHECK RESPONSE	The message shall include the IE "RB COUNT-C information".

Specific Message Contents

COUNTER CHECK (Step 2)

Information Element	Value/remark
All IEs <u>Critical extensions</u>	Not Present <u>'01'H</u>

RRC STATUS (Step 3)

Use the same message type found in Annex A, with the following exception.

Information Element	Value/remark
Protocol Error Information - Protocol Error Cause	Checked to see if set to "ASN.1 violation or encoding error" <u>Message extension not comprehended</u>

COUNTER CHECK (Step 4)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	20
- COUNT-C MSB uplink	Current COUNT-C MSB for RB#20 in uplink
- COUNT-C MSB downlink	Current COUNT-C MSB for RB#20 in downlink

COUNTER CHECK RESPONSE (Step 5)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	Check to if this IE is absent

COUNTER CHECK (Step 6)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	Check to see if set to 20
- COUNT-C MSB uplink	Toggle all bits of the current COUNT-C MSB in uplink for RB#20
- COUNT-C MSB downlink	Toggle all bits of the current COUNT-C MSB in downlink for RB#20

COUNTER CHECK RESPONSE (Step 7)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	
- RB identity	Check to see if set to 20
- COUNT-C uplink	Check to see if set to Current COUNT-C for RB#20 in uplink
- COUNT-C downlink	Check to see if set to COUNT-C for RB#20 in downlink

COUNTER CHECK (Step 8)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	Check to see if set to 25
- COUNT-C MSB uplink	Arbitrary COUNT-C MSB in uplink for RB#25
- COUNT-C MSB downlink	Arbitrary COUNT-C MSB in downlink for RB#25

COUNTER CHECK RESPONSE (Step 9)

Information Element	Value/remark
Message Type	0
RRC transaction identifier	Not checked
Integrity check info	
RB COUNT-C information	
- RB identity	Check to see if set to 20
- COUNT-C uplink	Check to see if set to Current COUNT-C for RB#20 in uplink
- COUNT-C downlink	Check to see if set to COUNT-C for RB#20 in downlink
- RB identity	Check to see if set to 25
- COUNT-C uplink	Check to see if COUNT-C MSB is set to COUNT-C MSB in uplink for RB#25 in step 8 and LSB is fill with '0'
- COUNT-C downlink	Check to see if COUNT-C MSB is set to COUNT-C MSB in downlink for RB#25 in step 8 and LSB is fill with '0'

8.1.8.1.5 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 error~~Message extension not comprehended".

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#20.

After step 8, the UE shall transmit a COUNTER CHECK RESPONSE message which includes the IE "RB COUNT-C information" to report that RB#25 is not found in variable ESTABLISHED_RABS and RB#20 is not found in IE "RB COUNT-C MSB information".

8.1.8.2 Counter check in CELL_FACH state

8.1.8.2.1 Definition

8.1.8.2.2 Conformance requirement

When the UE receives a COUNTER CHECK message it shall compare the COUNT-C MSB values received in the IE "RB COUNT-C MSB information" in the COUNTER CHECK message to the COUNT-C MSB values of the corresponding radio bearers.

The UE shall:

- 1> set the IE "RRC transaction identifier" in the COUNTER CHECK RESPONSE message to the value of "RRC transaction identifier" in the entry for the COUNTER CHECK message in the table "Accepted transactions" in the variable TRANSACTIONS; and

- 1> clear that entry.

If:

- there is one or more radio bearer(s) using UM or AM RLC mode stored in the variable ESTABLISHED_RABS, which is (are) not included in the IE "RB COUNT-C MSB information"; or
- there is one or more radio bearer(s) included in the IE "RB COUNT-C MSB information", which is (are) not stored in the variable ESTABLISHED_RABS; or
- for any radio bearer (excluding signalling radio bearers) using UM or AM RLC mode stored in the variable ESTABLISHED_RABS and included in the IE "RB COUNT-C MSB information" with COUNT-C MSB values different from the MSB part of the COUNT-C values in the UE:

the UE shall:

- 1> include these radio bearers in the IE "RB COUNT-C information" in the COUNTER CHECK RESPONSE message. For any RB which is included in the IE "RB COUNT-C MSB information" in the COUNTER CHECK message but not stored in the variable ESTABLISHED_RABS in the UE, the MSB part of COUNT-C values in the COUNTER CHECK RESPONSE message shall be set identical to COUNT-C-MSB values in the COUNTER CHECK message. The LSB part shall be filled with zeroes.

The UE shall:

- 1> submit a COUNTER CHECK RESPONSE message to lower layers for transmission on the uplink DCCH using AM RLC.

When the COUNTER CHECK RESPONSE message has been submitted to lower layers for transmission the procedure ends.

If the UE receives a COUNTER CHECK message, which contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to TS 25.331 clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit an RRC STATUS message on the uplink DCCH using AM RLC;
- 1> include the IE "Identification of received message"; and
- 1> set the IE "Received message type" to COUNTER CHECK; and
- 1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the UE COUNTER CHECK message in the table "Rejected transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION;
- 1> when the RRC STATUS message has been submitted to lower layers for transmission:
 - 2> continue with any ongoing processes and procedures as if the invalid COUNTER CHECK message has not been received.

Reference

3GPP TS 25.331 clause 8.1.15.

8.1.8.2.3 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.

8.1.8.2.4 Method of test

Initial Condition

System Simulator: 1 cell.

UE: [PS-DCCH+DTCH](#)~~CELL~~_FACH state (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is brought to the CELL_FACH state after a successful outgoing call attempt. The SS transmits an invalid COUNTER CHECK message. This message [contains an unexpected critical message extension](#)~~lacks all IEs~~. 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 for each radio bearer but with all the bits reversed. 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. The SS transmits a COUNTER CHECK message which includes a different 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

Step	Direction		Message	Comment
	UE	SS		
1				The UE is brought to CELL_FACH state after an outgoing call has been established successfully.
2		←	COUNTER CHECK	See specific message contents for this message
3		→	RRC STATUS	UE shall detect a protocol error and then transmit this message.
4		←	COUNTER CHECK	See specific message content.
5		→	COUNTER CHECK RESPONSE	The message shall not include the IE "RB COUNT-C information".
6		←	COUNTER CHECK	See specific message content.
7		→	COUNTER CHECK RESPONSE	The message shall include the IE "RB COUNT-C information".
8		←	COUNTER CHECK	See specific message content.
9		→	COUNTER CHECK RESPONSE	The message shall include the IE "RB COUNT-C information".

Specific Message Contents

COUNTER CHECK (Step 2)

Information Element	Value/remark
Critical extensions All IEs	'01'H Not Present

RRC STATUS (Step 3)

Information Element	Value/remark
Message Type	
Protocol Error Information	
- Protocol Error Cause	Checked to see if set to "ASN.1 violation or encoding" Message extension not comprehended

COUNTER CHECK (Step 4)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	20
- COUNT-C MSB uplink	Current COUNT-C MSB for RB#20 in uplink
- COUNT-C MSB downlink	Current COUNT-C MSB for RB#20 in downlink

COUNTER CHECK RESPONSE (Step 5)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	Check to if this IE is absent

COUNTER CHECK (Step 6)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	20
- COUNT-C MSB uplink	Toggle all bits of the current COUNT-C MSB in uplink for RB#20
- COUNT-C MSB downlink	Toggle all bits of the current COUNT-C MSB in downlink for RB#20

COUNTER CHECK RESPONSE (Step 7)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	
- RB identity	Check to see if set to 20
- COUNT-C uplink	Check to see if set to Current COUNT-C for RB#20 in uplink
- COUNT-C downlink	Check to see if set to COUNT-C for RB#20 in downlink

COUNTER CHECK (Step 8)

Information Element	Value/remark
Message Type	
RRC transaction identifier	0
Integrity check info	Calculated value
RB COUNT-C MSB information	
- RB identity	Check to see if set to 25
- COUNT-C MSB uplink	Arbitrary COUNT-C MSB in uplink for RB#25
- COUNT-C MSB downlink	Arbitrary COUNT-C MSB in downlink for RB#25

COUNTER CHECK RESPONSE (Step 9)

Information Element	Value/remark
RRC transaction identifier	0
Integrity check info	Not checked
RB COUNT-C information	
- RB identity	Check to see if set to 20
- COUNT-C uplink	Check to see if set to Current COUNT-C for RB#20 in uplink
- COUNT-C downlink	Check to see if set to COUNT-C for RB#20 in downlink
- RB identity	Check to see if set to 25
- COUNT-C uplink	Check to see if COUNT-C MSB is set to COUNT-C MSB in uplink for RB#25 in step 8 and LSB is fill with '0'
- COUNT-C downlink	Check to see if COUNT-C MSB is set to COUNT-C MSB in downlink for RB#25 in step 8 and LSB is fill with '0'

8.1.8.2.5 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 "[Message extension not comprehended](#)~~ASN.1 violation or encoding 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#20.

After step 8, the UE shall transmit a COUNTER CHECK RESPONSE message which includes the IE "RB COUNT-C information" to report that RB#25 is not found in variable ESTABLISHED_RABS and RB#20 is not found in IE "RB COUNT-C MSB information".

8.1.8.3 Counter check in CELL_DCH state, [with asymmetrical RAB](#)

8.1.8.3.1 Definition

8.1.8.3.2 Conformance requirement

When the UE receives a COUNTER CHECK message it shall compare the COUNT-C MSB values received in the IE "RB COUNT-C MSB information" in the COUNTER CHECK message to the COUNT-C MSB values of the corresponding radio bearers.

The UE shall:

- 1> if no COUNT-C exists for a radio bearer for a given direction (uplink or downlink) because:
 - 2> it is a uni-directional radio bearer configured only for the other direction (downlink or uplink respectively), or
 - 2> has been configured to RLC-TM mode in one direction (uplink or downlink) and RLC-UM in the other (downlink or uplink respectively),
 - 3> set the COUNT-C in the IE "RB COUNT-C information" in the COUNTER CHECK RESPONSE message, to any value;
- 1> submit a COUNTER CHECK RESPONSE message to lower layers for transmission on the uplink DCCH using AM RLC.

Reference

3GPP TS 25.331 clause 8.1.15.

8.1.8.3.3 Test purpose

To confirm that the UE transmits a COUNTER CHECK RESPONSE message even if COUNT-C does not exist for a radio bearer for a given direction for reasons given in the above section.

8.1.8.3.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: ~~CS-DCCH+DTCH_DCH (state 6-9) or PS-DCCH+DTCH_DCH (state 6-10)~~ CS-DCCH_DCH (state 6-5) or PS-DCCH_DCH (state 6-7) as specified in clause 7.4 of TS 34.108, depending on the domain supported by the UE.

Test Procedure

The UE is brought to the CELL_DCH state after a successful outgoing call attempt. SS sends a RADIO BEARER SETUP message to set up an asymmetric radio bearer. UE shall configure accordingly and then reply with a RADIO BEARER SETUP COMPLETE message. Then SS transmits a COUNTER CHECK message. The UE shall send a COUNTER CHECK RESPONSE message on the uplink DCCH, ~~specifying the current COUNT-C information for RB9.~~

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		←	RADIO BEARER SETUP	See specific message contents for this message
3		→	RADIO BEARER SETUP COMPLETE	
4		←	COUNTER CHECK	See specific message content.
5		→	COUNTER CHECK RESPONSE	The message shall include the IE "RB COUNT-C information".

Specific Message Contents

RADIO BEARER SETUP [\(Step 2\) \(FDD\)](#)

The contents of RADIO BEARER SETUP message in this test case is identical to the message sub-type indicated by "Non speech from CELL_DCH to CELL_DCH in CS" or "Speech from CELL_DCH to CELL_DCH in CS" or "Packet to CELL_DCH from CELL_DCH in PS" in [9] TS 34.108 clause 9, with the following exception:

Information Element	Value/remark
<p>RAB information for setup</p> <ul style="list-style-type: none"> - RAB info - RAB identity - CN domain identity - NAS Synchronization Indicator - Re-establishment timer - RB information to setup - RB identity - PDCP info <ul style="list-style-type: none"> - Support for lossless SRNS relocation - Max PDCP SN window size - PDCP PDU header - Header compression information - CHOICE RLC info type - CHOICE Uplink RLC mode <ul style="list-style-type: none"> - Transmission RLC discard - CHOICE SDU discard mode - Segmentation indication - CHOICE Downlink RLC mode - RB mapping info <ul style="list-style-type: none"> - Information for each multiplexing option - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list <ul style="list-style-type: none"> - MAC logical channel priority - Downlink RLC logical channel info <ul style="list-style-type: none"> - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity - RLC logical channel mapping indicator - Number of uplink RLC logical channels - Uplink transport channel type - UL Transport channel identity - Logical channel identity - CHOICE RLC size list <ul style="list-style-type: none"> - RLC size index - MAC logical channel priority - Downlink RLC logical channel info <ul style="list-style-type: none"> - Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity 	<p>0000-1111B0000 0101B (for PS domain) or 0000 0001B (for CS domain)</p> <p>PS domain or CS domain (depending on the domain supported by the UE)</p> <p>Not Present</p> <p>UseT315 (for PS domain) or UseT314 (for CS domain)</p> <p>9</p> <p>FALSE</p> <p>Not present</p> <p>Absent</p> <p>Not present</p> <p>RLC info</p> <p>TM RLC</p> <p>Not Present</p> <p>False</p> <p>UM RLC</p> <p>2 RBmuxOptions</p> <p>Not Present</p> <p>1</p> <p>DCH</p> <p>4</p> <p>Not Present</p> <p>Configured</p> <p>8</p> <p>1</p> <p>DCH</p> <p>9</p> <p>Not Present</p> <p>Not Present</p> <p>Not Present</p> <p>1</p> <p>RACH</p> <p>Not Present</p> <p>7</p> <p>Explicit List</p> <p>Reference to TS34.108 clause 6 Parameter Set</p> <p>8</p> <p>1</p> <p>FACH</p> <p>Not Present</p> <p>Not Present</p> <p>7</p>
<p>Added or Reconfigured TrCH information list</p> <ul style="list-style-type: none"> - Added or Reconfigured UL TrCH information <ul style="list-style-type: none"> - Uplink transport channel type - UL Transport channel identity - TFS <ul style="list-style-type: none"> - CHOICE Transport channel type - Dynamic Transport format information <ul style="list-style-type: none"> - RLC Size - Number of TBs and TTI List - Transmission Time Interval - Number of Transport blocks - CHOICE Logical Channel list - Semi-static Transport Format information <ul style="list-style-type: none"> - Transmission time interval - Type of channel coding - Coding Rate - Rate matching attribute 	<p>1 DCH added</p> <p>DCH</p> <p>4</p> <p>Dedicated transport channels</p> <p>Reference to TS34.108 clause 6.10 Parameter Set (This IE is repeated for TFI number.)</p> <p>Not Present</p> <p>Reference to TS34.108 clause 6.10 Parameter Set</p> <p>All</p> <p>Reference to TS34.108 clause 6.10 Parameter Set</p> <p>Reference to TS34.108 clause 6.10 Parameter Set</p> <p>Reference to TS34.108 clause 6.10 Parameter Set</p> <p>Reference to TS34.108 clause 6.10 Parameter Set</p>

- CRC size	Reference to TS34.108 clause 6.10 Parameter Set
Added or Reconfigured TrCH information list	1 DCH
Added or Reconfigured DL TrCH information	
- Downlink transport channel type	DCH
- DL Transport channel identity	9
- CHOICE DL parameters	Same as UL
- Uplink transport channel type	DCH
- UL TrCH identity	1
- DCH quality target	
- BLER Quality value	-2.0

COUNTER CHECK (Step 4)

Information Element	Value/remark
Message Type	0
RRC transaction identifier	Calculated value
Integrity check info	
RB COUNT-C MSB information	
- RB COUNT-C MSB information	
- RB identity	9
- COUNT-C MSB uplink	Arbitrary
- COUNT-C MSB downlink	Set to current COUNT-C for RB#9 in downlink

COUNTER CHECK RESPONSE (Step 57)

Information Element	Value/remark
Message Type	0
RRC transaction identifier	Not checked
Integrity check info	
RB COUNT-C information	
- RB identity	Check to see if set to 9
- COUNT-C uplink	Not checked Check to see if it is present
- COUNT-C downlink	Check to see if set to COUNT-C for RB#9 in downlink Check to see if it is present

8.1.8.3.5 Test requirement

After step 2, the UE shall transmit a RADIO BEARER RECONFIGURATION COMPLETE message on the uplink DCCH.

After step 4, the UE shall transmit a COUNTER CHECK RESPONSE message ~~which includes the IE "COUNT-C downlink" to report COUNT-C value of RB#9.~~

<End of Modifications>

CR-Form-v7

CHANGE REQUEST

34.123-1 CR 512 # rev - # Current version: 5.3.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# CR to 34.123-1 R5; Removal of low-priority RRC test case 8.4.1.20 and 8.4.1.21		
Source:	# Ericsson		
Work item code:	# TEI	Date:	# 02/05/2003
Category:	# F	Release:	# REL-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# In CR 1817 to TS 25.331 v3.13.0 (RP-030103), it is clarified in section 8.4.1.10.1 that the traffic volume measurement reporting and triggering is only relevant for transport channels applicable to the current RRC state. Hence, event-triggered traffic volume reporting is not applicable for RRC states Cell_PCH and URA_PCH. Test of UE behaviour in case of uplink data transfer in Cell_PCH and URA_PCH is covered in TCs 8.3.1.5 and 8.3.1.6.
Summary of change:	# Test cases 8.4.1.20 and 8.4.1.21 are deleted.
Consequences if not approved:	# Incorrect test cases will remain

Clauses affected:	# 8.4.1.20, 8.4.1.21		
Other specs affected:	#	Y	N
		X	
		X	
		X	
		Other core specifications	#
		Test specifications	#
		O&M Specifications	#
Other comments:	# Affects R99, REL-4 and REL-5 test cases.		

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.4.1.20 ~~Measurement Control and Report: Traffic volume measurement in CELL_PCH state~~ Void

~~8.4.1.20.1~~ ~~Definition~~

~~8.4.1.20.2~~ ~~Conformance requirement~~

~~Upon transition from CELL_DCH to CELL_FACH or CELL_PCH or URA_PCH state, the UE shall:~~

- ~~1> retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT_IDENTITY; and~~
- ~~2> if the optional IE "measurement validity" for this measurement has not been included:

 - ~~3> delete the measurement associated with the variable MEASUREMENT_IDENTITY.~~~~
- ~~2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL_DCH":

 - ~~3> stop measurement reporting;~~
 - ~~3> store the measurement associated with the variable MEASUREMENT_IDENTITY to be used after the next transition to CELL_DCH state.~~~~
- ~~2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":

 - ~~3> continue measurement reporting.~~~~
- ~~2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL_DCH":

 - ~~3> resume this measurement and associated reporting.~~~~
- ~~1> if no traffic volume type measurements set up or modified through a MEASUREMENT CONTROL message and valid in CELL_FACH or CELL_PCH or URA_PCH states are stored in the variable MEASUREMENT_IDENTITY with the same identity as the one indicated in the IE "Traffic volume measurement system information":~~
- ~~...~~

~~In CELL_PCH or URA_PCH state, the UE shall:~~

- ~~1> first perform the cell update procedure, using the cause "uplink data transmission", in order to transit to CELL_FACH state; and then~~
- ~~1> transmit a MEASUREMENT REPORT message on the uplink DCCH when the reporting criteria stored in variable MEASUREMENT_IDENTITY are fulfilled for any ongoing traffic volume measurement or UE positioning measurement which is being performed in the UE.~~

~~8.4.1.20.3~~ ~~Test Purpose~~

- ~~1> To confirm that in CELL_PCH state, UE performs assigned traffic volume measurement. When reporting criteria for ongoing traffic volume measurement is fulfilled, the UE shall first perform cell update procedure and then transmit MEASUREMENT REPORT message.~~

Reference

~~3GPP TS 25.331 clause 8.4.2.2, 3GPP TS 25.331 clause 8.4.1.6.6.~~

8.4.1.20.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCH+DTCH-DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

Initially the UE is in CELL_DCH state. System Information block type 12 message is modified to assign traffic volume measurement and reporting. RADIO-BEARER RECONFIGURATION procedure is used to take UE from CELL_DCH state to CELL_PCH state. While entering in CELL_PCH state from CELL_DCH state UE should start traffic volume measurement as assigned in System Information. When reporting criteria for traffic volume measurement is satisfied the UE shall change state to CELL_FACH and perform CELL_UPDATE procedure. After successful completion of CELL_UPDATE procedure, UE shall transmit MEASUREMENT REPORT message.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	SIB12 modified	Traffic volume measurements and reporting is assigned to UEs
2		←	RADIO-BEARER RECONFIGURATION	IE "RRC State Indicator" is set to "CELL_PCH"
3		→	RADIO-BEARER RECONFIGURATION COMPLETE	While entering in CELL_PCH state from CELL_DCH state UE shall start traffic volume measurement as assigned in System Information (Step 1).
4		→	CELL_UPDATE	The UE shall move to CELL_FACH state with the message set to "uplink data transmission" in IE "Cell update cause".
5		←	CELL_UPDATE_CONFIRM	
5a		→	UTRAN-MOBILITY INFORMATION CONFIRM	
6		→	MEASUREMENT REPORT	

Specific Message Content

System Information Block type 12 (Step 1)

Information Element	Value/remark
FACH measurement occasion info	Not Present
Measurement control system information	
Use of HCS	Not used
Cell_selection_and_reselection_quality	CPICH-RSCP
Intra-frequency measurement system information	Not Present
Inter-frequency measurement system information	Not Present
Inter-RAT measurement system information	Not Present
Traffic volume measurement system information	
Traffic volume measurement ID	4
Traffic volume measurement object list	
UL transport channel identity	RACH
UL transport channel identity	DCH:-5
Traffic volume measurement quantity	Variance of RLC-Buffer Payload
Time Interval to take an average	200 msec
Traffic volume reporting quantity	
RB buffer payload	False
RB buffer payload average	False
RB buffer payload variance	True
Traffic volume measurement reporting criteria	Not Present
Measurement validity	All States
Measurement reporting mode	
Measurement report transfer mode	Acknowledged Mode
Periodical or event trigger	Periodical
Report criteria system Information	Periodical reporting criteria
Reporting amount	Infinity
Reporting interval	8 seconds

RADIO BEARER RECONFIGURATION (Step 2)

Use the same message type found in Annex A with condition set to A5 except following exceptions:

Information Element	Value/remark
RRC State Indicator	CELL_PCH
UTRAN-DRX cycle length coefficient	3

CELL UPDATE (Step 4)

Use the same message type found in Annex A with condition set to A5 except following exceptions:

Information Element	Value/remark
Cell Update Cause	Check to see if set to "Uplink data transmission"

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in Annex A, with the following exceptions:

Information Element	Value/Remarks
New-C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 5a)

Only the message type is checked:

MEASUREMENT REPORT (Step 6)

Information Element	Value/remark
Measurement identity	4
Measured Results	
—CHOICE measurement	Traffic volume measured results list
—Traffic volume measurement results	
—RB identity	4
—RLC buffer payload	Check to see if this IE is absent
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is present
—RB identity	2
—RLC buffer payload	Check to see if this IE is absent
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is present
—RB identity	3
—RLC buffer payload	Check to see if this IE is absent
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is present
—RB identity	4
—RLC buffer payload	Check to see if this IE is absent
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is present
—RB identity	20
—RLC buffer payload	Check to see if this IE is absent
—RLC buffer payload average	Check to see if this IE is absent
—RLC buffer payload variance	Check to see if this IE is present
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

~~8.4.1.20.5 Test Requirement~~

~~The UE shall send CELL_UPDATE message with cause "Uplink data transfer" in step 4, UTRAN MOBILITY INFORMATION CONFIRM message in step 5a and MEASUREMENT REPORT message in step 6.~~

~~8.4.1.21 Measurement Control and Report: Traffic volume measurement in URA_PCH state~~
[Void](#)

~~8.4.1.21.1 Definition~~

~~8.4.1.21.2 Conformance requirement~~

~~Upon transition from CELL_DCH to CELL_FACH or CELL_PCH or URA_PCH state, the UE shall:~~

- ~~1> retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT_IDENTITY; and~~
- ~~2> if the optional IE "measurement validity" for this measurement has not been included:

 - ~~3> delete the measurement associated with the variable MEASUREMENT_IDENTITY;~~~~- ~~2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL_DCH":

 - ~~3> stop measurement reporting;~~
 - ~~3> store the measurement associated with the variable MEASUREMENT_IDENTITY to be used after the next transition to CELL_DCH state.~~~~- ~~2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":

 - ~~3> continue measurement reporting.~~~~

2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL_DCH":

3> resume this measurement and associated reporting.

1> if no traffic volume type measurements set up or modified through a MEASUREMENT CONTROL message and valid in CELL_FACH or CELL_PCH or URA_PCH states are stored in the variable MEASUREMENT_IDENTITY with the same identity as the one indicated in the IE "Traffic volume measurement system information":

...

In CELL_PCH or URA_PCH state, the UE shall:

1> first perform the cell update procedure, using the cause "uplink data transmission", in order to transit to CELL_FACH state; and then

1> transmit a MEASUREMENT REPORT message on the uplink DCCH when the reporting criteria stored in variable MEASUREMENT_IDENTITY are fulfilled for any ongoing traffic volume measurement or UE positioning measurement which is being performed in the UE.

8.4.1.21.3 Test Purpose

1. To confirm that in URA_PCH state, UE performs assigned traffic volume measurement. When reporting criteria for ongoing traffic volume measurement is fulfilled, the UE shall first perform cell update procedure and then transmit MEASUREMENT REPORT message.

Reference

~~3GPP TS 25.331 clause 8.4.2.2, 3GPP TS 25.331 clause 8.4.1.6.6.~~

8.4.1.21.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: PS-DCCH+DTCH_DCH (state 6-10) as specified in clause 7.4 of TS 34.108

Test Procedure

Initially the UE is in CELL_DCH state. MEASUREMENT CONTROL message is sent to UE to assign traffic volume measurement and reporting to be performed in all states except CELL_DCH. The UE is requested to perform periodic reporting of measurements with IE "Reporting amount" is set to 1. RADIO BEARER RECONFIGURATION procedure is used to take UE from CELL_DCH state to URA_PCH state. While entering in URA_PCH state from CELL_DCH state UE should start traffic volume measurement as assigned by MEASUREMENT CONTROL message. When reporting criteria for traffic volume measurement is satisfied the UE shall change state to CELL_FACH and perform CELL UPDATE procedure. After successful completion of CELL UPDATE procedure, UE shall transmit MEASUREMENT REPORT message. The UE shall not send second MEASUREMENT REPORT message after reporting interval, because IE "Reporting amount" in MEASUREMENT CONTROL message is set to 1.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	MEASUREMENT CONTROL	IE "Reporting amount" is set to 4.
2		←	RADIO BEARER RECONFIGURATION	IE "RRC State Indicator" is set to "URA_PCH"
3		→	RADIO BEARER RECONFIGURATION COMPLETE	While entering in URA_PCH state from CELL_DCH state UE shall start traffic volume measurement as assigned in System Information (Step 1).
4		→	CELL UPDATE	The UE shall move to CELL_FACH state with the message set to "uplink data transmission" in IE "Cell update cause".
5		←	CELL UPDATE CONFIRM	
5a		→	UTRAN MOBILITY INFORMATION CONFIRM	
6		→	MEASUREMENT REPORT	
7				SS waits for 8 Sec to confirm that UE does not send second MEASUREMENT REPORT message

Specific Message Content

MEASUREMENT CONTROL (Step 1)

Information Element	Value/remark
Measurement Identity	15
Measurement Command	Setup
—CHOICE measurement type	Traffic Volume Measurement
—Traffic volume measurement object list	RACH
—Traffic volume measurement quantity	Variance of RLC Buffer Payload
—Time Interval to take an average	200 msec
—Traffic volume reporting quantity	
—RB buffer payload	False
—RB buffer payload average	False
—RB buffer payload variance	True
—Measurement validity	All but CELL_DCH State
—Report criteria	Periodical Reporting Criteria
—Reporting amount	4
—Reporting interval	8 Sec
—Measurement reporting mode	
—Transfer Mode	Acknowledged mode
—Periodical or event trigger	Periodic
Additional measurement list	Not Present
DPCH compressed mode status	Not Present

RADIO BEARER RECONFIGURATION (Step 2)

Use the same message type found in Annex A with condition set to A5 except following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3

CELL UPDATE (Step 4)

Use the same message type found in Annex A with condition set to A5 except following exceptions:

Information Element	Value/remark
Cell Update Cause	Check to see if set to "Uplink data transmission"

CELL UPDATE CONFIRM (Step 5)

Use the same message sub type found in Annex A, with the following exceptions:

Information Element	Value/Remarks
New C-RNTI	'1010 1010 1010 1010'

UTRAN MOBILITY INFORMATION CONFIRM (Step 5a)

Only the message type is checked:

MEASUREMENT REPORT (Step 6)

Information Element	Value/remark
Measurement identity	15
Measured Results	
— CHOICE measurement	Traffic volume measured results list
— Traffic volume measurement results	
— RB identity	1
— RLC buffer payload	Check to see if this IE is absent
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is present
— RB identity	2
— RLC buffer payload	Check to see if this IE is absent
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is present
— RB identity	3
— RLC buffer payload	Check to see if this IE is absent
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is present
— RB identity	4
— RLC buffer payload	Check to see if this IE is absent
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is present
— RB identity	20
— RLC buffer payload	Check to see if this IE is absent
— RLC buffer payload average	Check to see if this IE is absent
— RLC buffer payload variance	Check to see if this IE is present
Measured results on RACH	Check to see if this IE is absent
Additional measured results	Check to see if this IE is absent
Event results	Check to see if this IE is absent

8.4.1.21.5 Test Requirement

The UE shall send CELL UPDATE message with cause "Uplink data transfer" in step 4, UTRAN MOBILITY INFORMATION CONFIRM message in step 5a and MEASUREMENT REPORT message in step 6. The UE shall not send MEASUREMENT REPORT message in step 7.

CR-Form-v7

CHANGE REQUEST

⌘ **34.123-1 CR 513** ⌘ rev **-** ⌘ Current version: **5.3.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to TS34.123-1, Corrections to low priority test case 8.4.1.9 (Measurement)		
Source:	⌘ Ericsson		
Work item code:	⌘ TEI	Date:	⌘ 14/05/2003
Category:	⌘ F	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	2 (GSM Phase 2)	
	A (corresponds to a correction in an earlier release)	R96 (Release 1996)	
	B (addition of feature),	R97 (Release 1997)	
	C (functional modification of feature)	R98 (Release 1998)	
	D (editorial modification)	R99 (Release 1999)	
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Rel-4 (Release 4)	
		Rel-5 (Release 5)	
		Rel-6 (Release 6)	

Reason for change:	⌘ <ul style="list-style-type: none">• Table in Specific message contents misaligned
Summary of change:	⌘ <ul style="list-style-type: none">• Table in Specific message contents corrected.
Consequences if not approved:	⌘ Test case will not be specified as intended.

Clauses affected:	⌘ 8.4.1.9										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table>	Y	N		X		X		X	Other core specifications	⌘
Y	N										
	X										
	X										
	X										
		Test specifications									
		O&M Specifications									
Other comments:	⌘ Affects Rel 99, Rel 4 and Rel 5 UEs.										

How to create CRs using this form:

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Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

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 UTRAN instructs the UE to perform a measurement that is not supported by the UE, the UE shall:

- 1> retain the measurement configuration that was valid before the MEASUREMENT CONTROL message was received;
- 1> set the IE "RRC transaction identifier" in the MEASUREMENT CONTROL FAILURE message to the value of "RRC transaction identifier" in the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry.
- 1> set the cause value in IE "failure cause" to "unsupported measurement";
- 1> submit the MEASUREMENT CONTROL FAILURE message to lower layers for transmission on the DCCH using AM RLC;
- 1> continue with any ongoing processes and procedures as if the invalid MEASUREMENT CONTROL message has not been received;
- 1> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.4.1.4

8.4.1.9.3 Test purpose

1. To confirm that the UE transmits a MEASUREMENT CONTROL FAILURE message, with the value "unsupported measurement" in IE "failure cause" when the SS instructs the UE to perform an unsupported measurement by sending a MEASUREMENT CONTROL message. To confirm that the UE retains its existing valid measurement configuration, after receiving a MEASUREMENT CONTROL message containing an unsupported measurement.

8.4.1.9.4 Method of test

Initial Condition

System Simulator: 1cell

UE: CS-DCCH+DTCH_DCH (State 6-9) or PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain supported by the UE.

[Editor's note: It is assumed in this test that the UE under test does not possess any inter-RAT measurement capability. The mandatory type(s) of measurement capability that shall be implemented by the UE is to be discussed]

Test Procedure

The UE is in the CELL_DCH state. SS sends MEASUREMENT CONTROL message to command the UE to perform internal measurement and reporting for UE transmitted power. The UE shall transmit MEASUREMENT REPORT messages on DCCH at 1 second interval. The SS transmits a MEASUREMENT CONTROL message to configure inter-

RAT measurements. The UE shall transmit a MEASUREMENT CONTROL FAILURE message on the uplink DCCH using AM RLC. SS verifies that the UE continues to transmit MEASUREMENT REPORT messages on uplink DCCH.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in the CELL_DCH state.
2		←	MEASUREMENT CONTROL	UE internal measurement and reporting is requested.
3		→	MEASUREMENT REPORT	Contains estimated reading for UE transmitted power.
4		←	MEASUREMENT CONTROL	Inter-RAT measurements are requested in this message
5		→	MEASUREMENT CONTROL FAILURE	The value "unsupported measurement" is set in IE "failure cause".
6		→	MEASUREMENT REPORT	SS verifies that UE continue to send this message on uplink DCCH.

Specific Message Content

MEASUREMENT CONTROL (Step 2)

Information Element	Value/remark
Measurement Identity	1
Measurement Command	Setup
Measurement Reporting Mode	Acknowledged Mode RLC
- Measurement Reporting Transfer Mode	Periodical Reporting
- Periodic Reporting / Event Trigger Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	UE internal measurement
- UE internal measurement quantity	UE internal measurement
- CHOICE mode	FDD
- Measurement quantity	FDD UE Transmitted Power
- Filter Coefficient	UE Transmitted Power ₀
- UE internal reporting quantity	∅
- UE Transmitted Power	TRUE
- CHOICE mode	TRUE FDD
- UE Rx-Tx time difference	FDD FALSE
- CHOICE report criteria	FALSE Periodical reporting criteria
- Amount of reporting	Periodical reporting criteria Infinity
- Reporting interval	Infinity 1000 msec
DPCH compressed mode status info	1000 msec Not present

MEASUREMENT REPORT (Step 3 and Step 6)

Information Element	Value/remark
Measurement Identity number	Check to see if it's set to '1'
Measured Results	Check to see if it's set to "UE internal measured results"
- CHOICE measurement	Check to see if it's set to "FDD"
- CHOICE mode	Check to see if the reported power is compatible with RF class
- UE Transmitted Power	Check to see if it is absent
- UE Rx-Tx report entries	Check to see if it is absent
Measured Results on RACH	Check to see if it is absent
Additional Measured results	Check to see if it is absent
Event results	Check to see if it is absent

MEASUREMENT CONTROL (Step 4)

Information Element	Value/remark
RRC transaction identifier	Select an arbitrary an integer between 0 and 3
Measurement Identity	2
Measurement Command	Setup
Measurement Reporting Mode	Not Present
Additional measurements list	Not Present
CHOICE measurement type	Inter-RAT measurement
- Inter-RAT cell info list	
- CHOICE inter-RAT cell removal	Remove no inter-RAT cells
- New inter-RAT cells	
- Inter-RAT cell id	1
- CHOICE <i>Radio Access Technology</i>	GSM
- Cell individual offset	0
- Cell selection and re-selection info	Not Present
- BSIC	Set to the BSIC code of cell 2
- BSIC ARFCN	Set to the ARFCN assigned to cell 2
- Output power	Not Present
- Cells for measurement	
- Inter-RAT cell id	2
- Inter-RAT measurement quantity	
- CHOICE system	GSM
- Measurement quantity	GSM Carrier RSSI
- Filter Coefficient	0
- BSIC verification required	Not required
- Inter-RAT reporting quantity	
- UTRAN estimate quantity	FALSE
- CHOICE system	GSM
- Pathloss	FALSE
- Observed time difference to GSM cell Reporting indicator	FALSE
- GSM Carrier RSSI	TRUE
- Reporting cell status	Not Present
- CHOICE report criteria	No reporting
DPCH compressed mode status info	Not Present

MEASUREMENT CONTROL FAILURE (Step 5)

Information Element	Value/remark
RRC transaction identifier	Check if it is set to the same value of the same IE in the MEASUREMENT CONTROL message sent in Step 4.
Failure cause	Check if it is set to "Unsupported measurement"

8.4.1.9.5 Test requirement

After step 2 the UE shall transmit a MEASUREMENT REPORT messages at 1 second interval. In these messages, the IE "CHOICE measurement" shall be set to "UE internal measured results", and it shall contain the measured UL transmitted power reading in IE "UE Transmitted Power".

After step 4 the UE shall transmit a MEASUREMENT CONTROL FAILURE message. In this message, the value "unsupported measurement" shall be specified in IE "failure cause".

After step 5 the UE shall continue to transmit MEASUREMENT REPORT messages on the uplink DCCH, with the contents of the messages identical to that received by SS after step 2.

CR-Form-v7

CHANGE REQUEST

34.123-1 CR 514 # rev - # Current version: 5.3.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	# CR to TS34.123-1, Corrections to low priority test case 8.1.6.3.		
Source:	# Ericsson		
Work item code:	# TEI	Date:	# 14/05/2003
Category:	# F	Release:	# Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# This test case is only applicable for PS UEs.
Summary of change:	# Initial condition updated to handle only the PS case.
Consequences if not approved:	# Test case will fail a good CS UE.

Clauses affected:	# 8.1.6.3										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	#
Y	N										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
		Test specifications									
		O&M Specifications									
Other comments:	# Affects Rel 99, Rel 4 and Rel 5 UEs.										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.1.6.3 Measurement Report on INITIAL DIRECT TRANSFER message and UPLINK DIRECT TRANSFER message

8.1.6.3.1 Definition

8.1.6.3.2 Conformance requirement

In CELL_FACH state, the UE shall:

- 1> include a measurement report in the IE "Measured results on RACH", as specified in the IE "Intra-frequency reporting quantity for RACH reporting" and the IE "Maximum number of reported cells on RACH" in System Information Block type 12 (or "System Information Block Type 11" if "System Information Block Type 12" is not being broadcast);
- 1> include in the IE "Measured results on RACH" all requested reporting quantities for cells for which measurements are reported.

Reference

3GPP TS 25.331, clause 8.1.8.2, 8.1.10.2

8.1.6.3.3 Test Purpose

To confirm that the UE reports measured results on RACH messages, if it receives IE "Intra-frequency reporting quantity for RACH reporting" and IE "Maximum number of reported cells on RACH" from System Information Block Type 11 or 12 upon a transition from idle mode to CELL_FACH state.

8.1.6.3.4 Method of test

Initial Condition

System Simulator: 1 cell

UE: "Registered idle mode on PS" (state 3) in cell 1 as specified in clause 7.4 of TS 34.108, ~~depending on the CN domain supported by the UE~~. If the UE supports both CS and PS domains, the initial UE state shall be "Registered idle mode on CS/PS" (state 7).

Specific Message Content

For system information block 11 for Cell 1 (gives IE's which are different from defaults given in 34.108 sec 6.1) to be transmitted before idle update preamble.

System Information Block type 11 (Step 1)

Use the same message sub-type found in clause 6.1 of TS 34.108, with the following exception:

Information Element	Value/remark
SIB12 indicator	FALSE
FACH measurement occasion info	Not Present
Measurement control system information	Not used
- Use of HCS	CPICH RSCP
- Cell selection and reselection quality measure	5
- Intra-frequency measurement system information	Remove no intra-frequency cells
- Intra-frequency measurement identity	0
- Intra-frequency cell info list	0 dB
- CHOICE intra-frequency cell removal	Not present
- New intra-frequency cells	FALSE
- Intra-frequency cell id	FDD
- Cell info	
- Cell individual offset	Set to same code as used for cell 1
- Reference time difference to cell	Not Present
- Read SFN Indicator	FALSE
- CHOICE mode	FDD
- Primary CPICH Info	
- Primary Scrambling Code	Set to same code as used for cell 1
- Primary CPICH TX power	Not Present
- TX Diversity Indicator	FALSE
- Cell selection and Re-selection info	Not present
- 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	CPICH RSCP
- 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	
- Cell synchronisation information reporting	FALSE
indicator	
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	FALSE
- Pathloss reporting indicator	FALSE
- Reporting quantities for monitored set cells	
- Cell synchronisation information reporting	TRUE
indicator	
- Cell identity reporting indicator	FALSE
- CPICH Ec/No reporting indicator	FALSE
- CPICH RSCP reporting indicator	TRUE
- Pathloss reporting indicator	FALSE
- Reporting quantities for detected set cells	Not present
- Measurement Reporting Mode	
- Measurement Reporting Transfer Mode	Acknowledged mode RLC
- Periodic Reporting/Event Trigger Reporting Mode	Event trigger
- CHOICE report criteria	Intra-frequency measurement reporting criteria
- Parameters required for each event	
- Intra-frequency event identity	1a
- Triggering condition 1	Not Present
- Triggering condition 2	Monitored set cells
- Reporting Range Constant	15 dB
- Cells forbidden to affect reporting range	Not Present
- W	0.0
- Hysteresis	1.0 dB
- Threshold used frequency	Not Present
- Reporting deactivation threshold	0
- Replacement activation threshold	Not Present
- Time to trigger	60 ms
- Amount of reporting	Infinity
- Reporting interval	16 seconds
- Reporting Cell Status	
- CHOICE reported cell	Report cells within active and/or monitored set on used frequency or within active and/or monitored set on non-used frequency

- Maximum number of reported cells	2
- Inter-frequency measurement system information	Not Present
- Traffic volume measurement system information	Not Present

Test Procedure

The UE is initially in idle mode and camps on cell 1. SS prompts the operator to make an outgoing call for one of the traffic classes supported by the UE. SS and UE shall execute out going call procedure. During this procedure UE transmits INITIAL DIRECT TRANSFER and UPLINK DIRECT TRANSFER messages with IE "Measured results on RACH" which is set to measured CPICH RSCP in the current cell. After that SS releases a RRC connection.

Expected Sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in idle mode and camps onto cell 1.
2				SS prompts the test operator to make an outgoing call.
3		→	RRC CONNECTION REQUEST	
4		←	RRC CONNECTION SETUP	See default message content (Transition to CELL_FACH)
5		→	RRC CONNECTION SETUP COMPLETE	See default message content
6		→	INITIAL DIRECT TRANSFER (SERVICE REQUEST)	See specific message content
7		←	DOWNLINK DIRECT TRANSFER(AUTHENTICATION AND CIPHERING REQUEST)	See default message content
8		→	UPLINK DIRECT TRANSFER(AUTHENTICATION AND CIPHERING RESPONSE)	See specific message content
9		←	SECURITY MODE COMMAND	See default message content
10		→	SECURITY MODE COMPLETE	See default message content
11		→	UPLINK DIRECT TRANSFER(ACTIVATE PDP CONTEXT REQUEST)	See specific message content
12		←	RRC CONNECTION RELEASE	See default message content
13		→	RRC CONNECTION RELEASE COMPLETE	See default message content

Specific Message Content

RRC CONNECTION REQUEST (Step 3)

Use the default message with the same message type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Measured results on RACH <ul style="list-style-type: none"> - Measurement result for current cell - CHOICE measurement quantity - CPICH RSCP - Measurement results for monitored cells 	<ul style="list-style-type: none"> Check to see if set to 'CPICH RSCP' Checked to see if set to within an acceptable range. Checked to see if this IE is absent.

INITIAL DIRECT TRANSFER (SERVICE REQUEST) (Step 6)

Use the default message with the same message type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Measured results on RACH <ul style="list-style-type: none"> - Measurement result for current cell - CHOICE measurement quantity - CPICH RSCP - Measurement results for monitored cells 	Check to see if set to 'CPICH RSCP' Checked to see if set to within an acceptable range. Checked to see if this IE is absent.

UPLINK DIRECT TRANSFER(AUTHENTICATION AND CIPHERING RESPONSE) (Step 8)

Use the default message with the same message type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Measured results on RACH <ul style="list-style-type: none"> - Measurement result for current cell - CHOICE measurement quantity - CPICH RSCP - Measurement results for monitored cells 	Check to see if set to 'CPICH RSCP' Checked to see if set to within an acceptable range. Checked to see if this IE is absent.

UPLINK DIRECT TRANSFER(ACTIVATE PDP CONTEXT REQUEST) (Step 11)

Use the default message with the same message type specified in clause 9 of TS 34.108, with the following exceptions:

Information Element	Value/remark
Measured results on RACH <ul style="list-style-type: none"> - Measurement result for current cell - CHOICE measurement quantity - CPICH RSCP - Measurement results for monitored cells 	Check to see if set to 'CPICH RSCP' Checked to see if set to within an acceptable range. Checked to see if this IE is absent.

8.1.6.3.5 Test Requirement

After step 2 the UE shall transmit a RRC CONNECTION REQUEST message which includes IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP.

After step 5 the UE shall transmit a INITIAL DIRECT TRANSFER (SERVICE REQUEST) message which includes IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP.

After step 7 the UE shall transmit a UPLINK DIRECT TRANSFER(AUTHENTICATION AND CIPHERING RESPONSE) message which includes IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP.

After step 10 the UE shall transmit a UPLINK DIRECT TRANSFER(ACTIVATE PDP CONTEXT REQUEST) message which includes IE "measured results on RACH", containing the measurement value for cell 1's CPICH RSCP.

CHANGE REQUEST

⌘ **34.123-1 CR 515** ⌘ rev **-** ⌘ Current version: **5.3.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ CR to TS34.123-1, Corrections to low priority test case 8.1.9a		
Source:	⌘ Ericsson		
Work item code:	⌘ TEI	Date:	⌘ 14/05/2003
Category:	⌘ F	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ This test case is applicable for both CS and PS UEs, but some text is missing in the PS case. Changes in this document compared to previous document T1-030524 marked in green. 1. CR1823 to 25.331 (RP-030103) was approved at RP#19. The CR introduced clarifications concerning bit numbering convention (alignment of bit numbering with ASN.1 convention). The value/remark in specific message content tables need update accordingly. 2. Some test cases incorrectly refers to IXIT statement in 34.123-2 as condition for IEs "Integrity check info" and "Integrity protection mode info" to be present or not.
Summary of change:	⌘ Initial condition and test procedure updated to handle also the PS case. Changes in this document compared to previous document T1-030524 marked in green. 1. Value/remark column updated for IEs (according to CR1823 to 25.331): a. Message authentication code b. Integrity protection initialisation number 2. References to IXIT statement in 34.123-2 removed from specific message tables and IEs "Integrity check info" and "Integrity protection mode info".

Consequences if not approved: ⌘ Test case will not be able to test a PS capable UE.

Clauses affected: ⌘ 8.1.9a

Other specs affected:	⌘	Y	N	Other core specifications	⌘	
			X			Test specifications
			X			O&M Specifications

Other comments: ⌘ Affects Rel 99, Rel 4 and Rel 5 UEs.

How to create CRs using this form:

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- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.1.9a Signalling Connection Release Indication (RLC re-establishment): CS signalling connection release

8.1.9a.1 Definition

8.1.9a.2 Conformance requirement

If a re-establishment of RLC on signalling radio bearer RB2 occurs before the successful delivery of the SIGNALLING CONNECTION RELEASE INDICATION message has been confirmed by RLC, the UE shall:

- 1> retransmit the SIGNALLING CONNECTION RELEASE INDICATION message on the uplink DCCH using AM RLC on signalling radio bearer RB2.

Reference

3GPP TS 25.331 clause 8.1.14.2a.

8.1.9a.3 Test purpose

To confirm that the UE re-transmits a SIGNALLING CONNECTION RELEASE INDICATION message after it re-establishes the RLC entity on signalling radio bearer RB2 if SRNS relocation occurs before the successful delivery of SIGNALLING CONNECTION RELEASE INDICATION message.

8.1.9a.4 Method of test

Initial Condition

System Simulator: 1 cells – Cell 1.

UE: CS-DCCH+DTCH_DCH (state 6-9) [or PS-DCCH+DTCH_DCH \(state 6-10\)](#) as specified in clause 7.4 of TS 34.108, [depending on the CN domain\(s\) supported by the UE](#).

Test Procedure

The UE is in CELL_DCH mode. The SS transmits a DOWNLINK DIRECT TRANSFER message. This message contains a NAS message (AUTHENTICATION REQUEST for CS domain [or AUTHENTICATION AND CIPHERING REQUEST for PS domain](#)). The UE shall transmit an UPLINK DIRECT TRANSFER message (AUTHENTICATION RESPONSE) using AM on DCCH. After SS responses with a DOWNLINK DIRECT TRANSFER message (AUTHENTICATION REJECT), SS shall set the RLC entity for SRB2 to stop and wait for T3240 to expire in the UE. The UE shall send a SIGNALLING CONNECTION RELEASE INDICATION message which includes the CN domain identity with the same value as that in the UPLINK DIRECT TRANSFER message. But SS do not respond with STATUS PDU for the AM DATA PDU with POLL. The SS then sends a UTRAN MOBILITY INFORMATION message on SRB1 requesting the UE to do a SRNS relocation. SS shall set the RLC entity for SRB2 to continue. The UE shall send a UTRAN MOBILITY INFORMATION CONFIRM message. The UE shall re-transmit a SIGNALLING CONNECTION RELEASE INDICATION message on the uplink DCCH using AM RLC.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1		←	DOWNLINK DIRECT TRANSFER (AUTHENTICATION REQUEST)	Depending on supported CN domain, AUTHENTICATION AND CIPHERING REQUEST message (PS domain) or AUTHENTICATION REQUEST (CS domain) message is embedded in DOWNLINK DIRECT TRANSFER message. An invalid SQN is provided in this message.
2		→	UPLINK DIRECT TRANSFER (AUTHENTICATION RESPONSE)	
3		←	DOWNLINK DIRECT TRANSFER (AUTHENTICATION REJECT)	After SS transmits this message, SS sets the RLC entity for SRB2 to stop and waits for T3240 to expire.
4		→	SIGNALLING CONNECTION RELEASE INDICATION	
5		←	UTRAN MOBILITY INFORMATION	. SS sets RLC for SRB2 to continue.
6		→	UTRAN MOBILITY INFORMATION CONFIRM	UE sends this message on uplink DCCH on AM.
7		→	SIGNALLING CONNECTION RELEASE INDICATION	UE re-transmits this message.

Specific Message Content

DOWNLINK DIRECT TRANSFER (Step 1)

Use the same message sub-type as found in TS 34.108 clause 9, with the following exceptions.

Information Element	Value/remark
CN domain identity NAS message	CS domain or PS domain AUTHENTICATION REQUEST (CS domain) or AUTHENTICATION AND CIPHERING REQUEST (PS domain)

UPLINK DIRECT TRANSFER (Step 2)

Information Element	Value/remark
Message Type Integrity check info	The presence of this IE is dependent on IXIT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub-IEs as stated below. Else, this IE and the sub-IEs shall be absent.
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I. This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
CN domain identity NAS message	CS domain or PS domain AUTHENTICATION FAILURE(CS domain) or AUTHENTICATION AND CIPHERING FAILURE (PS domain)
Measured results on RACH	Not checked

UTRAN MOBILITY INFORMATION (Step 5)

Use the same message sub-type found in [9] TS 34.108 clause 9 with the following exception:

Information Element	Value/remark
Ciphering mode info <ul style="list-style-type: none"> - Ciphering mode command - Ciphering algorithm - Ciphering activation time for DPCH - Radio bearer downlink ciphering activation time info - Radio bearer activation time - RB identity - RLC sequence number - RB identity - RLC sequence number - RB identity - RLC sequence number - RB identity - RLC sequence number - RB identity - RLC sequence number 	This presence of this IE is dependent on IXIT statements in TS 34.123-2. If ciphering is indicated to be active, this IE present with the values of the sub IEs as stated below. Else, this IE is omitted. Start/restart UEA0 or UEA1. The indicated algorithm must be one of the algorithms supported by the UE as indicated in the IE "security capability" in the RRC CONNECTION SETUP COMPLETE message. (256+CFN-(CFN MOD 8 + 8))MOD 256, this IE is set to "Not present" if only PS RABs are established during the initial setup procedure. 1 Current RLC SN + 2 2 Current RLC SN + 2 3 Current RLC SN + 2 4 Current RLC SN + 2 20, this IE is set to "Not present" if PS RAB is not established during the initial setup procedure. Current RLC SN + 2
Integrity protection mode info <ul style="list-style-type: none"> - Integrity protection mode command - Downlink integrity protection activation info - Integrity protection algorithm - Integrity protection initialisation number 	The presence of this IE is dependent on IXIT statements in TS 34.123-32. If integrity protection is indicated to be active, this IE is present with the values of the sub-IEs as stated below. Else, this IE and the sub-IEs are omitted. Start Not Present UIA1 SS selects an arbitrary 32 bits number for FRESH. The first/ leftmost bit of the bit string contains the most significant bit of the FRESH
New U-RNTI <ul style="list-style-type: none"> - SRNC identity - S-RNTI 	0000 0000 0010B 0000 0000 0000 0000 0001B
Downlink counter synchronisation info <ul style="list-style-type: none"> - RB with PDCP information list 	Not present

UTRAN MOBILITY INFORMATION CONFIRM (Step 6)

Check that the UE uses the same message sub-type found in TS 34.108 clause 9, with the following exception.

Information Element	Value/remark
Uplink counter synchronisation info <ul style="list-style-type: none"> - RB with PDCP information list - START list 	Not present Not checked.

SIGNALLING CONNECTION RELEASE INDICATION (Step 7)

Information Element	Value/remark
Message Type Integrity check info - Message authentication code - RRC Message sequence number	<p>The presence of this IE is dependent on IXT statements in TS 34.123-2. If integrity protection is indicated to be active, this IE shall be present with the values of the sub IEs as stated below. Else, this IE and the sub IEs shall be absent.</p> <p>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS. The first/ leftmost bit of the bit string contains the most significant bit of the MAC-I.</p> <p>This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</p>
CN domain identity	Check to see if this value is the same as in the UPLINK DIRECT TRANSFER message.

8.1.9a.5 Test requirement

After step 1 the UE shall transmit UPLINK DIRECT TRANSFER messages using AM on DCCH.

After step 5, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message using uplink DCCH on AM RLC.

After step 6 the UE shall re-transmit a SIGNALLING CONNECTION RELEASE INDICATION message which includes the same CN domain identity as that found in the UPLINK DIRECT TRANSFER message.

CHANGE REQUEST

34.123-1 CR 517 # rev - # Current version: **5.3.0**

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# URA identity for transition from CELL_FACH to URA_PCH		
Source:	# Panasonic		
Work item code:	# TEI	Date:	# 14/05/2003
Category:	# F	Release:	# Rel-5
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	#	1. It is a typical network behaviour to include URA identity in reconfiguration message, for transition to URA_PCH state. Provision of this IE avoids the situation in which the UTRAN does not know the URA the UE is currently camped on. Such provision has been made in Ericsson's T1-030714. However, it is proposed to leave a few test cases, whereby URA identity is not provided, to increase test coverage. 2. Editorial.
Summary of change:	#	1. In TC 8.2.3.23, 8.2.6.31, note is added to mention that URA identity is not added for transition to URA_PCH, with the purpose of increasing test coverage. The note is to prevent any CR from correcting this otherwise unnecessary correction in the future. 2. Sub-clause number in 8.2.6.31.5 is corrected.
Consequences if not approved:	#	This test case could fail good UE.

Clauses affected:	#	8.2.3.23, 8.2.6.31									
Other specs affected:	#	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">#</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N	#	X	#	X	#	X	#
Y	N										
#	X										
#	X										
#	X										
Other comments:	#	Affects R'99, Rel-4 and Rel-5 UEs.									

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modifications>**8.2.3.23 Radio Bearer Release for transition from CELL_FACH to URA_PCH: Success****8.2.3.23.1 Definition****8.2.3.23.2 Conformance requirement**

If the UE receives:

-a RADIO BEARER RELEASE message;

it shall:

1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.

1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a RADIO BEARER RELEASE message, the UE shall:

1> transmit a RADIO BEARER RELEASE COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:

1> if the IE "Frequency info" is included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304 on that frequency.

1> if the IE "Frequency info" is not included in the received reconfiguration message:

2> select a suitable UTRA cell according to TS25.304.

1> prohibit periodical status transmission in RLC;

1> remove any C-RNTI from MAC;

1> clear the variable C_RNTI;

1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;

1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.

1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9

1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:

2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";

2> when the URA update procedure is successfully completed:

3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.3, 8.5 and 8.6.

8.2.3.23.3 Test purpose

1. To confirm that the UE transmits RADIO BEARER RELEASE COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_FACH to URA_PCH according to the RADIO BEARER RELEASE message.
3. To confirm that the UE releases the radio access bearer and selects a common physical channel.

8.2.3.23.4 Method of test

Initial Condition

System Simulator: 1 cell– Cell 1 is active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state of cell 1. The SS transmits a RADIO BEARER RELEASE message. The UE shall release all radio access bearers and enter URA_PCH state after it transmits a RADIO BEARER RELEASE COMPLETE message using AM RLC. Upon completion of the procedure, the SS calls for generic procedure C.4 to check that UE is in URA_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_FACH state of cell 1.
2	←		RADIO BEARER RELEASE	
3		→	RADIO BEARER RELEASE COMPLETE	The UE transmits this message on uplink DCCH using AM RLC.
4				The SS waits for 5 s.
5	↔		CALL C.5	If the test result of C.4 indicates that UE is in CELL_PCH state, the test passes, otherwise it fails.

Specific Message Contents

RADIO BEARER RELEASE (Step 2)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3

Note: It is to be noted that IE “URA identity” is not included in this message, for the purpose of wider test coverage. The scenario in which IE “URA identity” is included, is tested in other test cases.

8.2.2.23.5 Test requirement

After step 2 the UE shall transmit a RADIO BEARER RELEASE COMPLETE message on uplink DCCH using AM RLC.

After step 4 the UE shall be in URA_PCH state.

<End of Modifications>**<Start of Modifications>**

8.2.6.31 Physical channel reconfiguration transition from CELL_FACH to URA_PCH: Success

8.2.6.31.1 Definition

8.2.6.31.2 Conformance requirement

If the UE receives:

- a PHYSICAL CHANNEL RECONFIGURATION message;

it shall:

- 1> act upon all received information elements as specified in TS25.331 subclause 8.6, unless specified in the following and perform the actions below.
- 1> enter a state according to TS25.331 subclause 8.6.3.3.

In case the procedure was triggered by reception of a PHYSICAL CHANNEL RECONFIGURATION message, the UE shall:

- 1> transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE on the uplink DCCH using AM RLC, using the old configuration before the state transition.

If after state transition the UE enters URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304 on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to TS25.304.
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> select Secondary CCPCH according to TS25.331 subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in TS25.331 subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:

- 2> keep the configuration existing before the reception of the message and transmit a failure response message as specified in TS25.331 subclause 8.2.2.9
- 1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to TS25.331 subclause 8.3.1 is fulfilled:
 - 2> initiate a URA update procedure according to TS25.331 subclause 8.3.1 using the cause "URA reselection";
 - 2> when the URA update procedure is successfully completed:
 - 3> the procedure ends.

Reference

3GPP TS 25.331 clause 8.2.2, 8.3, 8.5 and 8.6.

8.2.6.31.3 Test purpose

1. To confirm that the UE transmits the PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.
2. To confirm that the UE transits from CELL_FACH to URA_PCH according to the PHYSICAL CHANNEL RECONFIGURATION message.

8.2.6.31.4 Method of test

Initial Condition

System Simulator: 1 cell– Cell 1 is active.

UE: PS-DCCH+DTCH_FACH (state 6-11) as specified in clause 7.4 of TS 34.108.

Test Procedure

The UE is in CELL_FACH state of cell 1. The SS transmits a PHYSICAL CHANNEL RECONFIGURATION message. The UE shall enter URA_PCH state according to this message after it transmits a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message using AM RLC. Upon completion of the procedure, the SS calls for generic procedure C.5 to check that UE is in URA_PCH state.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				The UE is in CELL_FACH state of cell 1.
2		←	PHYSICAL CHANNEL RECONFIGURATION	
3		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	The UE transmits this message on uplink DCCH using AM RLC.
4				The SS waits for 5 s.
5				If the test result of C.5 indicates that UE is in URA_PCH state, the test passes, otherwise it fails.

Specific Message Contents

PHYSICAL CHANNEL RECONFIGURATION (Step 2)

Use the same message sub-type titled "Packet to CELL_FACH from CELL_FACH in PS" in [9] TS 34.108 clause 9 with following exceptions:

Information Element	Value/remark
RRC State Indicator	URA_PCH
UTRAN DRX cycle length coefficient	3

Note: It is to be noted that IE “URA identity” is not included in this message, for the purpose of wider test coverage. The scenario in which IE “URA identity” is included, is tested in other test cases.

8.2.26.31.5 Test requirement

After step 2 the UE shall transmit a PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on uplink DCCH using AM RLC.

After step 4 the UE shall be in URA PCH state.

<End of Modifications>

3GPP TSG T1 Meeting #19
Seoul, Korea 12th – 16th May 2003

Tdoc № T1-030719
Agenda 8.8.3

CHANGE REQUEST

CR-Form-v7

№ **34.123-1 CR 521** № rev **-** № Current version: **5.3.0** №

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the № symbols.

Proposed change affects: UICC apps № ME Radio Access Network Core Network

Title:	№ New RRC test cases for Inter-RAT cell reselection (PS) from UTRAN		
Source:	№ Motorola		
Work item code:	№ TEI	Date:	№ 05/05/2003
Category:	№ B	Release:	№ REL-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	R96 (Release 1996)	2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R97 (Release 1997)	
	B (addition of feature),	R98 (Release 1998)	
	C (functional modification of feature)	R99 (Release 1999)	
	D (editorial modification)	Rel-4 (Release 4)	
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Rel-5 (Release 5)	
		Rel-6 (Release 6)	

Reason for change:	№ Coverage for Inter-RAT cell reselection (PS) from UTRAN tests
Summary of change:	№ New test cases added in section 8.3.9
Consequences if not approved:	№ No test coverage for Inter-RAT cell reselection (PS) from UTRAN

Clauses affected:	№ 8.3.9.1 to 8.3.9.5										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	№ 34.123-2
	Y	N									
	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
<input checked="" type="checkbox"/>	<input type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
Test specifications											
O&M Specifications											
Other comments:	№ Affects R99, REL-4 and REL-5										

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- 1) Fill out the above form. The symbols above marked № contain pop-up help information about the field that they are closest to.

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of modification>8.3.9 Inter-RAT cell reselection from UTRAN8.3.9.1 Cell reselection if cell becomes barred or $S < 0$; UTRAN to GPRS (CELL_FACH)8.3.9.1.1 Definition

Test to verify that if both a GSM/GPRS and UTRAN network is available, the UE performs cell reselection from UTRAN to GSM/GPRS if the UTRAN cell becomes barred or S falls below zero.

8.3.9.1.2 Conformance requirement

1. The purpose of the inter-RAT cell reselection procedure from UTRAN is to transfer, under the control of the UE and to some extent the UTRAN, a connection between the UE and UTRAN to another radio access technology (e.g. GSM/GPRS).
2. This procedure is applicable in states CELL_FACH, CELL_PCH or URA_PCH.
When the UE based on received system information makes a cell reselection to a radio access technology other than UTRAN, e.g. GSM/GPRS, according to the criteria specified in [4], the UE shall:
 - 1> If the NAS procedures associated with inter-system change specified in [5] require the establishment of a connection:
 - 2> initiate the establishment of a connection to the target radio access technology according to its specifications.
3. When the UE has succeeded in reselecting a cell in the target radio access technology, the UE shall:
 - 1> release all UTRAN specific resources.

References

1. TS 25.331, clause 8.3.9

8.3.9.1.3 Test purpose

1. To verify that the UE performs reselection from UTRAN to GPRS in the state CELL_FACH on the following occasions:
 - Serving cell becomes barred.
 - $S < 0$ for serving cell.
2. To verify when the UE has succeeded in reselecting a cell in the target radio access technology and has initiated the establishment of a connection, it shall release all UTRAN specific resources.

8.3.9.1.4 Method of test

Initial conditions

System Simulator: 3 cells – Cell 1 is UTRAN FDD, Cell 2 is GPRS and Cell 3 is GSM. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2. 51.010 clause 26.6.5.1 shall be referenced for the default parameters of cell 3.

All cells belong to the same PLMN and location area.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 2 (GPRS) and Cell 3 (GSM).

The 3G Neighbour Cell Description of Cell 2 (GPRS) and Cell 3 (GSM) refers to Cell 1 (UTRAN)

UE: PS-DCCH+DTCH_FACH (State 6-11) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies.
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs.
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Step a-c:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
Test Channel		1
CPICH Ec (FDD)	dBm	-60
P-CCPCH RSCP (TDD)	dBm	-60
Qrxlevmin	dBm	-101
Srxlev*	dBm	41
CellBarred		Not barred

<u>Parameter</u>	<u>Unit</u>	<u>Cell 2 (GPRS)</u>
Test Channel		1
RF Signal Level	dBm	-75
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	25
FDD_Qmin	dB	-20
FDD_Qoffset	dBm	0

<u>Parameter</u>	<u>Unit</u>	<u>Cell 3 (GSM)</u>
Test Channel		2
RF Signal Level	dBm	-85
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	15
FDD_Qmin	dB	-20
FDD_Qoffset	dBm	0

Step d-f:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
<u>CellBarred</u>		<u>Not barred -> Barred</u>
<u>Tbarred</u>	<u>S</u>	<u>80</u>

Step i:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
<u>Qrxlevmin</u>	<u>DB</u>	<u>-101 -> -41</u>
<u>Srxlev*</u>	<u>DB</u>	<u>41 -> -19</u>

Test procedure

- a) The SS activates cells 1, 2, and 3. The SS monitors cells 1, 2 and 3 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS brings the UE to PS-DCCH+DTCH FACH (State 6-11).
- d) The SS sets Cell 1 to be barred.
- e) The SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.
- f) The SS waits for channel request from the UE to establish a Temporary Block flow.
- g) The SS pages the UE with PAGING TYPE 2 in Cell 1 (UTRAN), if UE does not respond by transmitting an upper layer message to answer this page, it means UE has released the UTRAN resources.
- h) The UE is switched off.
- i) Step a-e) is repeated with the same initial conditions except that in step d), Qrxlevmin is increased, so S will become negative instead of being barred.

8.3.9.1.5 Test Requirements

In step f), the UE shall respond on Cell 2

In step g), the UE shall not respond in UTRAN cell.

In step i), the UE shall respond on Cell 2 after Qrxlevmin is increased.

8.3.9.2 Cell reselection if cell becomes barred or $S < 0$; UTRAN to GPRS (URA PCH)

8.3.9.2.1 Definition

Test to verify that if both a GSM/GPRS and UTRAN network is available, the UE performs cell reselection from UTRAN to GSM/GPRS if the UTRAN cell becomes barred or S falls below zero.

8.3.9.2.2 Conformance requirement

1. The purpose of the inter-RAT cell reselection procedure from UTRAN is to transfer, under the control of the UE and to some extent the UTRAN, a connection between the UE and UTRAN to another radio access technology (e.g. GSM/GPRS).

2. This procedure is applicable in states CELL_FACH, CELL_PCH or URA_PCH.
When the UE based on received system information makes a cell reselection to a radio access technology other than UTRAN, e.g. GSM/GPRS, according to the criteria specified in [4], the UE shall.
 - 1> If the NAS procedures associated with inter-system change specified in [5] require the establishment of a connection:
 - 2> initiate the establishment of a connection to the target radio access technology according to its specifications.
3. When the UE has succeeded in reselecting a cell in the target radio access technology, the UE shall:
 - 1> release all UTRAN specific resources.

References

1. TS 25.331, clause 8.3.9

8.3.9.2.3 Test purpose

To verify that the UE performs reselection from UTRAN to GPRS in the state URA_PCH on the following occasions:

- Serving cell becomes barred.
- S<0 for serving cell.

8.3.9.2.4 Method of test

Initial conditions

System Simulator: 2 cells – Cell 1 is UTRAN FDD, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN and location area.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 2 (GPRS).

The 3G Neighbour Cell Description of Cell 2 (GPRS) refers to Cell 1 (UTRAN)

UE: URA_PCH (state 6-13) in cell 1 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies.
- UE supports UTRAN interactive/ background UL: 128kbps, DL: 128 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs.

Step a-c:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
<u>Test Channel</u>		<u>1</u>
<u>CPICH Ec (FDD)</u>	<u>dBm</u>	<u>-60</u>
<u>P-CCPCH RSCP (TDD)</u>	<u>dBm</u>	<u>-60</u>
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-101</u>
<u>Srxlev*</u>	<u>dBm</u>	<u>41</u>
<u>CellBarred</u>		<u>Not barred</u>

<u>Parameter</u>	<u>Unit</u>	<u>Cell 2 (GPRS)</u>
<u>Test Channel</u>		<u>1</u>
<u>RF Signal Level</u>	<u>dBm</u>	<u>-80</u>
<u>RXLEV_ACCESS_MIN</u>	<u>dBm</u>	<u>-100</u>
<u>C1*</u>	<u>dBm</u>	<u>20</u>
<u>FDD_Qmin</u>	<u>dB</u>	<u>-20</u>
<u>FDD_Qoffset</u>	<u>dBm</u>	<u>0</u>

Step d-f:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
<u>CellBarred</u>		<u>Not barred -> Barred</u>
<u>Tbarred</u>	<u>s</u>	<u>80</u>

Step i:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
<u>Qrxlevmin</u>	<u>dB</u>	<u>-101 -> -41</u>
<u>Srxlev*</u>	<u>dB</u>	<u>40 -> -20</u>

Test procedure

- a) The SS activates cells 1, 2, and 3. The SS monitors cells 1, 2 and 3 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS brings the UE to URA_PCH (State 6-13).
- d) The SS sets Cell 1 to be barred.
- e) The SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.
- f) The SS waits for channel request from the UE to establish Temporary Block flow
- g) The SS pages the UE with PAGING TYPE 1 in cell 1 (UTRAN), if UE does not respond with RRC Connection Request, it means UE has released the UTRAN resources.
- h) The UE is switched off.
- i) Step a-e) is repeated with the same initial conditions except that in step d), Qrxlevmin is increased, so S will become negative instead of being barred.

8.3.9.2.5 Test Requirements

In step f), the UE shall respond on Cell 2.

In step g), the UE shall not respond in UTRAN cell.

In step i), the UE shall respond on Cell 2 after $Q_{rxlevmin}$ is increased.

8.3.9.3 Cell reselection if $S < 0$; UTRAN to GPRS (UE in CELL_FACH fails to complete an inter-RAT cell reselection)

8.3.9.3.1 Definition

8.3.9.3.2 Conformance requirement

If the inter-RAT cell reselection fails, the UE shall:

- 1> resume the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure.

References

TS 25.331, clause 8.3.9.4

8.3.9.3.3 Test purpose

To verify if the inter-RAT cell reselection fails before the UE in CELL_FACH succeeds in initiating the establishment of a connection to the GPRS cell, the UE shall:

- resume the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure.

8.3.9.3.4 Method of test

Initial conditions

System Simulator: 2 cells – Cell 1 is UTRAN FDD, Cell 2 is GPRS with PBCCH. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 2 (GPRS).

The 3G Neighbour Cell Description of Cell 2 (GPRS) refers to Cell 1 (UTRAN)

UE: PS-DCCH+DTCH_FACH (State 6-11) in cell 1 (UTRAN) as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies.
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs.
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Step a-c:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
<u>Test Channel</u>		<u>1</u>
<u>CPICH Ec (FDD)</u>	<u>dBm</u>	<u>-60</u>
<u>P-CCPCH RSCP (TDD)</u>	<u>dBm</u>	<u>-60</u>
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-101</u>
<u>Treselection_s</u>	<u>s</u>	<u>5</u>
<u>Srxlev*</u>	<u>dBm</u>	<u>41</u>
<u>CellBarred</u>		<u>Not barred</u>

<u>Parameter</u>	<u>Unit</u>	<u>Cell 2 (GPRS)</u>
<u>Test Channel</u>		<u>1</u>
<u>RF Signal Level</u>	<u>dBm</u>	<u>-80</u>
<u>GPRS_RXLEV_A_CCESS_MIN</u>	<u>dBm</u>	<u>-100</u>
<u>C1*</u>	<u>dBm</u>	<u>20</u>
<u>C32*</u>	<u>dB</u>	<u>20</u>
<u>CellBarred</u>		<u>barred</u>

Step d:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
<u>Qrxlevmin</u>	<u>dB</u>	<u>-101 -> -41</u>
<u>Srxlev*</u>	<u>dB</u>	<u>41 -> -19</u>

Step f:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
<u>Qrxlevmin</u>	<u>dB</u>	<u>-41 -> -101</u>
<u>Srxlev*</u>	<u>dB</u>	<u>-19 -> 41</u>

Test procedure

- a) The SS activates cells 1 and 2. The SS monitors cells 1 and 2 for random access requests from the UE.
- b) The UE is switched on.
- c) The SS brings the UE to PS-DCCH+DTCH_FACH (State 6-11).
- d) The SS increases Qrxlevmin, so S will become negative.
- e) The SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.
- f) The SS decreases Qrxlevmin, so S will become positive (After the expiry of the timer Treselection)
- g) SS calls for generic procedure C.2 in cell 1 (UTRAN) to check that UE is in CELL_FACH state. The UE resumes the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure

8.3.9.3.5 Test Requirements

In step f, the UE remains in CELL_FACH in cell1.

8.3.9.4 Cell reselection if $S < 0$; UTRAN to GPRS (UE in CELL_PCH fails to complete an inter-RAT cell reselection)

8.3.9.4.1 Definition

8.3.9.4.2 Conformance requirement

If the inter-RAT cell reselection fails, the UE shall:

- 1> resume the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure.

References

TS 25.331, clause 8.3.9.4

8.3.9.4.3 Test purpose

To verify if the inter-RAT cell reselection fails before the UE in CELL_PCH succeeds in initiating the establishment of a connection to the GPRS cell, the UE shall:

- resume the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure.

8.3.9.4.4 Method of test

Initial conditions

System Simulator: 2 cells – Cell 1 is UTRAN FDD, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 2 (GPRS).

The 3G Neighbour Cell Description of Cell 2 (GPRS) refers to Cell 1 (UTRAN)

UE: CELL_PCH (State 6-12) in cell 1 (UTRAN) as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies.
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs.
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Step a-c:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
<u>Test Channel</u>		<u>1</u>
<u>CPICH Ec (FDD)</u>	<u>dBm</u>	<u>-60</u>
<u>P-CCPCH RSCP (TDD)</u>	<u>dBm</u>	<u>-60</u>
<u>Qrxlevmin</u>	<u>dBm</u>	<u>-101</u>
<u>Treselection_s</u>	<u>s</u>	<u>5</u>
<u>Srxlev*</u>	<u>dBm</u>	<u>41</u>
<u>CellBarred</u>		<u>Not barred</u>

<u>Parameter</u>	<u>Unit</u>	<u>Cell 2 (GPRS)</u>
<u>Test Channel</u>		<u>1</u>
<u>RF Signal Level</u>	<u>dBm</u>	<u>-80</u>
<u>RXLEV_ACCESS_MIN</u>	<u>dBm</u>	<u>-100</u>
<u>C1*</u>	<u>dBm</u>	<u>20</u>
<u>FDD_Qmin</u>	<u>dB</u>	<u>-20</u>
<u>FDD_Qoffset</u>	<u>dBm</u>	<u>0</u>
<u>CellBarred</u>		<u>barred</u>

Step d:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
<u>Qrxlevmin</u>	<u>dB</u>	<u>-101 -> -41</u>
<u>Srxlev*</u>	<u>dB</u>	<u>41 -> -19</u>

Step f:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
<u>Qrxlevmin</u>	<u>dB</u>	<u>-41 -> -101</u>
<u>Srxlev*</u>	<u>dB</u>	<u>-19-> 41</u>

Test procedure

- The SS activates cells 1 and 2. The SS monitors cells 1 and 2 for random access requests from the UE.
- The UE is switched on.
- The SS brings the UE to CELL_PCH (State 6-11).
- The SS increases Qrxlevmin, so S will become negative.
- The SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.
- The SS decreases Qrxlevmin, so S will become positive (After the expiry of the timer Treselection)
- SS calls for generic procedure C.4 in cell 1 (UTRAN) to check that UE is in CELL_PCH state. The UE resumes the connection to UTRAN using the resources used before initiating the inter-RAT cell reselection procedure

8.3.9.4.5 Test Requirements

In step f, the UE remains in CELL_PCH in cell1.

8.3.9.5 Successful Cell Reselection with RAU – Q_{offset} value modification: UTRAN to GPRS (CELL_FACH)

8.3.9.5.1 Definition

8.3.9.5.2 Conformance requirement

1. The purpose of the inter-RAT cell reselection procedure from UTRAN is to transfer, under the control of the UE and to some extent the UTRAN, a connection between the UE and UTRAN to another radio access technology (e.g. GSM/GPRS).
2. This procedure is applicable in states CELL_FACH, CELL_PCH or URA_PCH.
When the UE based on received system information makes a cell reselection to a radio access technology other than UTRAN, e.g. GSM/GPRS, according to the criteria specified in [4], the UE shall.
 - 1> If the NAS procedures associated with inter-system change specified in [5] require the establishment of a connection:
 - 2> initiate the establishment of a connection to the target radio access technology according to its specifications.
 3. When the UE has succeeded in reselecting a cell in the target radio access technology, the UE shall:
 - 1> release all UTRAN specific resources.

References

TS 25.331, clause 8.3.9

8.3.9.5.3 Test purpose

To verify that the UE performs reselection correctly considering the Q_{offset} value broadcast in SIB 11.

8.3.9.5.4 Method of test

Initial conditions

System Simulator: 2 cells – Cell 1 is UTRAN FDD, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN and location area.

The Inter-RAT Cell Info List of Cell 1 (UTRAN) refers to Cell 2 (GPRS).

The 3G Neighbour Cell Description of Cell 2 (GPRS) refers to Cell 1 (UTRAN)

UE: PS-DCCH+DTCH_FACH (State 6-11) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies.

- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs,

- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Step a-c:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
Test Channel		1
CPICH Ec (FDD)	dBm	-60
P-CCPCH RSCP (TDD)	dBm	-60
Qrxlevmin	dBm	-101
Srxlev*	dBm	41
CellBarred		Not barred

<u>Parameter</u>	<u>Unit</u>	<u>Cell 2 (GPRS)</u>
Test Channel		1
RF Signal Level	dBm	-70
RXLEV_ACCESS_MIN	dBm	-100
C1*	dBm	30
FDD_Qmin	dB	-20
FDD_Qoffset	dBm	0

Step d:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1 (UTRAN)</u>
Qoffset1 _{s,n}	dBm	20

Step f:

<u>Parameter</u>	<u>Unit</u>	<u>Cell 2 (GPRS)</u>
RF Signal Level	dBm	-70 -> -50
C1*	dBm	30 -> 50

Test procedure

- The SS activates cells 1 and 2. The SS monitors cells 1 and 2 for random access requests from the UE.
- The UE is switched on.
- The SS brings the UE to PS-DCCH+DTCH_FACH (State 6-11).
- Q_{offset} value is modified at UTRAN such that it makes the GSM cell look the best.
- The SS sends SYSTEM INFORMATION CHANGE INDICATION message to UE to inform UE of the modification in the system information.
- The SS increases signal level on Cell 2 to -50 dBm.
- The SS monitors for random access requests from the UE.
- The SS pages the UE with PAGING TYPE 1 in cell 1 (UTRAN), if UE does not respond with RRC Connection Request, it means UE has released the UTRAN resources.

8.3.9.5.5 Test Requirements

In step g), the UE shall respond on Cell 2 and enter PACKET TRANSFER mode after performing the routing area update procedure.

In step h), the UE shall not respond in UTRAN cell.

<End of modification>

3GPP TSG- T1 SIG Meeting #19
Seoul, Korea 12th – 16th May 2003

Tdoc # T1-030720
Agenda 8.8.3

CR-Form-v7	
CHANGE REQUEST	
⌘ 34.123-1 CR 522 ⌘ rev - ⌘ Current version: 5.3.0 ⌘	

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ New RRC test cases for Inter-RAT cell change order from UTRAN		
Source:	⌘ Motorola		
Work item code:	⌘ TEI	Date:	⌘ 05/05/2003
Category:	⌘ B	Release:	⌘ REL-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)	R96 (Release 1996)	2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)	R97 (Release 1997)	
	B (addition of feature),	R98 (Release 1998)	
	C (functional modification of feature)	R99 (Release 1999)	
	D (editorial modification)	Rel-4 (Release 4)	
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .	Rel-5 (Release 5)	
		Rel-6 (Release 6)	

Reason for change:	⌘ Coverage for Inter-RAT cell change order from UTRAN tests
Summary of change:	⌘ New test cases for Inter-RAT cell change order from UTRAN added
Consequences if not approved:	⌘ No test coverage for Inter-RAT cell change order from UTRAN

Clauses affected:	⌘ 8.3.11.1 to 8.3.11.8										
Other specs affected:	<table border="1" style="font-size: x-small;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘ 34.123-2
	Y	N									
	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
<input checked="" type="checkbox"/>	<input type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
Test specifications											
O&M Specifications											
Other comments:	⌘ Affects R99, REL-4 and REL-5										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of modification>8.3.11 Inter-RAT cell change order from UTRAN8.3.11.1 Inter-RAT cell change order from UTRAN/To GPRS/CELL DCH/Success8.3.11.1.1 Definition8.3.11.1.2 Conformance requirement

The purpose of the inter-RAT cell change order procedure is to transfer, under the control of the network, a connection between the UE and UTRAN to another radio access technology (e.g. GSM). This procedure may be used in CELL_DCH and CELL_FACH state. This procedure may be used when no RABs are established or when the established RABs are only from PS domain. This procedure may not be used when there is no PS signalling connection.

The procedure is initiated when UTRAN orders a UE in CELL_DCH or CELL_FACH state, to make a cell change to a radio access technology other than UTRAN, e.g. GSM.

To initiate the procedure, UTRAN sends a CELL CHANGE ORDER FROM UTRAN message.

The UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message and perform a cell change order to another RAT, even if no prior UE measurements have been performed on the target cell.

If the variable ESTABLISHED_SIGNALLING_CONNECTIONS does not include the CN domain identity "PS domain", or if the variable ESTABLISHED_SIGNALLING_CONNECTIONS includes the CN domain identity "CS domain":

- 1> the UE behaviour is not specified.

The UE shall:

- 1> start timer T309; and

- 1> establish the connection to the other radio access technology, as specified within IE "Target cell description". This IE specifies the target cell identity, in accordance with the specifications for that other RAT. In case the target cell is a GSM/ GPRS cell, IE "Target cell description" may also include IE "NC mode", which specifies the cell selection mode to be applied in the target cell; and

- 1> if IE "NC mode" is not included in the CELL CHANGE ORDER FROM UTRAN:

- 2> retrieve it from the target cell as specified in [43];

- 2> act upon IE "NC mode" as specified in [43].

- 1> if the IE "RAB Information List" is included in the CELL CHANGE ORDER FROM UTRAN message:

- 2> ignore the contents of the IE "RAB Information List".

NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification. In case of GSM/GPRS proceed according to the procedure Network control cell reselection procedure as specified in [44].

The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

Upon successful completion of the cell change order, the UE shall:

1> stop timer T309;

1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

Upon indication of the UE having successfully completed the cell change order, UTRAN should:

1> release the radio connection; and

1> remove all context information for the concerned UE.

NOTE: The release of the UMTS radio resources is initiated from another RAT.

Reference(s)

TS 25.331 clause 8.3.11, B.6

8.3.11.1.3 Test purpose

To test that the UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state and perform a cell change to another RAT, even if no prior UE measurements have been performed on the target cell. The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

8.3.11.1.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN and location area.

UE: PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_DCH (State 6-10). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GPRS cell. The SS checks whether the cell change is performed by checking that the UE receives a successful response to the CHANNEL REQUEST message from the SS through GPRS cell. The UE sends a RA UPDATE REQUEST message to indicate that the UTRAN UE context needs to be transferred to GPRS.

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into PS-DCCH+DTCH DCH (State 6-10) in cell 1
2		SS		The SS configures cell 2 as a GSM cell with GPRS enabled
3		←	CELL CHANGE ORDER FROM UTRAN	Send on cell 1 (UTRAN cell) and the message indicates: the target cell description for GPRS.
4	UE			The UE accepts the cell change command and switches to the GPRS cell specified in the CELL CHANGE ORDER FROM UTRAN
5		→	CHANNEL REQUEST	The SS receives this burst on the RACH of cell 2 to establish temporary block flow (GPRS cell). It implies that the UE has switched to GPRS cell.
6		←	IMMEDIATE ASSIGNMENT	Uplink dynamic allocation. Sent on AGCH.
7		→	ROUTING AREA UPDATE REQUEST	

Specific message contents

CELL CHANGE ORDER FROM UTRAN

Information Element	Value/remark
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC1
- Band Indicator	DCS 1800 band used
- BCCH ARFCN	1
- NC mode	NOT PRESENT

8.3.11.1.5 Test requirement

After step 3 the UE shall transmit a CHANNEL REQUEST message on RACH.

8.3.11.2 Inter-RAT cell change order from UTRAN/To GPRS/CELL FACH/Success

8.3.11.2.1 Definition

8.3.11.2.2 Conformance requirement

The purpose of the inter-RAT cell change order procedure is to transfer, under the control of the network, a connection between the UE and UTRAN to another radio access technology (e.g. GSM). This procedure may be used in CELL_DCH and CELL_FACH state. This procedure may be used when no RABs are established or when the established RABs are only from PS domain. This procedure may not be used when there is no PS signalling connection.

The procedure is initiated when UTRAN orders a UE in CELL_DCH or CELL_FACH state, to make a cell change to a radio access technology other than UTRAN, e.g. GSM.

To initiate the procedure, UTRAN sends a CELL CHANGE ORDER FROM UTRAN message.

The UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message and perform a cell change order to another RAT, even if no prior UE measurements have been performed on the target cell.

If the variable ESTABLISHED_SIGNALLING_CONNECTIONS does not include the CN domain identity "PS domain", or if the variable ESTABLISHED_SIGNALLING_CONNECTIONS includes the CN domain identity "CS domain":

1> the UE behaviour is not specified.

The UE shall:

1> start timer T309; and

1> establish the connection to the other radio access technology, as specified within IE "Target cell description". This IE specifies the target cell identity, in accordance with the specifications for that other RAT. In case the target cell is a GSM/ GPRS cell, IE "Target cell description" may also include IE "NC mode", which specifies the cell selection mode to be applied in the target cell; and

1> if IE "NC mode" is not included in the CELL CHANGE ORDER FROM UTRAN:

2> retrieve it from the target cell as specified in [43];

2> act upon IE "NC mode" as specified in [43].

1> if the IE "RAB Information List" is included in the CELL CHANGE ORDER FROM UTRAN message:

2> ignore the contents of the IE "RAB Information List".

NOTE: Requirements concerning the establishment of the radio connection towards the other radio access technology and the signalling procedure are outside the scope of this specification. In case of GSM/GPRS proceed according to the procedure Network control cell reselection procedure as specified in [44].

The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a (PACKET) CHANNEL REQUEST in the new cell.

Upon successful completion of the cell change order, the UE shall:

1> stop timer T309;

1> clear or set variables upon leaving UTRA RRC connected mode as specified in subclause 13.4.

Upon indication of the UE having successfully completed the cell change order, UTRAN should:

1> release the radio connection; and

1> remove all context information for the concerned UE.

NOTE: The release of the UMTS radio resources is initiated from another RAT.

Reference(s)

TS 25.331 clause 8.3.11, B.6

8.3.11.2.3 Test purpose

To test that the UE shall be able to receive a CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state and perform a cell change to another RAT, even if no prior UE measurements have

been performed on the target cell. The UE regards the procedure as completed when it has received a successful response from the target RAT, e.g. in case of GSM when it received the response to a CHANNEL REQUEST in the new cell.

8.3.11.2.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS with PBCCH. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN and location area.

UE: PS-DCCH+DTCH_FACH (state 6-11) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies.
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_FACH (state 6-11). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. After the UE receives the command it shall configure itself accordingly and switch to the new channel on the target GPRS cell. The SS checks whether the cell change is performed by checking that the UE receives a successful response to the CHANNEL REQUEST message from the SS through GPRS cell. The UE sends a RA UPDATE REQUEST message to indicate that the UTRAN UE context needs to be transferred to GPRS.

<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>The SS brings the UE into PS-DCCH DTCH FACH (State 6-11) in cell 1</u>
<u>2</u>		<u>SS</u>		<u>The SS configures cell 2 as a GSM cell with GPRS enabled</u>
<u>3</u>		<u>←</u>	<u>CELL CHANGE ORDER FROM UTRAN</u>	<u>Send on cell 1 (UTRAN cell) and the message indicates: the target cell description for GPRS.</u>
<u>4</u>	<u>UE</u>			<u>The UE accepts the cell change command and switches to the GPRS specified in the CELL CHANGE ORDER FROM UTRAN</u>
<u>5</u>		<u>→</u>	<u>PACKET CHANNEL REQUEST</u>	<u>The SS receives this burst on PRACH of cell 2 (GPRS cell) to establish temporary block flow. It implies that the UE has switched to GPRS cell.</u>
<u>6</u>		<u>←</u>	<u>PACKET UPLINK ASSIGNMENT</u>	<u>Uplink dynamic allocation Sent on PAGCH.</u>
<u>7</u>		<u>→</u>	<u>ROUTING AREA UPDATE REQUEST</u>	

Specific message contentsCELL CHANGE ORDER FROM UTRAN

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u>	
<u>RRC transaction identifier</u>	<u>Arbitrarily selects one integer between 0 to 3</u>
<u>Integrity check info</u>	
<u>- Message authentication code</u>	<u>SS calculates the value of MAC-I for this message and writes to this IE.</u>
<u>- RRC Message sequence number</u>	<u>SS provides the value of this IE, from its internal counter.</u>
<u>Activation time</u>	<u>Now</u>
<u>Target cell description</u>	
<u>- CHOICE Radio Access Technology</u>	
<u>- GSM</u>	
<u>- BSIC</u>	<u>BSIC1</u>
<u>- Band Indicator</u>	<u>DCS 1800 band used</u>
<u>- BCCH ARFCN</u>	<u>1</u>
<u>- NC mode</u>	<u>NOT PRESENT</u>

8.3.11.2.5 Test requirement

After step 3 the UE shall transmit a CHANNEL REQUEST message on RACH.

8.3.11.3 Inter-RAT cell change order from UTRAN/To GPRS/CELL DCH/Failure (T309 expiry)8.3.11.3.1 Definition8.3.11.3.2 Conformance requirement

If:

- timer T309 expires prior to the successful establishment of a connection to the target RAT; or
- if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources;

the UE shall:

- 1> if it received the CELL CHANGE ORDER FROM UTRAN message in state CELL_DCH;
 - 2> revert back to the UTRA configuration;
 - 2> establish the UTRA physical channel(s) used at the time for reception of CELL CHANGE ORDER FROM UTRAN;
 - 2> if the UE does not succeed in establishing the UTRA physical channel(s):
 - 3> perform a cell update procedure according to subclause 8.3.1 with cause "Radio link failure";
 - 3> when the cell update procedure has completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and

3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and

3> clear that entry;

3> set the IE "Inter-RAT change failure" to "physical channel failure".

2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission, the procedure ends.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.3.3 Test purpose

To verify that when UE received CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state and if the establishment of the connection to the other RAT failed due to expiry of timer T309 prior to the successful establishment of a connection to the target RAT:

- a. revert back to the UTRA configuration;
- b. establish the UTRA physical channel(s) used at the time for reception of CELL CHANGE ORDER FROM UTRAN;
- c. transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message and set the IE "Inter-RAT change failure" to "physical channel failure".

8.3.11.3.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN and location area.

UE: PS-DCCH_DCH (State 6-7) in cell 1 as specified in clause 7.4 of TS 34.108.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies.
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Test Procedure

The SS starts the UTRAN cell and brings the UE into state PS-DCCH_DCH (State 6-7). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. The UE starts the timer T309. After the UE receives the command it shall configure itself accordingly but cannot complete the cell change, as SS does not respond to the CHANNEL REQUEST message transmitted by UE till the expiry of T309 timer. The SS checks that the cell change has failed by checking that the UE transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message to the SS in UTRAN cell.

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS bring the UE into PS-DCCH DCH (State 6-7) in cell 1
2		SS		The SS configures cell 2 as a GSM cell with GPRS enabled
3		←	CELL CHANGE ORDER FROM UTRAN	Send on cell 1 (UTRAN cell) and the message indicates: the target cell description for GSM/GPRS.
4	UE			UE starts the timer T309. The UE accepts the cell change command and switches to the GPRS specified in the CELL CHANGE ORDER FROM UTRAN
5		→	CHANNEL REQUEST	The SS receives this burst on RACH of cell 2 (GPRS cell) to establish temporary block flow
6		→		SS does not respond to the channel request. UE sends M + 1 CHANNEL REQUEST messages
				The SS does not transmit a response and wait for T309 timer to expire.
7		→	CELL CHANGE ORDER FROM UTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell.

Specific message contents

CELL CHANGE ORDER FROM UTRAN

<u>Information Element</u>	<u>Value/remark</u>
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC1
- Band Indicator	DCS 1800 band used
- BCCH ARFCN	1
- NC mode	Not present

CELL CHANGE ORDER FROM UTRAN FAILURE

<u>Information Element</u>	<u>Value/remark</u>
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink CELL CHANGE ORDER FROM UTRAN message
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT change failure	
-Inter-RAT change failure cause	physical channel failure

8.3.11.3.5 Test requirement

In step 5 the UE shall transmit a CHANNEL REQUEST message on RACH.

In step 7 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.11.4 Inter-RAT cell change order from UTRAN/To GPRS/CELL DCH/Failure (Physical channel Failure and Reversion Failure)8.3.11.4.1 Definition8.3.11.4.2 Conformance requirement

If:

- timer T309 expires prior to the successful establishment of a connection to the target RAT; or
- if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources;

the UE shall:

- 1> if it received the CELL CHANGE ORDER FROM UTRAN message in state CELL DCH:
 - 2> revert back to the UTRA configuration;
 - 2> establish the UTRA physical channel(s) used at the time for reception of CELL CHANGE ORDER FROM UTRAN;
 - 2> if the UE does not succeed in establishing the UTRA physical channel(s):
 - 3> perform a cell update procedure according to subclause 8.3.1 with cause "Radio link failure";
 - 3> when the cell update procedure has completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".
 - 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission, the procedure ends.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.4.3 Test purpose

To verify that when UE received CELL CHANGE ORDER FROM UTRAN message in CELL_DCH state and if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

- a. revert back to the UTRA configuration;
- b. if the UE does not succeed in establishing the UTRA physical channel(s):
 - perform a cell update procedure with cause "Radio link failure";
- c. when the cell update procedure is completed successfully, it transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message and set the IE "Inter-RAT change failure" to "physical channel failure".

8.3.11.4.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN and location area.

UE: PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies,
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_DCH (state 6-10). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. The UE receives the command and configures itself accordingly but cannot complete the cell change and wants to revert to the old configuration, but the UE cannot revert to the old configuration because the SS shall not use the old configuration. The UE transmit CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "radio link failure". The SS shall transmit CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits PHYSICAL CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC and subsequently transmits the CELL CHANGE ORDER FAILURE message to the SS in UTRAN cell, on the DCCH using AM RLC, setting the value of IE " Inter-RAT change failure " to " physical channel failure".

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS brings the UE into PS-DCCH+DTCH DCH (State 6-10) in cell 1
2		SS		The SS configures cell 2 as a GSM cell with GPRS enabled
3		←	CELL CHANGE ORDER FROM UTRAN	Send on cell 1 (UTRAN cell) and the message indicates: the target cell description for GSM/GPRS.
4	UE			The UE accepts the cell change command and switches to the GSM/GPRS specified in the CELL CHANGE ORDER FROM UTRAN
5		→	CHANNEL REQUEST	The SS receives this burst on RACH of cell 2 (GPRS cell) to establish temporary block flow. It implies that the UE has switched to GPRS cell.
6		←	IMMEDIATE ASSIGNMENT REJECT	SS rejects the channel request
7		SS		SS removes the Physical channel (DPCH) allocated to the mobile before handover command transmission
8		→	CELL UPDATE	The value "radio link failure" shall be set in IE "Cell update cause".
9		←	CELL UPDATE CONFIRM	This message include IE "Physical channel information elements".
10				The SS configure the dedicated physical channel according to the IE "Physical channel information elements" included in the CELL UPDATE CONFIRM message.
11		→	PHYSICAL CHANNEL RECONFIGURATION COMPLETE	
12		→	CELL CHANGE ORDER FROM UTRAN FAILURE	The IE "Inter-RAT failure cause" shall be set to "physical channel failure"

Specific message contents

CELL CHANGE ORDER FROM UTRAN

<u>Information Element</u>	<u>Value/remark</u>
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC1
- Band Indicator	DCS 1800 band used
- BCCH ARFCN	1
- NC mode	Not present

CELL UPDATE (Step 8)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in TS 34.108, clause 9, with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>U-RNTI</u> - <u>SRNC Identity</u> - <u>S-RNTI</u> <u>Cell Update Cause</u>	<u>Check to see if set to '0000 0000 0001'</u> <u>Check to see if set to '0000 0000 0000 0000 0001'</u> <u>"radio link failure"</u>

CELL UPDATE CONFIRM (Step 9)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS 34.108, clause 9, with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>U-RNTI</u> <u>RRC State indicator</u> <u>Frequency info</u> - <u>UARFCN uplink (Nu)</u> - <u>UARFCN downlink (Nd)</u> <u>Maximum allowed UL TX power</u> <u>CHOICE Mode</u> <u>Downlink information for each radio links</u> - <u>Primary CPICH info</u> - <u>Primary scrambling code</u> - <u>PDSCH with SHO DCH info</u> - <u>PDSCH code mapping</u> - <u>Downlink DPCH info for each RL</u> - <u>Primary CPICH usage for channel estimation</u> - <u>DPCH frame offset</u> - <u>Secondary CPICH info</u> - <u>DL channelisation code</u> - <u>Secondary scrambling code</u> - <u>Spreading factor</u> - <u>Code number</u> - <u>Scrambling code change</u> - <u>TPC combination index</u> - <u>SSTD Cell Identity</u> - <u>Closed loop timing adjustment mode</u> - <u>SCCPCH information for FACH</u>	<u>Same as CELL UPDATE message in step 3</u> <u>CELL_DCH</u> <u>Reference to TS34.108 clause 5.1 Test frequencies</u> <u>Reference to TS34.108 clause 5.1 Test frequencies</u> <u>33dBm</u> <u>FDD</u> <u>100</u> <u>Not Present</u> <u>Not Present</u> <u>Primary CPICH may be used</u> <u>0 chips</u> <u>Not Present</u> <u>2</u> <u>Reference to TS34.108 clause 6.10 Parameter Set</u> <u>SF-1 (SF is reference to TS34.108 clause 6.10</u> <u>Parameter Set)</u> <u>No change</u> <u>0</u> <u>-a</u> <u>Not Present</u> <u>Not Present</u>

CELL CHANGE ORDER FROM UTRAN FAILURE

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>RRC transaction identifier</u> <u>Integrity check info</u> - <u>Message authentication code</u> - <u>RRC Message sequence number</u> <u>Inter-RAT change failure</u> - <u>Inter-RAT change failure cause</u>	<u>Checked to see if it matches the same value used in the</u> <u>corresponding downlink CELL CHANGE ORDER FROM</u> <u>UTRAN message</u> <u>This IE is checked to see if it is present. The value is</u> <u>compared against the XMAC-I value computed by SS.</u> <u>This IE is checked to see if it is present. The value is used</u> <u>by SS to compute the XMAC-I value.</u> <u>physical channel failure</u>

8.3.11.4.5 Test requirement

In step 5 the UE shall transmit a CHANNEL REQUEST message on RACH.

In step 8 the SS shall receive CELL UPDATE message on the old channel of the UTRAN cell with the IE

“Cell update cause” set to cause “radio link failure”.

In step 11 the SS shall receive PHYSICAL CHANNEL COMPLETE message.

In step 12 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message with the IE “Inter-RAT change failure cause” set to “physical channel failure”.

8.3.11.5 Inter-RAT cell change order from UTRAN/To GPRS/CELL FACH/Failure (T309 expiry)

8.3.11.5.1 Definition

8.3.11.5.2 Conformance requirement

If:

- timer T309 expires prior to the successful establishment of a connection to the target RAT; or
- if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources;

the UE shall:

- 1> if the UE receives the CELL CHANGE ORDER FROM UTRAN message in CELL FACH state:
 - 2> revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
 - 2> if the UE is unable to return to this cell:
 - 3> select a suitable UTRA cell according to [4];
 - 3> initiate the cell update procedure according to subclause 8.3.1 using the cause "cell re-selection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the CELL CHANGE ORDER FROM UTRAN message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".
 - 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 3> the procedure ends.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.5.3 Test purpose

To verify that when UE received CELL CHANGE ORDER FROM UTRAN message in CELL FACH state and if the establishment of the connection to the other RAT failed due to expiry of timer T309 prior to the successful establishment of a connection to the target RAT:

- a. revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
- b. transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message and set the IE "Inter-RAT change failure" to "physical channel failure".

8.3.11.5.4 Method of test

Initial conditions

System Simulator: 2 cells - Cell 1 is UTRAN, Cell 2 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN and location area.

UE: PS-DCCH+DTCH FACH (State 6-11) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies.
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs.
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS_DCCH+DTCH_FACH (state 6-11). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. The UE starts the timer T309. After the UE receives the command it shall configure itself accordingly but cannot complete the cell change, as SS does not respond to the Channel Request message transmitted by UE till the timer T309 expires. The SS checks that the cell change has failed by checking that the UE transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message to the SS in UTRAN cell.

Step	Direction		Message	Comments
	UE	SS		
1	UE			The SS bring the UE into PS-DCCH+DTCH FACH (State 6-11) in cell 1
2		SS		The SS configures cell 2 as a GSM cell with GPRS enabled
3		←	CELL CHANGE ORDER FROM UTRAN	Send on cell 1 (UTRAN cell) and the message indicates: the target cell description for GSM/GPRS.
4	UE			The UE accepts the cell change command and switches to the GSM/GPRS specified in the CELL CHANGE ORDER FROM UTRAN
5		→	CHANNEL REQUEST	The SS receives this burst on RACH of cell 2 (GPRS cell) to establish temporary block flow
6		→		SS does not respond to the channel request. UE transmits CHANNEL REQUEST message M+1 times. The SS does not transmit a response and wait for T309 timer to expire.
7		→	CELL CHANGE ORDER FROM UTRAN FAILURE	The SS receives the message on the old channel of UTRAN cell.

Specific message contents

CELL CHANGE ORDER FROM UTRAN

<u>Information Element</u>	<u>Value/remark</u>
Message Type	
RRC transaction identifier	Arbitrarily selects one integer between 0 to 3
Integrity check info	
- Message authentication code	SS calculates the value of MAC-I for this message and writes to this IE.
- RRC Message sequence number	SS provides the value of this IE, from its internal counter.
Activation time	Now
Target cell description	
- CHOICE Radio Access Technology	
- GSM	
- BSIC	BSIC1
- Band Indicator	DCS 1800 band used
- BCCH ARFCN	1
- NC mode	Not present

CELL CHANGE ORDER FROM UTRAN FAILURE

<u>Information Element</u>	<u>Value/remark</u>
Message Type	
RRC transaction identifier	Checked to see if it matches the same value used in the corresponding downlink CELL CHANGE ORDER FROM UTRAN message
Integrity check info	
- Message authentication code	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- RRC Message sequence number	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
Inter-RAT change failure	
-Inter-RAT change failure cause	physical channel failure

8.3.11.5 Test requirement

In step 5 the UE shall transmit a CHANNEL REQUEST message on RACH.

In step 7 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.11.6 Inter-RAT cell change order from UTRAN/To GPRS/CELL_FACH/Failure (Physical channel Failure and Reversion Failure)

8.3.11.6.1 Definition8.3.11.6.2 Conformance requirement

If:

- timer T309 expires prior to the successful establishment of a connection to the target RAT; or
- if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources;

the UE shall:

- 1> if the UE receives the CELL CHANGE ORDER FROM UTRAN message in CELL_FACH state:
 - 2> revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
 - 2> if the UE is unable to return to this cell:
 - 3> select a suitable UTRA cell according to [4];
 - 3> initiate the cell update procedure according to subclause 8.3.1 using the cause "cell re-selection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.
 - 2> transmit the CELL CHANGE ORDER FROM UTRAN FAILURE message setting the information elements as specified below:
 - 3> include the IE "RRC transaction identifier"; and
 - 3> set it to the value of "RRC transaction identifier" in the entry for the CELL CHANGE ORDER FROM UTRAN message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry;
 - 3> set the IE "Inter-RAT change failure" to "physical channel failure".
 - 2> When the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layer for transmission:
 - 3> the procedure ends.

Reference(s)TS 25.331 clause 8.3.118.3.11.6.3 Test purpose

To verify that when UE received CELL CHANGE ORDER FROM UTRAN message in CELL FACH state and if the establishment of the connection to the other RAT failed due to other reasons e.g. (random) access failure, rejection due to lack of resources:

- a. revert to the cell it was camped on at the reception of the CELL CHANGE ORDER FROM UTRAN message;
- b. if the UE is unable to return to this cell:
- select a suitable UTRA cell;
- c. initiate the cell update procedure using the cause "cell re-selection";
- d. when the cell update procedure is completed successfully, it transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message and set the IE "Inter-RAT change failure" to "physical channel failure".

8.3.11.6.4 Method of testInitial conditions

System Simulator: 3 cells - Cell 1, Cell 2 are UTRAN, Cell 3 is GPRS. 51.010 clauses 20.22 and 40.1.1 shall be referenced for the default parameters of cell 2.

All cells belong to the same PLMN and location area.

UE: PS-DCCH+DTCH FACH (State 6-11) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies.
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs.
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Test ProcedureTable 8.3.11.6

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84 MHz	-60	-75	-75	-60

Table 8.3.11.6 illustrates the downlink power to be applied for the 2 UTRAN cells at various time instants of the test execution. SS switches the power settings between columns "T0" and "T1", whenever the description in multi-cell condition specifies a reverse in the transmission power settings for cell 1 and cell 2.

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_FACH (state 6-11). The SS starts GPRS cell, then sends CELL CHANGE ORDER FROM UTRAN indicating the target cell description, GPRS cell, to the UE through DCCH of the serving UTRAN cell. The UE receives the command and configures itself accordingly but cannot complete the cell change and wants to revert to the old configuration, but the UE cannot revert to the old configuration because the SS shall not use the old configuration. The SS configures its downlink transmission power settings according to columns "T1" in table 8.3.11.6. The UE transmits CELL UPDATE message on uplink CCCH with IE "Cell update cause" set to "cell reselection". The SS shall transmit CELL UPDATE CONFIRM message on downlink CCCH after receiving CELL UPDATE message. The UE transmits the CELL CHANGE ORDER FAILURE message to the SS in UTRAN cell, on the DCCH using AM RLC, setting the value of IE "Inter-RAT change failure" to "physical channel failure".

Step	Direction		Message	Comments
	UE	SS		
1		→		The SS bring the UE into PS-DCCH+DTCH_FACH (State 6-11) in cell 1
2		→		The SS configures cell 2 as a GSM cell with GPRS enabled
3		←	CELL CHANGE ORDER FROM UTRAN	Send on cell 1 (UTRAN cell) and the message indicates: The target cell description for GSM/GPRS.
4		→		The UE accepts the cell change command and switches to the GSM/GPRS specified in the CELL CHANGE ORDER FROM UTRAN
5		→	CHANNEL REQUEST	The SS receives this burst on the traffic channel of cell 2 (GPRS cell) to establish temporary block flow It implies that the UE has switched to GPRS cell.
6		←	IMMEDIATE ASSIGNMENT REJECT	SS rejects the channel request
7		→		SS removes the Physical channel (DPCH) allocated to the mobile before handover command transmission
8		→		The SS applies the downlink transmission power settings, according to the values in columns "T1" of table 8.3.11.6.
9		→	CELL UPDATE	The value "cell reselection" shall be set in IE "Cell update cause".
10		←	CELL UPDATE CONFIRM	See message content.
11		→	CELL CHANGE ORDER FROM UTRAN FAILURE	The IE "Inter-RAT failure cause" shall be set to "physical channel failure"

Specific message contentsCELL CHANGE ORDER FROM UTRAN

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u>	
<u>RRC transaction identifier</u>	Arbitrarily selects one integer between 0 to 3
<u>Integrity check info</u>	
- <u>Message authentication code</u>	SS calculates the value of MAC-I for this message and writes to this IE.
- <u>RRC Message sequence number</u>	SS provides the value of this IE, from its internal counter.
<u>Activation time</u>	Now
<u>Target cell description</u>	
- <u>CHOICE Radio Access Technology</u>	
- <u>GSM</u>	
- <u>BSIC</u>	BSIC1
- <u>Band Indicator</u>	DCS 1800 band used
- <u>BCCH ARFCN</u>	1
- <u>NC mode</u>	Not present

CELL UPDATE (Step 8)

The contents of CELL UPDATE message is identical as "Contents of CELL UPDATE message" as found in TS 34.108, clause 9, with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>Cell Update Cause</u>	"cell reselection"

CELL UPDATE CONFIRM (Step 9)

The contents of CELL UPDATE CONFIRM message is identical as "CELL UPDATE CONFIRM message" as found in TS 34.108, clause 9

CELL CHANGE ORDER FROM UTRAN FAILURE

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u>	
<u>RRC transaction identifier</u>	Checked to see if it matches the same value used in the corresponding downlink CELL CHANGE ORDER FROM UTRAN message
<u>Integrity check info</u>	
- <u>Message authentication code</u>	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
- <u>RRC Message sequence number</u>	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
<u>Inter-RAT change failure</u>	
- <u>Inter-RAT change failure cause</u>	physical channel failure

8.3.11.6.5 Test requirement

In step 5 the UE shall transmit a CHANNEL REQUEST message on RACH.

In step 9 the SS shall receive CELL UPDATE message on the old channel of the UTRAN cell with the IE "Cell update cause" set to cause "cell reselection".

In step 11 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message with the IE "Inter-RAT change failure cause" set to "physical channel failure".

8.3.11.7 Inter-RAT cell change order from UTRAN/To GPRS/ Failure (Unsupported configuration)

8.3.11.7.1 Definition

8.3.11.7.2 Conformance requirement

If the UTRAN instructs the UE to perform a non-supported cell change order scenario or to use a non-supported configuration, the UE shall:

- 1> transmit a CELL CHANGE ORDER FROM UTRAN FAILURE message, setting the information elements as specified below:
- 2> include the IE "RRC transaction identifier"; and
- 2> set it to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 2> clear that entry;
- 2> set the IE "Inter-RAT change failure" to "configuration unacceptable";
- 2> when the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layers for transmission:
 - 3> resume normal operation as if the CELL CHANGE ORDER FROM UTRAN message has not been received;
 - 3> and the procedure ends.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.7.3 Test purpose

To verify if the UTRAN instructs the UE to perform a non-supported cell change order or to use a non-supported configuration, the UE shall:

- a. Transmit a CELL CHANGE ORDER FROM UTRAN FAILURE message, setting the IE "Inter-RAT change failure" to "configuration unacceptable";
- b. Resume normal operation

8.3.11.7.4 Method of test

Initial conditions

System Simulator : 1 UTRAN cell

UE : PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies.

- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs,
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480,

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH DCH (state 6-10). The SS then sends a CELL CHANGE ORDER FROM UTRAN message including a Configuration not Supported by the UE, to the UE through DCCH of the serving UTRAN cell. The UE receives the command and finds that the configuration given in cell change message is not supported. The SS checks that the cell change is failed by checking that the UE transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message to the SS in UTRAN cell with the IE "Inter-RAT change failure" set to "configuration unsupported".

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comments</u>
	<u>UE</u>	<u>SS</u>		
1	<u>UE</u>			The SS brings the UE into PS-DCCH+DTCH DCH (State 6-10) in cell 1
2		←	<u>CELL CHANGE ORDER FROM UTRAN</u>	Send on cell 1 (UTRAN cell) and the message carries an unsupported configuration. Cell change order to a Band not supported by the UE
3		→	<u>CELL CHANGE ORDER FROM UTRAN FAILURE</u>	The SS receives the message on the old channel of UTRAN cell.

Specific message contents

CELL CHANGE ORDER FROM UTRAN

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u>	
<u>RRC transaction identifier</u>	Arbitrarily selects one integer between 0 to 3
<u>Integrity check info</u>	
<u>- Message authentication code</u>	SS calculates the value of MAC-I for this message and writes to this IE.
<u>- RRC Message sequence number</u>	SS provides the value of this IE, from its internal counter.
<u>Activation time</u>	Now
<u>Target cell description</u>	Contains a Configuration not supported By the UE (Cell change order to a Band not supported by the UE)

CELL CHANGE ORDER FROM UTRAN FAILURE

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u>	
<u>RRC transaction identifier</u>	Checked to see if it matches the same value used in the corresponding downlink CELL CHANGE ORDER FROM UTRAN message
<u>Integrity check info</u>	
<u>- Message authentication code</u>	This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.
<u>- RRC Message sequence number</u>	This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.
<u>Inter-RAT change failure</u>	
<u>-Inter-RAT change failure cause</u>	configuration unsupported

8.3.11.7.5 Test requirement

In step 3 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

8.3.11.8 Inter-RAT cell change order from UTRAN/To GPRS/ Failure (Invalid Inter-RAT message)

8.3.11.8.1 Definition

8.3.11.8.2 Conformance requirement

If the CELL CHANGE ORDER FROM UTRAN message contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> set the IE "RRC transaction identifier" in the CELL CHANGE ORDER FROM UTRAN FAILURE message to the value of "RRC transaction identifier" in the entry for the CELL CHANGE ORDER FROM UTRAN message in the table "Rejected transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "Inter-RAT change failure" to the cause value "protocol error";
- 1> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION;
- 1> transmit a CELL CHANGE ORDER FROM UTRAN FAILURE message on the uplink DCCH using AM RLC;
- 1> when the CELL CHANGE ORDER FROM UTRAN FAILURE message has been submitted to lower layers for transmission:
 - 2> resume normal operation as if the invalid CELL CHANGE ORDER FROM UTRAN message has not been received;
 - 2> and the procedure ends.

Reference(s)

TS 25.331 clause 8.3.11

8.3.11.8.3 Test purpose

To verify that the UE shall keep its old configuration and transmit a CELL CHANGE ORDER FROM UTRAN FAILURE message, with the "Inter-RAT change failure" set to "protocol error", when it receives a CELL CHANGE ORDER FROM UTRAN message, not including a valid message in accordance with the protocol specifications for the target RAT.

8.3.11.8.4 Method of test

Initial conditions

System Simulator: 1 UTRAN cell

UE: PS-DCCH+DTCH_DCH (State 6-10) in cell 1 as specified in clause 7.4 of TS 34.108, one PS domain RAB is established.

Related ICS/IXIT statement

- UE supports both GSM/GPRS and UTRAN Radio Access Technologies.
- UE supports UTRAN interactive/ background UL: 64kbps, DL: 64 kbps/PS RAB + uplink:3.4 DL:3.4 kbps SRBs.
- UE supports GSM-P, GSM-E, GSM-DCS, GSM-450, GSM-480.

Test Procedure

The SS starts the UTRAN cell and brings the UE into PS-DCCH+DTCH_DCH (state 6-10). The SS then sends a CELL CHANGE ORDER FROM UTRAN message not including a valid cell change order from UTRAN message in accordance with the protocol specifications for the target RAT, to the UE through DCCH of the serving UTRAN cell. The UE receives the command and finds that the cell change order message is Invalid. The SS checks that the cell change is failed by checking that the UE transmits the CELL CHANGE ORDER FROM UTRAN FAILURE message to the SS in UTRAN cell with the IE "Inter-RAT change failure cause" set to "protocol error".

<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>The SS bring the UE into PS-DCCH+DTCH_DCH (State 6-10) in cell 1</u>
<u>2</u>		<u>←</u>	<u>CELL CHANGE ORDER FROM UTRAN</u>	<u>Send on cell 1 (UTRAN cell) and the message carries an invalid CELL CHANGE ORDER FROM UTRAN.</u>
<u>3</u>		<u>→</u>	<u>CELL CHANGE ORDER FROM UTRAN FAILURE</u>	<u>The SS receives the message on the old channel of UTRAN cell</u>

Specific message contents

CELL CHANGE ORDER FROM UTRAN

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u>	
<u>RRC transaction identifier</u>	<u>Arbitrarily selects one integer between 0 to 3</u>
<u>Integrity check info</u>	
<u> - Message authentication code</u>	<u>SS calculates the value of MAC-I for this message and writes to this IE.</u>
<u> - RRC Message sequence number</u>	<u>SS provides the value of this IE, from its internal counter.</u>
<u>Activation time</u>	<u>Now</u>
<u>Target cell description</u>	
<u> - CHOICE Radio Access Technology</u>	<u>Spare2</u>

CELL CHANGE ORDER FROM UTRAN FAILURE

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>RRC transaction identifier</u>	<u>Checked to see if it matches the same value used in the corresponding downlink CELL CHANGE ORDER FROM UTRAN message</u>
<u>Integrity check info</u> <u>- Message authentication code</u> <u>- RRC Message sequence number</u>	<u>This IE is checked to see if it is present. The value is compared against the XMAC-I value computed by SS.</u> <u>This IE is checked to see if it is present. The value is used by SS to compute the XMAC-I value.</u>
<u>Inter-RAT change failure</u> <u>-Inter-RAT change failure cause</u>	<u>protocol error</u>

8.3.11.8.5 Test requirement

In step 3 the SS shall receive CELL CHANGE ORDER FROM UTRAN FAILURE message on the old channel of the UTRAN cell.

<End of modification>

CHANGE REQUEST

⌘ **34.123-1 CR 525** ⌘ rev - ⌘ Current version: **5.3.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ New test cases for radio link failure [revision to T1-030565, T1-030725]		
Source:	⌘ Panasonic		
Work item code:	⌘ TEI	Date:	⌘ 30/04/2003
Category:	⌘ F	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ In T1-SIG #27 meeting, Panasonic presented T1S030217 to inform that coverage for radio link failure testing is insufficient and therefore proposed to add 6 new test cases.
	<p>Changes to T1-030565</p> <ul style="list-style-type: none"> • It shall be specified whether CELL UPDATE CONFIRM message is sent on downlink DCCH or CCCH. • When radio link failure occurs, it is a typical network behaviour to include only physical channel information, but not transport channel information, in CELL UPDATE CONFIRM message, sent in response to cell update with cause "radio link failure". Therefore, it is proposed to remove transport channel information in all test cases in this CR, leaving only TC 8.3.1.18 for wider test coverage. <p>Changes to T1-030725</p> <p>Corrections shall not be made to CR, but to test spec. (editorial)</p>
Summary of change:	⌘ The new test cases and corrections proposed in this document is similar to that in T1S030217, which was agreed in T1-SIG #27 meeting. The only exception is that in TC 8.3.1.18, transport channel info is added to CELL UPDATE CONFIRM message and thus TRANSPORT CHANNEL RECONFIGURATION COMPLETE message is expected by the SS in step 12.
	<p>Changes to T1-030565</p> <ul style="list-style-type: none"> • It is specified whether CELL UPDATE CONFIRM message is sent on downlink DCCH or CCCH. • Transport channel information in CELL UPDATE CONFIRM message is

removed for all test cases, except in TC 8.3.1.18.

Changes to T1-030725

Corrections to CR are removed. Please note that such corrections are without revision mark. (editorial)

Consequences if not approved: ☹ Lack in test coverage for radio link failure scenarios.

Clauses affected: ☹ 8.3.1.18, 8.3.1.25 (new), 8.3.1.26 (new), 8.3.1.27 (new), 8.3.1.28 (new), 8.3.1.29 (new), 8.3.1.30 (new),

Other specs affected:

	Y	N		
	X		Other core specifications	☹
	X		Test specifications	TS 34.123-2
		X	O&M Specifications	

Other comments: ☹

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>.

Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ☹ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

<Start of Modifications>

8.3.1.18 Cell Update: Radio Link Failure (T314>0, T315=0), [CS RAB established](#)

8.3.1.18.1 Definition

8.3.1.18.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

- 2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and
- 2> if the UE is in CELL_DCH state; and
- 2> if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:
 - 3> perform cell update using the cause "radio link failure".

...

When initiating the cell update procedure, the UE shall:

1> stop timer T305;

1> if the UE is in CELL_DCH state:

- 2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;
- 2> if the stored values of the timer T314 and timer T315 are both equal to zero; or
- 2> if the stored value of the timer T314 is equal to zero and there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315":

...

2> if the stored value of the timer T314 is equal to zero:

...

2> if the stored value of the timer T315 is equal to zero:

- 3> release all radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315";
- 3> in the variable RB_TIMER_INDICATOR set the IE "T315 expired" to TRUE.

2> if the stored value of the timer T314 is greater than zero:

- 3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314":
 - 4> start timer T314.

- 3> if there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314" or "useT315":
 - 4> start timer T314.
- 2> if the stored value of the timer T315 is greater than zero:
 - ...
- 2> for the released radio bearer(s):
 - 3> delete the information about the radio bearer from the variable ESTABLISHED_RABS;
 - 3> when all radio bearers belonging to the same radio access bearer have been released:
 - 4> indicate local end release of the radio access bearer to upper layers using the CN domain identity together with the RAB identity stored in the variable ESTABLISHED_RABS;
 - 4> delete all information about the radio access bearer from the variable ESTABLISHED_RABS.
- 2> select a suitable UTRA cell according to TS 25.304;
- 2> set the variable ORDERED_RECONFIGURATION to FALSE.
- 1> set the variables PROTOCOL_ERROR_INDICATOR, FAILURE_INDICATOR, UNSUPPORTED_CONFIGURATION and INVALID_CONFIGURATION to FALSE;
- 1> set the variable CELL_UPDATE_STARTED to TRUE;

1> if the UE is not already in CELL_FACH state:

- 2> move to CELL_FACH state;
- 2> select PRACH according to TS 25.331 subclause 8.5.17;
- 2> select Secondary CCPCH according to TS 25.331 subclause 8.5.19;
- 2> use the transport format set given in system information as specified in TS 25.331 subclause 8.6.5.1.

~~1> move to CELL_FACH state, if not already in that state;~~

- 1> if the UE performs cell re-selection:
 - 2> clear the variable C_RNTI; and
 - 2> stop using that C_RNTI just cleared from the variable C_RNTI in MAC.
- 1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;
- 1> in case of a cell update procedure:
 - 2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;
 - 2> submit the CELL UPDATE message for transmission on the uplink CCCH.
- 1> set counter V302 to 1;
- 1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.

...

If the received CELL UPDATE CONFIRM message would cause the UE to transit to CELL_DCH state; and

1> if the UE failed to establish the physical channel(s) indicated in the received CELL UPDATE CONFIRM message according to the criteria defined in TS 25.331 subclause 8.5.4 are not fulfilled; or

~~1> in case of a received CELL_UPDATE_CONFIRM message:~~

~~2> if the UE failed to establish the physical channel(s) indicated in the received CELL UPDATE CONFIRM message~~

...

the UE shall:

1> if the variable ORDERED_RECONFIGURATION is set to TRUE caused by the received CELL UPDATE CONFIRM message in case of a cell update procedure:

2> set the variable ORDERED_RECONFIGURATION to FALSE.

1> if V302 is equal to or smaller than N302:

2> select a suitable UTRA cell according to TS 25.304;

2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3, except for the IE "Cell update cause" which shall be set to "Radio link failure";

2> submit the CELL UPDATE message for transmission on the uplink CCCH;

2> increment counter V302;

2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.

1> if V302 is greater than N302:

...

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.18.3 Test purpose

1. 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 after detecting that a radio link failure has occurred.
2. To confirm that the UE performs a cell selection procedure when it fails to configure the physical channel(s) indicated in the CELL UPDATE CONFIRM message.

8.3.1.18.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 and cell 2 are ~~is active, Cell 2 is inactive~~).

UE: CS_DCCH+DTCH_DCH (state 6-9) ~~or PS_DCCH+DTCH_DCH (state 6-10) in cell 1, depending on the CN domain(s) supported by the UE. PS+CS-DCCH+DTCH_DCH (state 6-14) in cell 1, if UE supports both CS and PS domains.~~

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled "System Information Block type 1 (supported PLMN type is GSM-MAP)" as found in TS 34.108 clause 6, with the following exception.

<u>Information Element</u>	<u>Value/remark</u>
<u>- T315</u>	<u>0</u>

Test Procedure

Table 8.3.1.18

Parameter	Unit	Cell 1		Cell 2	
		T0	T1	T0	T1
UTRA RF Channel Number		Ch. 1		Ch. 1	
CPICH Ec (FDD)	dBm/3.84MHz	-60	OFF	-75	-60
P-CCPCH RSCP (TDD)	dBm	-60	OFF	-75	-60

Table 8.3.1.18 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Columns marked "T0" denote the initial conditions.

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, SS ~~transmits UTRAN MOBILITY INFORMATION message to UE to change to value of T315 timer. UE shall respond with a UTRAN MOBILITY INFORMATION CONFIRM message.~~ SS configures its downlink transmission power settings according to columns "T1" in table 8.3.1.18. The UE shall detect a radio link failure in cell 1.

~~UE shall release of the radio bearer which is associated with T315, if the latter has been set up in the initial condition. and indicate to the non-access stratum the release of the radio bearer which is associated with T315.~~

Then it shall attempt to re-select to cell 2. After that, it shall then enter CELL_FACH state and transmit CELL UPDATE on the uplink CCCH to SS. The SS transmits CELL UPDATE CONFIRM message which includes dedicated ~~transport and~~ physical channel parameters on downlink DCCH. SS shall not configure according to this message. Instead, SS configures its downlink transmission power settings according to columns "T0" in table 8.3.1.18. UE shall fail to establish the dedicated channel in cell 2. UE shall re-select to cell 1 and transmit a CELL UPDATE message with IE "Cell update cause" set to "Radio link failure". Then SS responds with a CELL UPDATE CONFIRM message on downlink DCCH to end the procedure. ~~Then the UE shall transmit an UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH to acknowledge the receipt of the new UE identities. Then the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH.~~

~~If the initial condition of the UE is in state 6-10 or 6-14, SS transmits COUNTER CHECK message to UE. UE shall transmit a COUNTER CHECK RESPONSE message back to SS.~~

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
0				In the initial set up procedure, the SS shall request UE to associate timer T315 with the new RAB.
1		←	Void	UTRAN MOBILITY INFORMATION
2		→	Void	UTRAN MOBILITY INFORMATION CONFIRM
3			Void	
4				SS configures cell 1 and 2 according to column "T1" in table 8.3.1.18. SS starts to listen to the uplink CCCH of cell 2.
5			Void	
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		→	CELL UPDATE	The UE shall find a new cell 2 and the value "radio link failure" shall be set in IE "Cell update cause".
8		←	CELL UPDATE CONFIRM	Including dedicated physical channel parameters.
9				SS does not configure according to the message in step 8. SS configures cell 1 and 2 according to column "T0" in table 8.3.1.18.
10		→	CELL UPDATE	UE shall select cell 1 and enter CELL_FACH state to transmit this message
11		←	CELL UPDATE CONFIRM	See message content.
12		→	UTRAN MOBILITY INFORMATION CONFIRM	TRANSPORT CHANNEL RECONFIGURATION COMPLETE

Specific Message Contents

~~UTRAN MOBILITY INFORMATION (Step 1)~~

The contents of UTRAN MOBILITY INFORMATION message in this test case is identical to those in TS 34.108 clause 9 with the following exceptions:

Information Element	Value/remark
New U-RNTI	Not Present
New C-RNTI	Not Present
UE Timers and constants in connected mode	
—— T315	0

CELL UPDATE (Step 7)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI -SRNC Identity - S-RNTI Cell Update Cause RB timer indicator - T314 expired - T315 expired	Check to see if set to value assigned in cell 1. Check to see if set to value assigned in cell 1. Check to see if set to 'radio link failure' FALSE TRUE

CELL UPDATE CONFIRM (Step 8 [and](#) 11)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
RRC State indicator	CELL_DCH
UL Transport channel information common for all transport channels	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
Added or Reconfigured TrCH information list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
DL Transport channel information common for all transport channels	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
Added or Reconfigured TrCH information list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
CHOICE channel requirement	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
Downlink information common for all radio links	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.
Downlink information per radio link list	Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement	Same as the set defined in the RADIO BEARER SETUP message in initial condition.

CELL UPDATE (Step 10)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI -SRNC Identity - S-RNTI Cell Update Cause	Check to see if set to value assigned in cell 1. Check to see if set to value assigned in cell 1. Check to see if set to 'radio link failure'

~~CELL UPDATE CONFIRM (Step 11)~~

~~Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:~~

Information Element	Value/remark
New C-RNTI	'1010 1010 1010 1010'

8.3.1.18.5 Test requirement

~~After step 1, the UE shall transmit UTRAN MOBILITY INFORMATION CONFIRM message.~~

After step 6, the UE shall detect the presence of cell 2, perform cell re-selection and transmit a CELL UPDATE message.

After step 9, the UE shall transmit a CELL UPDATE message with IE "Cell update cause" set to "Radio link failure".

After step 11, the UE shall transmit a ~~UTRAN MOBILITY INFORMATION CONFIRM~~ **TRANSPORT CHANNEL RECONFIGURATION COMPLETE** message on the uplink DCCH using AM RLC.

<End of Modifications>

<Start of Modifications>

8.3.1.25 CELL UPDATE: Radio Link Failure (T314=0, T315=0)

8.3.1.25.1 Definition

8.3.1.25.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met:

3> if the UE is in CELL_DCH state and the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6; or

...

4> perform cell update using the cause "radio link failure".

When initiating cell update procedure, the UE shall:

...

1> if the UE is in CELL_DCH state:

...

2> if the stored values of the timer T314 and timer T315 are both equal to zero; or

...

3> release all its radio resources;

3> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;

3> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;

3> clear the variable ESTABLISHED_RABS;

3> enter idle mode;

3> perform other actions when entering idle mode from connected mode as specified in TS 25.331 subclause 8.5.2;

3> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1.2

8.3.1.25.3 Test purpose

1. To confirm that the UE releases all resources and enters idle mode when there is a radio link failure.

8.3.1.25.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 and Cell 2 are active).

UE: PS-DCCH+DTCH_DCH (state 6-10) or CS-DCCH+DTCH_DCH (state 6-9) in cell 1 as specified in clause 7.4 of TS 34.108, depending on the CN domain(s) supported by the UE. PS+CS-DCCH+DTCH_DCH (state 6-14) in cell 1, if UE supports both CS and PS domains.

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled “System Information Block type 1 (supported PLMN type is GSM-MAP)” as found in TS 34.108 clause 6, with the following exception.

<u>Information Element</u>	<u>Value/remark</u>
<u>- T314</u>	<u>0</u>
<u>- T315</u>	<u>0</u>

Test Procedure

Table 8.3.1.25

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>		<u>Cell 2</u>	
		<u>T0</u>	<u>T1</u>	<u>T0</u>	<u>T1</u>
<u>UTRA RF Channel Number</u>		<u>Ch. 1</u>		<u>Ch. 1</u>	
<u>CPICH Ec (FDD)</u>	<u>dBm/3.84MHz</u>	<u>-60</u>	<u>OFF</u>	<u>-75</u>	<u>-60</u>
<u>P-CCPCH RSCP (TDD)</u>	<u>dBm</u>	<u>-60</u>	<u>OFF</u>	<u>-75</u>	<u>-60</u>

Table 8.3.1.25 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked ‘T0’ denote the initial conditions.

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, SS configures its downlink transmission power settings according to column 'T1' in table 8.3.1.25. The UE shall detect a radio link failure in cell 1 and indicate to the non-access stratum the release of all the radio bearers. Then it shall attempt to re-select to cell 2. After that, it shall then enter idle mode state. SS calls for generic procedure C.1 to check that UE is in Idle Mode state in cell 2.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				In the initial set up procedure, the SS shall request UE to set timer T314 and T315 to 0.
2				SS configures cell 1 and 2 according to column 'T1' in table 8.3.1.25.
3				SS waits for 5 seconds.
4	↔		CALL C.1	SS execute this procedure in cell 2. If the test result of C.1 indicates that UE is in Idle Mode state, the test passes, otherwise it fails.

Specific Message Contents

None.

8.3.1.25.5 Test requirement

After step 2, the UE shall release all its radio bearers.

After step 3, the UE shall be in idle mode state in cell 2.

8.3.1.26 Cell Update: Radio Link Failure (T314>0, T315=0), PS RAB established

8.3.1.26.1 Definition

8.3.1.26.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and

2> if the UE is in CELL_DCH state; and

2> if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:

3> perform cell update using the cause "radio link failure".

...

When initiating the cell update procedure, the UE shall:

1> stop timer T305;

1> if the UE is in CELL_DCH state:

2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;

2> if the stored values of the timer T314 and timer T315 are both equal to zero; or

2> if the stored value of the timer T314 is equal to zero and there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315";

...

2> if the stored value of the timer T314 is equal to zero:

...

2> if the stored value of the timer T315 is equal to zero:

3> release all radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315";

3> in the variable RB_TIMER_INDICATOR set the IE "T315 expired" to TRUE.

2> if the stored value of the timer T314 is greater than zero:

3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314";

4> start timer T314.

3> if there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314" or "useT315";

4> start timer T314.

2> if the stored value of the timer T315 is greater than zero:

...

2> for the released radio bearer(s):

3> delete the information about the radio bearer from the variable ESTABLISHED_RABS;

3> when all radio bearers belonging to the same radio access bearer have been released:

4> indicate local end release of the radio access bearer to upper layers using the CN domain identity together with the RAB identity stored in the variable ESTABLISHED_RABS;

4> delete all information about the radio access bearer from the variable ESTABLISHED_RABS.

2> select a suitable UTRA cell according to TS 25.304;

2> set the variable ORDERED_RECONFIGURATION to FALSE.

1> set the variables PROTOCOL_ERROR_INDICATOR, FAILURE_INDICATOR, UNSUPPORTED_CONFIGURATION and INVALID_CONFIGURATION to FALSE;

1> set the variable CELL_UPDATE_STARTED to TRUE;

1> if the UE is not already in CELL_FACH state:

2> move to CELL_FACH state;

2> select PRACH according to s TS 25.331 ubclause 8.5.17;

2> select Secondary CCPCH according to s TS 25.331 ubclause 8.5.19;

2> use the transport format set given in system information as specified in TS 25.331 subclause 8.6.5.1.

1> if the UE performs cell re-selection:

2> clear the variable C_RNTI; and

2> stop using that C_RNTI just cleared from the variable C_RNTI in MAC.

1> set CFN in relation to SFN of current cell according to TS 25.331 subclause 8.5.15;

1> in case of a cell update procedure:

2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3;

2> submit the CELL UPDATE message for transmission on the uplink CCCH.

1> set counter V302 to 1;

1> start timer T302 when the MAC layer indicates success or failure in transmitting the message.

...

If the received CELL UPDATE CONFIRM message would cause the UE to transit to CELL_DCH state; and

1> in case of a received CELL UPDATE CONFIRM message:

2> if the UE failed to establish the physical channel(s) indicated in the received CELL UPDATE CONFIRM message

...

the UE shall:

1> if the variable ORDERED_RECONFIGURATION is set to TRUE caused by the received CELL UPDATE CONFIRM message in case of a cell update procedure:

2> set the variable ORDERED_RECONFIGURATION to FALSE.

1> if V302 is equal to or smaller than N302:

2> select a suitable UTRA cell according to TS 25.304;

2> set the contents of the CELL UPDATE message according to TS 25.331 subclause 8.3.1.3, except for the IE "Cell update cause" which shall be set to "Radio link failure";

2> submit the CELL UPDATE message for transmission on the uplink CCCH;

2> increment counter V302;

2> restart timer T302 when the MAC layer indicates success or failure to transmit the message.

1> if V302 is greater than N302:

...

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.26.3 Test purpose

1. 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 after detecting that a radio link failure has occurred.

8.3.1.26.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 and cell 2 are active).

UE: PS_DCCH+DTCH_DCH (state 6-10) in cell 1 or PS+CS-DCCH+DTCH_DCH (state 6-14) in cell 1, if UE supports both CS and PS domains.

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled "System Information Block type 1 (supported PLMN type is GSM-MAP)" as found in TS 34.108 clause 6, with the following exception.

<u>Information Element</u>	<u>Value/remark</u>
<u>- T315</u>	<u>0</u>

Test Procedure

Table 8.3.1.26

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>		<u>Cell 2</u>	
		<u>T0</u>	<u>T1</u>	<u>T0</u>	<u>T1</u>
<u>UTRA RF Channel Number</u>		<u>Ch. 1</u>		<u>Ch. 1</u>	
<u>CPICH Ec (FDD)</u>	<u>dBm/3.84MHz</u>	<u>-60</u>	<u>OFF</u>	<u>-75</u>	<u>-60</u>
<u>P-CCPCH RSCP (TDD)</u>	<u>dBm</u>	<u>-60</u>	<u>OFF</u>	<u>-75</u>	<u>-60</u>

Table 8.3.1.26 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked "T0" denote the initial conditions.

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, SS configures its downlink transmission power settings according to column "T1" in table 8.3.1.26. The UE shall detect a radio link failure in cell 1.

UE shall release of the radio bearer which is associated with T315, if the latter has been set up in the initial condition.

Then it shall attempt to re-select to cell 2. After that, it shall then enter CELL_FACH state and transmit CELL_UPDATE on the uplink CCCH to SS. The SS transmits CELL_UPDATE_CONFIRM message which includes dedicated transport and physical channel parameters on downlink DCCH. Then the UE shall transmit a TRANSPORT_CHANNEL_RECONFIGURATION_COMPLETE message on the uplink DCCH.

SS transmits COUNTER_CHECK message to UE. UE shall transmit a COUNTER_CHECK_RESPONSE message back to SS.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS configures cell 1 and 2 according to column "T1" in table 8.3.1.26. SS starts to listen to the uplink CCCH of cell 2.
2				The UE detects the radio link failure.
3		→	CELL UPDATE	The UE shall find a new cell 2 and the value "radio link failure" shall be set in IE "Cell update cause".
4		←	CELL UPDATE CONFIRM	Including dedicated physical channel parameters.
5		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
6		←	COUNTER CHECK	SS sent the COUNT-C info for the RBs that were established in the initial condition.
7		→	COUNTER CHECK RESPONSE	

Specific Message Contents

CELL UPDATE (Step 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

Information Element	Value/remark
U-RNTI	
-SRNC Identity	Check to see if set to value assigned in cell 1.
- S-RNTI	Check to see if set to value assigned in cell 1.
Cell Update Cause	Check to see if set to 'radio link failure'
RB timer indicator	
- T314 expired	FALSE
- T315 expired	TRUE

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

If the initial condition of the UE is in state 6-10, then

Information Element	Value/remark
RRC State indicator	CELL_DCH
CHOICE channel requirement	Same as the set defined in RRC CONNECTION SETUP message: UM (Transition to CELL_DCH) found in TS 34.108 clause 9.
Downlink information common for all radio links	Same as the set defined in RRC CONNECTION SETUP message: UM (Transition to CELL_DCH) found in TS 34.108 clause 9.
Downlink information per radio link list	Same as the set defined in RRC CONNECTION SETUP message: UM (Transition to CELL_DCH) found in TS 34.108 clause 9.

If the initial condition of the UE is in state 6-14, then

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC State indicator</u>	<u>CELL_DCH</u>
<u>CHOICE channel requirement</u>	<u>Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.</u>
<u>Downlink information common for all radio links</u>	<u>Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.</u>
<u>Downlink information per radio link list</u>	<u>Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A1, A2, A7 or A8.</u>

COUNTER CHECK (Step 6)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>RRC transaction identifier</u> <u>Integrity check info</u> <u>RB COUNT-C MSB information</u> <u>- RB identity</u> <u>- COUNT-C MSB uplink</u> <u>- COUNT-C MSB downlink</u>	<u>0</u> <u>Calculated value</u> <u>Set to the RB identity that was release by the UE upon radio link failure</u> <u>Arbitrary COUNT-C MSB</u> <u>Arbitrary COUNT-C MSB</u>

COUNTER CHECK RESPONSE (Step 7)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>RRC transaction identifier</u> <u>Integrity check info</u> <u>RB COUNT-C information</u> <u>- RB identity</u> <u>- COUNT-C uplink</u> <u>- COUNT-C downlink</u>	<u>0</u> <u>Not checked</u> <u>Check to see if set to the RB identity that was release by the UE upon radio link failure</u> <u>Check to see if COUNT-C MSB is set to arbitrary value given in step 13 and LSB is fill with '0'</u> <u>Check to see if COUNT-C MSB is set to arbitrary value given in step 13 and LSB is fill with '0'</u>

8.3.1.26.5 Test requirement

After step 2, the UE shall detect the presence of cell 2, perform cell re-selection and transmit a CELL UPDATE message.

After step 4, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 6, the UE shall transmit a COUNTER CHECK RESPONSE message with the MSB part of the COUNT-C values set identical to COUNT-C MSB values in the COUNTER CHECK message in step 6.

8.3.1.27 Cell Update: Radio Link Failure (T314=0, T315>0), CS RAB

8.3.1.27.1 Definition

8.3.1.27.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and

2> if the UE is in CELL_DCH state; and

2> if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:

3> perform cell update using the cause "radio link failure".

...

When initiating the cell update procedure, the UE shall:

1> stop timer T305;

1> if the UE is in CELL_DCH state:

2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;

...

2> if the stored values of the timer T314 and timer T315 are both equal to zero; or

2> if the stored value of the timer T314 is equal to zero and there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315";

3> release all its radio resources;

3> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;

3> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;

3> clear the variable ESTABLISHED_RABS;

3> enter idle mode;

3> perform other actions when entering idle mode from connected mode as specified in subclause 8.5.2;

3> and the procedure ends.

2> for the released radio bearer(s):

3> delete the information about the radio bearer from the variable ESTABLISHED_RABS;

3> when all radio bearers belonging to the same radio access bearer have been released:

4> indicate local end release of the radio access bearer to upper layers using the CN domain identity together with the RAB identity stored in the variable ESTABLISHED_RABS;

4> delete all information about the radio access bearer from the variable ESTABLISHED_RABS.

2> select a suitable UTRA cell according to TS 25.304;

2> set the variable ORDERED_RECONFIGURATION to FALSE.

...

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.Y.3 Test purpose

1. To confirm that the UE release radio access bearer which is associated with T314 and try to find a new cell after detecting that a radio link failure has occurred.

8.3.1.Y.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 and Cell 2 are active).

UE: CS_DCCH+DTCH_DCH (state 6-9).

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled "System Information Block type 1 (supported PLMN type is GSM-MAP)" as found in TS 34.108 clause 6, with the following exception.

<u>Information Element</u>	<u>Value/remark</u>
<u>- T314</u>	<u>0</u>

Test Procedure

Table 8.3.1.Y

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>		<u>Cell 2</u>	
		<u>T0</u>	<u>T1</u>	<u>T0</u>	<u>T1</u>
<u>UTRA RF Channel Number</u>		<u>Ch. 1</u>		<u>Ch. 1</u>	
<u>CPICH Ec (FDD)</u>	<u>dBm/3.84MHz</u>	<u>-60</u>	<u>OFF</u>	<u>-75</u>	<u>-60</u>
<u>P-CCPCH RSCP (TDD)</u>	<u>dBm</u>	<u>-60</u>	<u>OFF</u>	<u>-75</u>	<u>-60</u>

Table 8.3.1.27 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked 'T0' denote the initial conditions.

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, SS configures its downlink transmission power settings according to column 'T1' in table 8.3.1.27. The UE shall detect a radio link failure in cell 1.

The UE shall release radio bearer associated with T314 and enter idle mode state. SS calls for generic procedure C.1 to check that UE is in Idle Mode state in cell 2.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comment</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>				<u>SS configures cell 1 and 2 according to column 'T1' in table 8.3.1.27. SS starts to listen to the uplink CCCH of cell 2.</u>
<u>2</u>				<u>The UE detects the radio link failure.</u>
<u>3</u>		<u>↔</u>	<u>CALL C.1</u>	<u>SS execute this procedure in cell 2. If the test result of C.1 indicates that UE is in Idle Mode state, the test passes. Otherwise it fails.</u>

Specific Message Contents

None.

8.3.1.27.5 Test requirement

After step 2, the UE shall detect the presence of cell 2 and enter idle mode state in cell 2.

8.3.1.28 Cell Update: Radio Link Failure (T314=0, T315>0), PS RAB

8.3.1.28.1 Definition

8.3.1.28.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and

2> if the UE is in CELL_DCH state; and

2> if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:

3> perform cell update using the cause "radio link failure".

...

When initiating the cell update procedure, the UE shall:

1> stop timer T305;

1> if the UE is in CELL_DCH state:

2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;

2> if the stored values of the timer T314 and timer T315 are both equal to zero; or

2> if the stored value of the timer T314 is equal to zero and there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315";

...

2> if the stored value of the timer T314 is equal to zero:

3> release all radio bearers, associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314";

3> in the variable RB_TIMER_INDICATOR set the IE "T314 expired" to TRUE.

...

2> if the stored value of the timer T315 is greater than zero:

3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315";

4> start timer T315.

2> for the released radio bearer(s):

3> delete the information about the radio bearer from the variable ESTABLISHED_RABS;

3> when all radio bearers belonging to the same radio access bearer have been released:

4> indicate local end release of the radio access bearer to upper layers using the CN domain identity together with the RAB identity stored in the variable ESTABLISHED_RABS;

4> delete all information about the radio access bearer from the variable ESTABLISHED_RABS.

2> select a suitable UTRA cell according to TS 25.304;

2> set the variable ORDERED_RECONFIGURATION to FALSE.

...

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.28.3 Test purpose

1. To confirm that the UE release radio access bearer which is associated with T314 and try to find a new cell after detecting that a radio link failure has occurred.

8.3.1.28.4 Method of test

Initial Condition

System Simulator: 2 cells (Cell 1 and Cell 2 are active).

UE: PS_DCCH+DTCH_DCH (state 6-10) in cell 1 or PS+CS-DCCH+DTCH_DCH (state 6-14) in cell 1, if UE supports both CS and PS domains.

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled “System Information Block type 1 (supported PLMN type is GSM-MAP)” as found in TS 34.108 clause 6, with the following exception.

<u>Information Element</u>	<u>Value/remark</u>
- T314	0

Test Procedure

Table 8.3.1.28

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>		<u>Cell 2</u>	
		T0	T1	T0	T1
<u>UTRA RF Channel Number</u>		<u>Ch. 1</u>		<u>Ch. 1</u>	
<u>CPICH Ec (FDD)</u>	<u>dBm/3.84MHz</u>	<u>-60</u>	<u>OFF</u>	<u>-75</u>	<u>-60</u>
<u>P-CCPCH RSCP (TDD)</u>	<u>dBm</u>	<u>-60</u>	<u>OFF</u>	<u>-75</u>	<u>-60</u>

Table 8.3.1.28 illustrates the downlink power to be applied for the 2 cells at various time instants of the test execution. Column marked ‘T0’ denote the initial conditions.

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, SS configures its downlink transmission power settings according to column ‘T1’ in table 8.3.1.28. The UE shall detect a radio link failure in cell 1.

The UE shall attempt to re-select to cell 2. After that, it shall then enter CELL_FACH state and transmit CELL_UPDATE on the uplink CCCH to SS. The SS transmits CELL_UPDATE_CONFIRM message which includes dedicated transport channel and physical channel parameters on downlink DCCH. Then the UE shall transmit a TRANSPORT_CHANNEL_RECONFIGURATION_COMPLETE message on the uplink DCCH. SS transmits COUNTER_CHECK message to UE. UE shall transmit a COUNTER_CHECK_RESPONSE message back to SS.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comment</u>
	<u>UE</u>	<u>SS</u>		
1				SS configures cell 1 and 2 according to column ‘T1’ in table 8.3.1.28. SS starts to listen to the uplink CCCH of cell 2.
2				The UE detects the radio link failure.
3		→	CELL_UPDATE	The UE shall find a new cell 2 and the value "radio link failure" shall be set in IE "Cell update cause".
4		←	CELL_UPDATE_CONFIRM	See message content.
5		→	TRANSPORT_CHANNEL_RECONFIGURATION_COMPLETE	
6		←	COUNTER_CHECK	SS sent the COUNT-C info for the RBs that were established in the initial condition.
7		→	COUNTER_CHECK_RESPONSE	

Specific Message Contents

CELL UPDATE (Step 3)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

<u>Information Element</u>	<u>Value/remark</u>
<u>U-RNTI</u> <u>- S-RNTI</u> <u>- SRNC Identity</u>	<u>Check to see if set to value assigned in cell</u> <u>1.</u> <u>Check to see if set to value assigned in cell</u> <u>1.</u>
<u>Cell Update Cause</u> <u>RB timer indicator</u> <u>- T314 expired</u> <u>- T315 expired</u>	<u>Check to see if set to 'radio link failure'</u> <u>TRUE</u> <u>FALSE</u>

CELL UPDATE CONFIRM (Step 4)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC State indicator</u>	<u>CELL_DCH</u>
<u>CHOICE channel requirement</u>	<u>Same as the set defined in RADIO BEARER</u> <u>SETUP message found in TS 34.108 clause 9</u> <u>under condition A4.</u>
<u>Downlink information common for all radio links</u>	<u>Same as the set defined in RADIO BEARER</u> <u>SETUP message found in TS 34.108 clause 9</u> <u>under condition A4.</u>
<u>Downlink information per radio link list</u>	<u>Same as the set defined in RADIO BEARER</u> <u>SETUP message found in TS 34.108 clause 9</u> <u>under condition A4.</u>

COUNTER CHECK (Step 7)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>RRC transaction identifier</u> <u>Integrity check info</u> <u>RB COUNT-C MSB information</u> <u>- RB identity</u> <u>- COUNT-C MSB uplink</u> <u>- COUNT-C MSB downlink</u>	<u>0</u> <u>Calculated value</u> <u>Set to the RB identity that was set up in the initial</u> <u>condition</u> <u>Set to the value stored in the SS</u> <u>Set to the value stored in the SS</u>

COUNTER CHECK RESPONSE (Step 8)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u> <u>RRC transaction identifier</u> <u>Integrity check info</u> <u>RB COUNT-C information</u>	<u>0</u> <u>Not checked</u> <u>Not present</u>

8.3.1.28.5 Test requirement

After step 2, the UE shall detect the presence of cell 2, perform cell re-selection and transmit a CELL UPDATE message.

After step 5, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 7, the UE shall transmit a COUNTER CHECK RESPONSE message without including IE "RB COUNT-C information".

8.3.1.29 Cell Update: Radio Link Failure (T314>0, T315>0), CS RAB

8.3.1.29.1 Definition

8.3.1.29.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and

2> if the UE is in CELL_DCH state; and

2> if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:

3> perform cell update using the cause "radio link failure".

...

When initiating the cell update procedure, the UE shall:

...

1> if the UE is in CELL_DCH state:

2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;

...

2> if the stored value of the timer T314 is greater than zero:

3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314":

4> start timer T314.

3> if there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314" or "useT315":

4> start timer T314.

2> if the stored value of the timer T315 is greater than zero:

3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315":

4> start timer T315.

...

Upon expiry of timer T314 the UE shall:

1> if timer T302 is running:

...

1> if timer T302 is not running and timer T315 is running:

2> set IE "T314 expired" in variable RB_TIMER_INDICATOR to TRUE;

2> release locally all radio bearers which are associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314";

2> indicate release of those radio access bearers to upper layers;

2> delete all information about those radio access bearers from the variable ESTABLISHED_RABS.

1> if timers T302 and T315 are not running:

2> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;

2> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;

2> clear the variable PDCP_SN_INFO;

2> clear the entry for the CELL_UPDATE_CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;

2> release all its radio resources;

2> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;

2> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;

2> clear the variable ESTABLISHED_RABS;

2> set the variable CELL_UPDATE_STARTED to FALSE;

2> enter idle mode;

2> other actions the UE shall perform when entering idle mode from connected mode are specified in subclause 8.5.2;

2> and the procedure ends.

Upon expiry of timer T315 the UE shall:

1> if timer T302 is running:

...

1> if timer T302 is not running and timer T314 is running:

2> set IE "T315 expired" in variable RB_TIMER_INDICATOR to TRUE;

2> release locally all radio bearers which are associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "use T315";

2> indicate release of those radio access bearers to upper layers;

2> delete all information about those radio access bearers from the variable ESTABLISHED_RABS.

1> if timers T302 and T314 are not running:

- 2> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;
- 2> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;
- 2> clear the variable PDCP_SN_INFO;
- 2> clear the entry for the CELL_UPDATE_CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;
- 2> release all its radio resources;
- 2> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;
- 2> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;
- 2> clear the variable ESTABLISHED_RABS;
- 2> set the variable CELL_UPDATE_STARTED to FALSE;
- 2> enter idle mode;
- 2> other actions the UE shall perform when entering idle mode from connected mode are specified in subclause 8.5.2;
- 2> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.29.3 Test purpose

1. 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 after detecting that a radio link failure has occurred.
2. To confirm that the UE shall indicate to the non-access stratum the release of radio access bearer which is associated with T314 and try to find a new cell after detecting that a radio link failure has occurred.
3. To confirm that the UE enters idle mode after T314 expires and T302 and T315 are not running.
4. To confirm that the UE enters idle mode after T315 expires and T302 and T314 are not running.

8.3.1.29.4 Method of test

Initial Condition

System Simulator: 1 cell (Cell 1 is active).

UE: CS_DCCH+DTCH_DCH (state 6-9).

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled "System Information Block type 1 (supported PLMN type is GSM-MAP)" as found in TS 34.108 clause 6, with the following exception.

<u>Information Element</u>	<u>Value/remark</u>
- T314	10
- T315	40

Test Procedure

Table 8.3.1.29

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	
		<u>T0</u>	<u>T1</u>
<u>UTRA RF Channel Number</u>		<u>Ch. 1</u>	
<u>CPICH Ec (FDD)</u>	<u>dBm/3.84MHz</u>	<u>-60</u>	<u>OFF</u>
<u>P-CCPCH RSCP (TDD)</u>	<u>dBm</u>	<u>-60</u>	<u>OFF</u>

The UE is brought to CELL_DCH state after making a successful outgoing call attempt. After the call has been established, SS configures its downlink transmission power settings according to column 'T1' in table 8.3.1.29. The UE shall detect a radio link failure in cell 1.

The SS shall wait for 12s (see Note 1) and then configure its downlink transmission power settings according to column 'T0' in table 8.3.1.29. The UE shall release radio bearer associated with T314 and enter idle mode state. SS calls for generic procedure C.1 to check that UE is in Idle Mode state in cell 1.

Note 1: Considering the timer tolerance of the UE, T314 may expire between 10s±0.25s, therefore the SS must wait for at least 10.25s before it reconfigures its downlink transmission power. Since SS has a timer tolerance of 10% or 2*TTI+55ms (consider the greater value of the two), the test case shall set the SS to reconfigure the power level 12s after the it configures the power settings according to column 'T1' in table 8.3.1.29.

Expected sequence

<u>Step</u>	<u>Direction</u>		<u>Message</u>	<u>Comment</u>
	<u>UE</u>	<u>SS</u>		
<u>1</u>				<u>SS configures cell 1 according to column 'T1' in table 8.3.1.29.</u>
<u>2</u>				<u>SS waits for 12s after the completion of step 1 and then configures cell 1 according to column 'T0' in table 8.3.1.29.</u>
<u>3</u>	<u>↔</u>		<u>CALL C.1</u>	<u>SS execute this procedure in cell 1. If the test result of C.1 indicates that UE is in Idle Mode state, the test passes. Otherwise it fails.</u>

Specific Message Contents

None.

8.3.1.29.5 Test requirement

After step 2, the UE shall detect the presence of cell 1 and enter idle mode state in cell 1.

8.3.1.30 Cell Update: Radio Link Failure (T314>0, T315>0), PS RAB

8.3.1.30.1 Definition

8.3.1.30.2 Conformance requirement

A UE shall initiate the cell update procedure in the following cases:

1> Uplink data transmission:

...

1> Paging response:

...

1> Radio link failure:

2> if none of the criteria for performing cell update with the causes specified above in the current subclause is met; and

2> if the UE is in CELL_DCH state; and

2> if the criteria for radio link failure is met as specified in TS 25.331 subclause 8.5.6:

3> perform cell update using the cause "radio link failure".

...

When initiating the cell update procedure, the UE shall:

...

1> if the UE is in CELL_DCH state:

2> in the variable RB_TIMER_INDICATOR, set the IE "T314 expired" and the IE "T315 expired" to FALSE;

...

2> if the stored value of the timer T314 is greater than zero:

3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314":

4> start timer T314.

3> if there are no radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314" or "useT315":

4> start timer T314.

2> if the stored value of the timer T315 is greater than zero:

3> if there are radio bearers associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT315":

4> start timer T315.

...

Upon expiry of timer T314 the UE shall:

1> if timer T302 is running:

...

1> if timer T302 is not running and timer T315 is running:

2> set IE "T314 expired" in variable RB_TIMER_INDICATOR to TRUE;

2> release locally all radio bearers which are associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "useT314";

2> indicate release of those radio access bearers to upper layers;

2> delete all information about those radio access bearers from the variable ESTABLISHED_RABS.

1> if timers T302 and T315 are not running:

2> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;

2> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;

2> clear the variable PDCP_SN_INFO;

2> clear the entry for the CELL_UPDATE_CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;

2> release all its radio resources;

2> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;

2> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;

2> clear the variable ESTABLISHED_RABS;

2> set the variable CELL_UPDATE_STARTED to FALSE;

2> enter idle mode;

2> other actions the UE shall perform when entering idle mode from connected mode are specified in subclause 8.5.2;

2> and the procedure ends.

Upon expiry of timer T315 the UE shall:

1> if timer T302 is running:

...

1> if timer T302 is not running and timer T314 is running:

2> set IE "T315 expired" in variable RB_TIMER_INDICATOR to TRUE;

2> release locally all radio bearers which are associated with any radio access bearers for which in the variable ESTABLISHED_RABS the value of the IE "Re-establishment timer" is set to "use T315";

2> indicate release of those radio access bearers to upper layers;

2> delete all information about those radio access bearers from the variable ESTABLISHED_RABS.

1> if timers T302 and T314 are not running:

2> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO;

2> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO;

2> clear the variable PDCP_SN_INFO;

2> clear the entry for the CELL_UPDATE_CONFIRM message in the table "Rejected transactions" in the variable TRANSACTIONS;

2> release all its radio resources;

2> indicate release (abort) of the established signalling connections (as stored in the variable ESTABLISHED_SIGNALLING_CONNECTIONS) and established radio access bearers (as stored in the variable ESTABLISHED_RABS) to upper layers;

2> clear the variable ESTABLISHED_SIGNALLING_CONNECTIONS;

2> clear the variable ESTABLISHED_RABS;

2> set the variable CELL_UPDATE_STARTED to FALSE;

2> enter idle mode;

2> other actions the UE shall perform when entering idle mode from connected mode are specified in subclause 8.5.2;

2> and the procedure ends.

Reference

3GPP TS 25.331 clause 8.3.1

8.3.1.30.3 Test purpose

1. 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 after detecting that a radio link failure has occurred.
2. To confirm that the UE shall indicate to the non-access stratum the release of radio access bearer which is associated with T314 and try to find a new cell after detecting that a radio link failure has occurred.
3. To confirm that the UE enters idle mode after T314 expires and T302 and T315 are not running.
4. To confirm that the UE enters idle mode after T315 expires and T302 and T314 are not running.

8.3.1.30.4 Method of test

Initial Condition

System Simulator: 1 cell (Cell 1 is active).

UE: PS_DCCH+DTCH_DCH (state 6-10 or PS+CS-DCCH+DTCH_DCH (state 6-14), if UE supports both CS and PS domains.

Specific Message Content

For SIB type 1 message to be transmitted throughout the test, use the message titled "System Information Block type 1 (supported PLMN type is GSM-MAP)" as found in TS 34.108 clause 6, with the following exception.

<u>Information Element</u>	<u>Value/remark</u>
- T314	10
- T315	40

Test Procedure

Table 8.3.1.30

<u>Parameter</u>	<u>Unit</u>	<u>Cell 1</u>	
		<u>T0</u>	<u>T1</u>
<u>UTRA RF Channel Number</u>		<u>Ch. 1</u>	
<u>CPICH Ec (FDD)</u>	<u>dBm/3.84MHz</u>	<u>-60</u>	<u>OFF</u>
<u>P-CCPCH RSCP (TDD)</u>	<u>dBm</u>	<u>-60</u>	<u>OFF</u>

The UE is brought to CELL_DCH state after making a successful outgoing call attempt. After the call has been established, SS configures its downlink transmission power settings according to column 'T1' in table 8.3.1.30. The UE shall detect a radio link failure in cell 1.

Case A (the initial condition of the UE is in state 6-10):

The SS shall wait for 46s (see Note 2) and then configure its downlink transmission power settings according to column 'T0' in table 8.3.1.30. The UE shall release radio bearer associated with T315 and enter idle mode state. SS calls for generic procedure C.1 to check that UE is in Idle Mode state in cell 1.

Case B (the initial condition of the UE is in state 6-14):

The SS shall wait for 12s (see Note 1) and then configure its downlink transmission power settings according to column 'T0' in table 8.3.1.30. The UE shall release radio bearer associated with T314 and attempt to re-select to cell 1. After that, it shall then enter CELL_FACH state and transmit CELL_UPDATE on the uplink CCCH to SS. The SS transmits CELL_UPDATE_CONFIRM message which includes dedicated transport and physical channel parameters on downlink DCCH. Then the UE shall transmit a TRANSPORT_CHANNEL_RECONFIGURATION_COMPLETE message on the uplink DCCH. SS transmits COUNTER_CHECK message to UE. UE shall transmit a COUNTER_CHECK_RESPONSE message back to SS. Then SS configures its downlink transmission power settings according to column 'T1' in table 8.3.1.30. The UE shall detect a radio link failure in cell 1. The SS shall wait for 46s (see Note 2) and then configure its downlink transmission power settings according to column 'T0' in table 8.3.1.30. The UE shall release radio bearer associated with T315 and enter idle mode state. SS calls for generic procedure C.1 to check that UE is in Idle Mode state in cell 1.

Note 1: Considering the timer tolerance of the UE, T314 may expire between $10s \pm 0.25s$, therefore the SS must wait for at least 10.25s before it reconfigures its downlink transmission power. Since SS has a timer tolerance of 10% or $2 * TTI + 55ms$ (consider the greater value of the two), the test case shall set the SS to reconfigure the power level 12s after the it configures the power settings according to column 'T1' in table 8.3.1.30.

Note 2: Considering the timer tolerance of the UE, T315 may expire between $40s \pm 1s$, therefore the SS must wait for at least 41s before it reconfigures its downlink transmission power. Since SS has a timer tolerance of 10% or $2 * TTI + 55ms$ (consider the greater value of the two), the test case shall set the SS to reconfigure the power level 46s after the it configures the power settings according to column 'T1' in table 8.3.1.30.

Expected sequence

Step	Direction		Message	Comment
	UE	SS		
1				SS configures cell 1 according to column 'T1' in table 8.3.1.30.
2				For Case A, go to step 9. SS waits for 12s after the completion of step 1 and then configures cell 1 according to column 'T0' in table 8.3.1.30.
3		→	CELL UPDATE	UE shall select cell 1 and enter CELL_FACH state to transmit this message
4		←	CELL UPDATE CONFIRM	See message content.
5		→	TRANSPORT CHANNEL RECONFIGURATION COMPLETE	
6		←	COUNTER CHECK	SS sent the COUNT-C info for the RBs that were established in the initial condition.
7		→	COUNTER CHECK RESPONSE	
8				SS configures cell 1 according to column 'T1' in table 8.3.1.30.
9				SS waits for 46s after the completion of step 1 and then configures cell 1 according to column 'T0' in table 8.3.1.30.
10		↔	CALL C.1	SS execute this procedure in cell 1. If the test result of C.1 indicates that UE is in Idle Mode state, the test passes. Otherwise it fails.

Specific Message Contents

CELL UPDATE (Step 4)

The same message found in TS 34.108 clause 9 shall be transmitted by the UE on the uplink CCCH, with the exception of the following IEs:

<u>Information Element</u>	<u>Value/remark</u>
U-RNTI	Check to see if set to value assigned in cell 1.
- S-RNTI	Check to see if set to value assigned in cell 1.
- SRNC Identity	Check to see if set to 'radio link failure'
Cell Update Cause	
RB timer indicator	
- T314 expired	TRUE
- T315 expired	FALSE

CELL UPDATE CONFIRM (Step 5)

Use the same message sub-type found in TS 34.108 clause 9, with the following exceptions:

<u>Information Element</u>	<u>Value/remark</u>
<u>RRC State indicator</u>	<u>CELL_DCH</u>
<u>CHOICE channel requirement</u>	<u>Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A4.</u>
<u>Downlink information common for all radio links</u>	<u>Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A4.</u>
<u>Downlink information per radio link list</u>	<u>Same as the set defined in RADIO BEARER SETUP message found in TS 34.108 clause 9 under condition A4.</u>

COUNTER CHECK (Step 7)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u>	<u>0</u>
<u>RRC transaction identifier</u>	<u>Calculated value</u>
<u>Integrity check info</u>	
<u>RB COUNT-C MSB information</u>	
<u>- RB identity</u>	<u>Set to the RB identity that was set up in the initial condition and support PS service.</u>
<u>- COUNT-C MSB uplink</u>	<u>Set to the value stored in the SS</u>
<u>- COUNT-C MSB downlink</u>	<u>Set to the value stored in the SS</u>

COUNTER CHECK RESPONSE (Step 8)

<u>Information Element</u>	<u>Value/remark</u>
<u>Message Type</u>	<u>0</u>
<u>RRC transaction identifier</u>	<u>Not checked</u>
<u>Integrity check info</u>	<u>Not present</u>
<u>RB COUNT-C information</u>	

8.3.1.30.5 Test requirement

Case A:

After step 2, the UE shall detect the presence of cell 1 and enter idle mode state in cell 1.

Case B:

After step 2, the UE shall detect the presence of cell 1, perform cell re-selection and transmit a CELL UPDATE message.

After step 5, the UE shall transmit a TRANSPORT CHANNEL RECONFIGURATION COMPLETE message on the uplink DCCH using AM RLC.

After step 7, the UE shall transmit a COUNTER CHECK RESPONSE message without including IE "RB COUNT-C information".

After step 10, the UE shall detect the presence of cell 1 and enter idle mode state in cell 1.

<End of Modifications>