3GPP TSG-RAN WG2, Sophia Antipolis, France, 16-19 August 1999

Agenda Item: 5

Source: Rapporteur

Title: FINAL Report of the email discussion group - Enhanced RRC message and IE tabular descriptions

Document for: Approval

Attached is the final output of the RRC_A email ad-hoc.

Comments:

1) In producing this document the editor has assumed that the edits to RRC which were forwarded on the reflector on 28th July 99 will be approved by the group at the next meeting. The changes marked in this document are therefore with respect to that version .

Summary of email discussion and conclusions:

1) Email discussion on meaning of 'conditionality'

Sony Comment #1

When I read Tdoc 524 a bit more carefully, I discovered that the example section contains a use of CONDITIONAL in a way which I think should not be used and which I therefore do not support. Tdoc 524 states e.g. in that example section that "The presence of this element is mandatory in the RACH/FACH case. In all other cases, it is not necessary, and its presence or absence has no meaning for the receiver." This use of CONDITIONAL in the way that the sending entity is still allowed to include the information element if the condition is not true should be forbidden from my point of view, because it makes life for the receiving entity unnecessarily complicated and the attribute CONDITIONAL then specifies not the conditionality of presense anymore (but rather something like the condition of validity). The receiving entity has still to check whether an element tagged as CONDITIONAL in the specification is valid or not. In addition, I don't see the need to transfer unvalid information over the air interface as a scarce resource.

As this kind of use of CONDITIONAL was only present in the example section of Tdoc 524 and did not go into 25.921, I propose that we use the CONDITIONAL only in the way, that the condition specifies whether the sending entity shall include the element or not. Inclusion of the element when the condition is not true and forcing the receiving entity to ignore that element then, is not allowed. In the hope that this thinking reflects the groups oppinion, I've tried to make some of the text more precise in the Condition sections of Steve's first draft to reflect this. See my attachment.

Any thoughts on this? Philips Comment #1

My comprehension of Conditional is: if condition is fulfilled, presence is Mandatory else not present It is different from Optional because Optional must be tagged and conditional needs not. On the other side, translating tabular into Z105 ASN.1 will require to build as many combinaisons as existing as Condition cannot be translated in Z105. Any other optinion ?

Nortel Comment #1

I think we need to specify both the sender and the receiver side for the use of the Conditional element. On the receiver side, what we actually have to specify are the error handling rules in case the receiver detects that an element is present when conditions are not fulfilled and vice versa. This is because you cannot assume that what has been sent by the transmitter is exactly the same as what is received on the other side, and that the conditions on the transmitter and receiver side are necessarily the same.

Sony Comment #2

Thanks for your answer. I acknowledge the fact that we have to specify an error handling to cope with the case that what is received is not identical to what has been sent. E.g. in GSM 04.08 there is also an error handling. This error handling should be generic (as far as possible) and I expect that we do not define for each information element (IE) which is conditional a specific error handling. However, error handling is not exactly the issue I wanted to raise. I just wanted to ensure that we specify that IF AND ONLY IF the condition is true, the sender includes the IE and has not the option to include it if the condition is false (because I see no sense in transferring invalid information and see a risk is this). This is also the method of GSM 04.08 / GSM 04.07. Do you have objections to this? (How we specify the error handling of something like "missing conditional IE" or "unexpected conditional IE" should be dealt later.)

I agree that on the sender side we can specify that a Conditional element is sent only when the relevant conditions are fulfilled.

Nokia comment #1

I completely agree that we must be careful when using conditional information elements. We could try to identify the different situations where conditional IEs are feasible and then decide whether to apply conditional or optional IEs in these cases.

Some possible situations that spring to mind: Whether an IE is included in a message or not could depend on 1) the value of another IE (or several IEs) in the same message.

2) the state which the protocol entities are in

3) the logical channel on which the message is sent on

How feasible does the use of conditional IEs seem in these cases? Opinions? More possible cases? **Rapporteur proposed conclusion #1:**

A clarification has been added at the beginning of Section 10 stating that IE's marked as conditional will be included if and only if the condition is satisfied otherwise the IE is not sent. The description of condition states included after the message and IE descriptions have been improved in line with Sony's comments.

2) Email discussion on SSDT

Telecom Modus Comment #1

Here is a short comment on SSDT: Please also include the parameter "SSDT cell id" in the messages: Handover Command, RRC Connection Setup, Radio Access Bearer Setup (when activating DCH), Transport Channel Reconfiguration (when activating DCH), Physical Channel Reconfiguration (when activating DCH)

as described in TDoc R2-99557 and agreed in the meeting. You can add an ffs for the parameter in these messages, because the necessity depends on wether it is possible to go from idle mode/common channel modes straight into macro diversity.

Rapporteur proposed conclusion #1: The IE has now been included in the mentioned messages, in the messages it has been marked as conditional.

3) Email discussion - General editing comments

Nokia comment #1

Here are some comments on the updated RRC tables.

Clause 10.1.1.5: The indentation of DL timeslot info is wrong - it looks like it belongs to the link specific information group now, but Note 2 states that it is the same for all radio links.

[Editors note: Agreed and change incorporated]

Clause 10.1.4.3: Why is the range 0 to <MeasRepCount> instead of 1 to <MeasRepCount>?

[Editors note: Agreed and change incorporated]

Clause 10.1.4.6: Same here - why 0 instead of 1? All measurement IEs where marked as mandatory in the previous

version.

[Editors note: Agreed and change incorporated] Clause 10.1.4.7: RAB information elements: in my opinion there is one indentation too many in both uplink and downlink transport channels. The range could be moved to the same row with Uplink/Downlink transport channels (along with the semantics description) and the Transport channel information row could be deleted. PhyCH information elements: to clarify, the IE item Downlink information could be renamed Downlink radio link (or RL for short) information. [Editors note: Agreed and change incorporated] Clause 10.1.4.8: The "M" should be removed from the Phy CH information elements row. [Editors note: Agreed and change incorporated] Clause 10.2.3.9: The condition "isCN" has not been clarified. [Editors note: Agreed and change incorporated] There are some problems with the presence and range columns. If the guidelines from tdoc 524 are followed, then whenever a range value is present, O or M should not be used. In these cases a range starting with 0 implies optionality, and a range starting from 1 (or another positive integer) implies that the IE is mandatory. If the presence is C, then the range should not start with 0 - the conditionality implies already that the IE can be missing. Some clauses with these problems are 10.1.5.9, 10.1.6.1, 10.2.6.4, 10.2.6.6 and 10.2.6.8. I did not check the document thoroughly yet, there may be more occurrences. [Editors note: Agreed and changes incorporated. The document has been reviewed and a number of other message and IE tables have been updated] The range bounds could be expressed in a less space-consuming way, for example by using a table like this: Range bound Explanation <rangebound1> text <rangebound2> text <rangebound3> text [Editors note: Agreed and changes incorporated, conditions and CHOICE options have also been captured in tables] The measurement control message definition (clause 10.1.2.1) is not very pretty... another way of writing it would be to group the IEs first by the measurement type. I could try to write this down in a Word table to see what the outcome is like. At least we would probably be able to dump the "if Measurement Type = \dots " texts from the semantics description. [Editors note: Agreed and changes incorporated, this seems a more logical way of describing the message, since there may be the necessity to associate different IE's with different measurement types (ie there may be an IE for traffic volume measurements which is not necessary for inter-frequency measurements) In addition it makes the description neater and shorter] Yet another issue (although this may be nitpicking): having two successive IEs with the same name (for example 10.1.4.7, TFCS and TFCS in the TrCH IEs) doesn't look very pretty to me. They could be renamed UL-TFCS and DL-TFCS, since the actual definition of these IEs would still be similar (and visible from the type and reference column). [Editors note: I have not included this change since to me it seems inappropriate to have two IE's having the same description but different names] Ericsson comment #1 10.1.1.4 Cell Update Confirm Shouldn't PLMN Identity be on the same level as CN related information? similar as in URA Update Confirm and RNTI Reallocation. [Editors note: Agreed and change incorporated] 10.1.1.5 Handover Command According to note 2, DL timeslot info is assumed to be the same for all RLs, and according to the old tables DL timeslot info should not be in the Link specific information. [Editors note: Agreed and change incorporated] 10.1.2.1 Measurement Control I beleive that Note 2 can be removed since that text is included in the semantics description. [Editors note: Agreed and change incorporated] 10.1.2.2 Measurement Report A comment to the new editors note: I beleive that it is not entirely consistent between measurement report and measurement control depending on if Reporting quantity is divided for each measurement type or not. (This is Note 1 in measurement control.) [Editor's note: editors note has now been removed] 10.1.4.7 RRC Connection setup Why is Uplink radio resource information Optional and Downlink radio resource information is not?

[Editor's note: These were only group names, I have removed the 'O' from the uplink resource information] 10.2.3.17 UE mode capability

As I understand the type enumerated a parameter can take "one and only one" of the listed enumerated values. This means that system and mode capability must have several entries to cover UEs capable of e.g. both GSM and UMTS and/or both FDD and TDD.

[Editors note: Agreed and ranges inserted to reflect the fact that a UE may support multiple systems and modes.]

Philips comment #1

I have few question on different topics and any delegate that have an opinion can express it. Methodology : does it mean something that the presence is M and range from 0 to n ? The question could also be presence is O and range from 1 to n but this case never happen.

[Editor's note, Juhana from Nokia made a similar comment and the tables have now been updated to reflect this] Then for my comprehension or a suggestion : why is there uplink TFCS and Dowlink TFCS on one side and on the other side Uplink transport channels and downlink transport channels ? Is it possible to put TFCS at the same level as ssequence of Transport channel information ?

Perhaps there is something I misunderstood but as in Uplink, Physical channel is a choice, in downlink it seems that there is a sequence of PCCPCH info + DL DPCH info + SCCPCH info is it really necessary all of these for each Radio Link ?

Nokia comment #2

Some further comments on the message and IE definitions:

- CN domain identity is included in the UE information element group in 10.1.3.3. Shouldn't the correct group be CN information elements?

[Editors note: Agreed and change incorporated]

- Currently there is no difference between the IE definitions in 10.2.7.18 and 10.2.7.19. Is this just a coincidence? [Editors note: It would appear to be a co-incidence I don't think it is in the remit of this email ad-hoc to make modifications to the IE's but just to align the messages with the new table formats. Hence I won't make any modification this time]

- In 10.2.7.27 I would include only Transport CH ID and Threshold to the parameters which are sent for each transport channel. The remaining four IEs should therefore not be indented, am I correct?

[Editors note: I think you could argue it both ways. Since different transport channels may have different QoS requirements then it might be advantageous to have different traffic volume reporting criteria for the different transport channels. However, you are right that I made a mistake in my translation from the agreed original message so I have removed the indentations]

On the issue of similar names: I guess it is just a question of viewpoints. I tend to look at the definitions from an ASN.1biased point of view, and in the ASN.1 specifications I will have to give unique names to IEs within a message. Your point on the matter is quite valid, and I will not push the issue any further.

[Editors note: Perhaps a good compromise would be to always have different IE names in a message (to help with the ASN.1) but to not duplicate the descriptive tables (and rather use a cross reference). I could make this change in the next version of 25.331 - what do you think?]

10 Message and information element functional definition and content

The function of each Radio Resource Control message together with message contents in the form of a list of information elements is defined in subclause 10.1.

Functional definitions of the information elements are then described in subclause 10.2.

Information elements are marked as either M- mandatory, O - Optional or C -conditional (see Table 1).

Abbreviation	Meaning
M	<u>IE's marked as Mandatory (M) will always be included in</u> <u>the message.</u>
\underline{O}	<u>IE's marked as Optional (O) may or may not be included</u> in the message.
C	<u>IE's marked as Conditional (C) will be included in a</u> <u>message only if the condition is satisfied otherwise the IE</u> <u>is not included.</u>

Table 1) meaning of abbreviations used in RRC messages and information elements

10.1 Radio Resource Control messages

10.1.1 RRC Connection Mobility Messages

10.1.1.1 ACTIVE SET UPDATE

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH

Direction: UTRAN \rightarrow UE

Information Element	Presence	Range	IE type and	Semantics description
			<u>reference</u>	
Message Type	M			
UE information elements				
Activation time	<u>0</u>			
Phy CH information elements				
Radio link addition information		<u>0 to</u>		Radio link addition information
		< <u>MaxAddR</u>		required for each RL to add
		Lcount>		
Primary CCPCH info	M			Note 1
SSDT cell identity	<u>C -</u>			
	<u>ifSSDTO</u>			
Downlink DPCH info	M			
Radio link removal information		<u>0 to</u>		Radio link removal information
		< <u>MaxDelR</u>		required for each RL to
		Lcount>		remove
Primary CCPCH info	M			Note 1
SSDT indicator	0			

Condition

<u>ifSSDT</u>	This IE is only sent when SSDT is being used and a
	new radio link is added

Range bound	Explanation
<u>MaxAddRLcount</u>	Maximum number of radio links which can be added
<u>MaxDelRLcount</u>	Maximum number of radio links which can be removed/deleted

Range bound MaxAddRLcount

Maximum number of radio links which can be added

Range bound MaxDelRLcount

Maximum number of radio links which can be removed/deleted

Information element category	Information elements	REFERENCE	TYPE	NOTE	
	Message Type		H		
			<u> </u>		
UE Information elements	Activation time		θ.		
Phy CH	Primary CCPCH info		M	Note 1	For each radio
information	SSDT cell identity		<u>0</u>		link to add
elements	Downlink DPCH info		M		
	Primary CCPCH info		M	Note 1	For each radio link to delete
	SSDT indicator		0		

Note 1: If it is assumed that primary CCPCH downlink scrambling code is always allocated with sufficient reuse distances, primary CCPCH downlink scrambling code will be enough for designating the different radio links.

10.1.1.2 ACTIVE SET UPDATE COMPLETE

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH Direction: UE→UTRAN

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	<u>M</u>			
Phy CH information elements				
SSDT indicator	<u>0</u>			

Information element category	Information elements	REFERENCE	TYPE	NOTE
	Message Type		₩	
Phy CH	SSDT indicator		Ð	
information elements				

10.1.1.3 CELL UPDATE

This message is used by the UE to initiate a cell update procedure. RLC-SAP: t.b.d. Logical channel: t.b.d. Direction: UE→UTRAN

Information Element	Presence	Range	IE type and	Semantics description
			<u>reference</u>	
Message Type	M			
UE information elements				
<u>S-RNTI</u>	M			FFS whether in RRC or MAC
SRNC identity	M			PDU.
Cell update cause	M			
Measurement information				
<u>elements</u>				
Measurement identity number				Intra-frequency measurement
Measured results				related report

Information element category	Information elements	REFERENCE	TYPE	NOTE
	Message Type		M	
UE information elements	S-RNTI SRNC identity Cell update cause		M M M	FFS whether in RRC or MAC PDU.
Measurement information elements	Measurement identity number Measured results			Intra-frequency measurement related report

10.1.1.4 CELL UPDATE CONFIRM

This message confirms the cell update procedure and can be used to reallocate new RNTI information for the UE valid in the new cell.

RLC-SAP: t.b.d. Logical channel: t.b.d.

Direction: UTRAN \rightarrow UE

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
UE information elements				
<u>S-RNTI</u>	M			FFS whether in RRC or MAC
SRNC identity	M			PDU
<u>S-RNTI</u>	<u>0</u>			New S-RNTI

SRNC identity	<u>0</u>		New SRNC identity
<u>C-RNTI</u>	<u>0</u>		New C-RNTI
UTRAN mobility information			
elements			
URA update indicator	<u>0</u>		
URA identifier	<u>0</u>		
CN information elements			
PLMN identity	<u>0</u>		(Note1,2)
CN related information		<u>0 to</u>	CN related information to be
		< <u>MaxNoC</u>	provided for each CN domain
		<u>Ndomains</u>	
		<u>></u>	
<u>PLMN identity</u>	Q		<u>(Note1,2)</u>
CN domain identity	0		(Note1,2)
NAS system info	<u>0</u>		(Note1,2)
Physical CH information			
elements			
Default DPCH Offset Value	0		FFS

Information	-Information elements	REFERENCE	TYPE	NOTE
element				
category				
	Message Type		H	
UE information	S-RNTI		M	FFS whether in RRC or MAC
elements	SRNC identity		M	PDU.
	S-RNTI		0	New S-RNTI
	SRNC identity		0	New SRNC identity
	C-RNTI		θ	New C-RNTI
UTRAN	URA update indicator		θ	When present, it instructs UE to
mobility				make URA updating
information	URA identifier		θ	Indicates to the UE, which URA
elements				it shall use in case of
				overlapping URAs.
CN information	PLMN identity		θ	(Note1,2)
elements	CN domain identity		0	For each CN domain (Note1,2)
	NAS system info		0	For each CN domain (Note1,2)
Physical CH	Default DPCH Offset Value		θ	FFS
information				
elements				

Range Bound	Explanation
<u>MaxNoCN domains</u>	Maximum number of CN domains

Range bound MaxNoCN domains

Maximum number of CN domains

[Note1: It depends on the length of these information whether this message can be used to notify these information to UE.]

[Note2: Necessity of PLMN is FFS and for CN domain identity and NAS system information, the confirmation in SA WG2 is needed.]

10.1.1.5 HANDOVER COMMAND

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH

Direction: UTRAN \rightarrow UE

Information Element	Presence	Range	IE type and	Semantics description
			reference	
Message Type	M			
Phy CH information elements				
Frequency info	M			
Uplink radio resources				
UL DPCH power control info	M			
UL DPCH info	M			
UL timeslot info	<u>0</u>			
Downlink radio resources				
Link specific information		<u>10 to</u>		Provide information for each
		< <u>MaxHoRL</u>		DL radio link. (Note 1)
		count>		
Primary CCPCH info	M			
DL DPCH info	M			
DL timeslot info	<u>0</u>			Note 2
SSDT indicator	<u>0</u>			
SSDT Cell ID	<u>C ifSSDT</u>			FFS

Information element category	-Information elements	REFERENCE	TYPE	NOTE	
	Message Type		М		
Phy CH	Frequency info		M		
information	UL DPCH power control info		M		
elements	UL DPCH info		M		Uplink radio
	UL timeslot info		θ		resources
	Primary CCPCH info		₩	For each radio	Downlink radio
	DL DPCH info		₩	link. Note1	resources
	DL timeslot info		θ	Note 2	
	SSDT indicator		θ		

Condition	Explanation
<u>ifSSDT</u>	This IE is only sent when SSDT is used

Range Bound	Explanation
MaxHoRLcount	Maximum number of DL radio links which can be
	established on handover

Range bound MaxHoRLcount

Maximum number of DL radio links which can be established on handover

Note1: The possibility to request the establishment of several radio links simultaneously with this message is FFS.

Note 2: It is assumed that the DL timeslot configuration is the same for all radio links, whether or not macrodiversity is supported for TDD.

10.1.1.6 HANDOVER COMPLETE

<Functional description of this message to be included here> RLC-SAP: t.b.d.

Logical channel: DCCH Direction: UE \rightarrow UTRAN

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Phy CH information elements				
SSDT indicator	<u>0</u>			

Information element category	Information elements	REFERENCE	TYPE	NOTE
	Message Type		H	
Phy CH information elements	SSDT indicator		Q	

10.1.1.7 INTER-SYSTEM HANDOVER COMMAND

This message is used for handover from UMTS to another system e.g. GSM. One or several messages from the other system can be included in the Inter-System message information element in this message. These messages are structured and coded according to that systems specification.

RLC-SAP: t.b.d.

Logical channel: DCCH

Direction: UTRAN→UE

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
UE information elements				
Activation time	<u>0</u>			
Other information				
elements				
Inter-System message	Μ			

Information elements	REFERENCE	TYPE	NOTE
Message Type		H	
Activation time		Q	
Inter-System message		H	
	Information elements Message Type Activation time Inter-System message	Information elements REFERENCE Message Type	Information elements REFERENCE TYPE Message Type M Activation time O Inter-System message M Inter-System message M

10.1.1.8 INTER-SYSTEM HANDOVER FAILURE

This message is sent on the RRC connection used before the Inter-System Handover was executed. The message indicates that the UE has failed to seize the new channel in the other system. RLC-SAP: t.b.d. Logical channel: DCCH Direction: UE→UTRAN

Information Element	Presence	Range	IE type and	Semantics description
			reference	
Message Type	M			
UE information elements				
Inter-System handover failure	<u>0</u>			<u>FFS</u>
cause				
Other Information				
<u>elements</u>				
Inter-System message	<u>0</u>			

Information element category	Information elements	REFERENCE	TYPE	NOTE
	Message Type		H	
UE	Inter-System handover failure cause		0	FFS
information				
Othor	Inter System massage		0	
Information elements	mer-system message		Ð	

10.1.1.9 URA UPDATE

This message is used by the UE to initiate a URA update procedure.

RLC-SAP: t.b.d.

Logical channel: t.b.d.

Direction: UE→UTRAN

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
UE information elements				
<u>S-RNTI</u>	M			FFS whether in RRC or MAC PDU.
SRNC identity	M			FFS whether in RRC or MAC PDU.
URA update cause	M			

Information element category	-Information elements	REFERENCE	TYPE	NOTE
	Message Type		H	
UE information	S-RNTI		М	FFS whether in RRC or MAC
elements	SRNC identity		М	PDU.
	URA update cause		M	

10.1.1.10 URA UPDATE CONFIRM

<Functional description of this message to be included here>This message confirms the URA update procedure and can be used to reallocate new RNTI information for the UE valid after the URA update. RLC-SAP: t.b.d. Logical channel: t.b.d. Direction: UTRAN→UE

Information Element	Presence	Range	IE type and	Semantics description
			reference	
Message Type	M			
UE information elements				
<u>S-RNTI</u>	M			FFS whether in RRC or MAC
SRNC identity	M			PDU.
<u>S-RNTI</u>	<u>0</u>			New S-RNTI
SRNC identity	<u>0</u>			New SRNC identity
<u>C-RNTI</u>	<u>0</u>			New C-RNTI
UTRAN mobility information				
<u>elements</u>				
URA identifier	<u>0</u>			
CN information elements				
PLMN identity	<u>0</u>			(Note1,2)
CN related information		<u>0 to</u>		CN related information to be
		< <u>MaxNoC</u>		provided for each CN domain
		Ndomains		
		2		
CN domain identity	<u>0</u>			<u>(Note1,2)</u>
NAS system info	<u>0</u>			<u>(Note1,2)</u>

Information element category	-Information elements	REFERENCE	TYPE	NOTE
	Message Type		M	
UE information elements	S-RNTI SRNC identity		M M	FFS whether in RRC or MAC PDU.
	S-RNH SRNC identity C-RNTI		ф Ф Ф	New SRNC identity New C-RNTI
UTRAN mobility information	URA identifier		Ð	Indicates to the UE, which URA it shall use in case of overlapping URAs.
CN information elements	PLMN-identity CN domain identity NAS system info		0 0 0	(Note1,2) For each CN domain (Note1,2) For each CN domain (Note1,2)

Range Bound	Explanation
<u>MaxNoCN domains</u>	Maximum number of CN domains

Range bound MaxNoCN domains

Maximum number of CN domains

[Note1: It depends on the length of these information whether this message can be used to notify these information to UE.]

[Note2: Necessity of PLMN is FFS and for CN domain identity and NAS system information, the confirmation in SA WG2 is needed.]

10.1.1.11 RNTI REALLOCATION

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: t.b.d. Direction: UTRAN→UE

Information Element	Presence	Range	IE type and	Semantics description
			reference	
Message Type	M			
UE information elements				
<u>S-RNTI</u>	<u>0</u>			FFS whether in RRC or MAC
SRNC identity	<u>0</u>			PDU.
<u>S-RNTI</u>	<u>0</u>			New S-RNTI
SRNC identity	0			New SRNC identity
<u>C-RNTI</u>	<u>0</u>			New C-RNTI
CN information elements				
PLMN identity	<u>0</u>			(Note1,2)
CN related information		<u>0 to</u>		CN related information to be
		< <u>MaxNoC</u>		provided for each CN domain
		Ndomains		
CN domain identity	0	2		(Noto1 2)
	<u>U</u>			$\frac{(\text{NOLE } 1, 2)}{(\text{NOLE } 1, 2)}$
NAS system info	<u>U</u>			(Note1,2)

Information element category	Information elements	REFERENCE	TYPE	NOTE
	Message Type		₩	
UE information	S-RNTI		θ	FFS whether in RRC or MAC
elements	SRNC identity		Ð	PDU.
	S-RNTI		θ	New S-RNTI
	SRNC identity		θ	New SRNC identity
	C-RNTI		Ð	New C-RNTI
CN information	PLMN identity		θ	(Note1,2)
elements	CN domain identity		θ	For each CN domain (Note1,2)
	NAS system info		θ	For each CN domain (Note1,2)

Range Bound	Explanation		
MaxNoCN domains	Maximum number of CN domains		

Range bound MaxNoCN domains

Maximum number of CN domains

[Note1: It depends on the length of these information whether this message can be used to notify these information to UE.]

[Note2: Necessity of PLMN is FFS and for CN domain identity and NAS system information, the confirmation in SA WG2 is needed.]

10.1.1.12 RNTI REALLOCATION COMPLETE

This message is used to confirm the new RNTI information for the UE. RLC-SAP: t.b.d.

Logical channel: DCCH

Direction: UE→UTRAN

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			

Information element	-Information elements	REFERENCE	TYPE	NOTE
category				
	Message Type		M	

10.1.2 Measurement Messages

10.1.2.1 MEASUREMENT CONTROL

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH Direction: UTRAN→UE

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	Μ			
Measurement Information				
elements				
Measurement Identity Number	M			
Measurement Command	M			
Measurement Type	0			
Measurement Reporting Mode	<u>0</u>			
CHOICE Measurement				
Intra-frequency				
Intra-frequency cell info				Measurement object
Intra-frequency measurement quantity	<u>C event</u> trigger			
Intra-frequency measurement	<u>0</u>			Note 1
reporting quantity				
CHOICE report criteria				
Intra-frequency				
measurement				
Periodical reporting				
Inter-frequency	-			Magguramant object
Inter-frequency cell Into	Covert			Measurement object
<u>quantity</u>	trigger			
Inter-frequency measurement	<u>0</u>			Note 1
reporting quantity				
CHOICE report criteria				
Inter-frequency				
measurement				
reporting criteria				
Periodical reporting				
Inter-system				
Inter-system cell info				Measurement object
Inter-system measurement	Cevent			
	trigger			Note 1
	<u>u</u>			Note 1
Inter-system massurement				
reporting criteria				
Periodical reporting				
Traffic Volume				
Traffic volume measurement				
Object				
Traffic volume measurement	C event			
quantity	trigger			
Traffic volume measurement	0			Note 1
reporting quantity				
CHOICE report criteria				
Traffic volume measurement				
reporting criteria				
Periodical reporting				
Quality				
Quality measurement				
	0		+	<u> </u>
Quality measurement	Cevent			
				Noto 1
	∠			
		+	+	
	<u> </u>			
Periodical reporting				
UE internal				
UE internal measurement	C event	1		
quantity	trigaer			

UE internal measurement	<u>0</u>		Note 1	
reporting quantity				
CHOICE report criteria				
UE internal measurement				
reporting criteria				
Periodical reporting				

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Measurement Information				
elements				
Measurement Identity Number	M			
Measurement Command	M			
Measurement Type	0			
Measurement Reporting Mode	<u> </u>			
CHOICE Measurement Object	<u> </u>			
Intra-frequency cell info				If Measurement Type = Intra
				frequency measurement
Inter-frequency cell info				If Measurement Type = Inter
				frequency measurement
Inter-system cell info				If Measurement Type = Inter
				system measurement
- Traffic volume measurement				If Measurement Type = Traffic
				volume measurement
Quality measurement object				If Measurement Type = Quality
				measurement
CHOICE Measurement	C event			
Quantity	trigger			
Intra-frequency measurement			1	If Measurement Type = Intra
- quantity				frequency measurement
Inter-frequency measurement			1	If Measurement Type = Inter
- auantity				frequency measurement
<u></u>				<u></u>
-Inter-system measurement				If Measurement Type = Inter
				system measurement
Traffic volume measurement				If Measurement Type = Traffic
				volume measurement
Quality measurement quantity				If Measurement Type = Quality
				measurement
UE Internal measurement				If Measurement Type = UE
				Internal measurement
CHOICE Reporting quantity	θ			
(Note 1)	_			
Intra-frequency measurement				If Measurement Type = Intra
- reporting quantity				frequency measurement
Inter-frequency measurement				If Measurement Type = Inter
-reporting quantity				frequency measurement
Inter-system measurement				If Measurement Type = Inter
-reporting quantity				system measurement
- Traffic volume measurement				If Measurement Type = Traffic
reporting quantity				volume measurement
Quality measurement				If Measurement Type = Quality
<u>reporting quantity</u>				measurement
UE Internal measurement				If Measurement Type = UE
<u>reporting quantity</u>				Internal measurement
CHOICE Measurement	<u>e</u>			Periodical reporting criteria is
Reporting Criteria (Note 2)				used only in periodical
<u></u>				reporting mode and others are
				used in event trigger mode
Intra-frequency measurement				If Measurement Type = Intra
<u>reporting criteria</u>				frequency measurement
Inter-frequency measurement				If Measurement Type = Inter
<u>reporting criteria</u>				frequency measurement
<u>Inter-system measurement</u>				If Measurement Type = Inter
<u>reporting criteria</u>				system measurement
 Traffic volume measurement 				If Measurement Type = Traffic
<u>reporting criteria</u>				volume measurement
Quality measurement				If Measurement Type = Quality
<u>reporting criteria</u>				measurement
UE Internal measurement				If Measurement Type = UE
<u>reporting criteria</u>				Internal measurement
-Periodical reporting criteria				

Information	Information ele	oments	REFERENCE	TYPE	NOTE
category					
	Message Type			₩	
Measurement	Measurement lo	Measurement Identity Number		M	
Information	Measurement C	Command		H	
elements	Measurement Type			θ	
	Measurement R	eporting Mode		0	
	Measurement Object	Intra-frequency cell info		C	If Measurement Type = Intra frequency measurement
		Inter-frequency cell info		e	If Measurement Type = Inter frequency measurement
		Inter-system cell info		e	If Measurement Type = Inter system measurement
		Traffic volume measurement object		C	I f Measurement Type = Traffic volume measurement
		Quality measurement object		e	If Measurement Type = Quality measurement
	Measurement Quantity (Note1)	Intra-frequency measurement		C	If Measurement Type = Intra frequency measurement
		Inter-frequency measurement quantity		C	If Measurement Type = Inter frequency measurement
		Inter-system measurement quantity		e	If Measurement Type = Inter system measurement
		Traffic volume measurement quantity		C	If Measurement Type = Traffic volume measurement
		Quality measurement quantity		e	If Measurement Type = Quality measurement
		UE Internal measurement quantity		C	If Measurement Type = UE Internal measurement
	Reporting quantity (Note2)	Intra-frequency measurement reporting quantity		θ	If Measurement Type = Intra frequency measurement
	(******)	Inter-frequency measurement reporting quantity		θ	If Measurement Type = Inter frequency measurement
		Inter-system measurement reporting quantity		θ	I f Measurement Type = Inter system measurement
		Traffic volume measurement reporting guantity		Ð	If Measurement Type = Traffic volume measurement
		Quality measurement reporting quantity		θ	I f Measurement Type = Quality measurement
		UE Internal measurement reporting quantity		Ð	If Measurement Type = UE Internal measurement
	Measurement Reporting	Intra-frequency measurement		C	If Measurement Type = Intra frequency measurement
	Criteria (Note3)	reporting criteria Inter-frequency measurement reporting criteria		C	If Measurement Type = Inter frequency measurement

Inter-system	C	If Measurement Type = Inter
measurement		system measurement
reporting criteria		
Traffic volume	C	If Measurement Type = Traffic
measurement		volume measurement
reporting criteria		
Quality	C	If Measurement Type = Quality
measurement		measurement
reporting criteria		
UE Internal	C	If Measurement Type = UE
measurement		Internal measurement
reporting criteria		
Periodical reporting	C	
criteria		

Condition	Explanation
event trigger	This element is only included in the message which is
	sent in event trigger reporting mode.

CHOICE Measurement	Condition under which the given Measurement is
	chosen
intra-frequency	if measurement type=Intra-frequency measurement
inter-frequency	if measurement type=Inter-frequency measurement
inter-system	if measurement type=Intra-system measurement
traffic volume	if measurement type=traffic volume measurement
Quality	if measurement type=Quality measurement
<u>UE internal</u>	if measurement type=UE internal measurement
CHOICE reporting criteria	Condition under which the given reporting criteria
	<u>is chosen</u>
****** measurement reporting criteria	Chosen when event triggering is required
periodical reporting	Chosen when periodical reporting is required

Condition event trigger

This element is only necessary Note 1: Necessary only in event trigger reporting mode.

Note <u>12</u>: It is FFS whether it is necessary to separate the reporting quantity for each type. Note <u>23</u>: Periodical reporting criteria is used only in periodical reporting mode and others are used in event trigger mode.

Note-2234: The network may order the UE to report other measurements when UE internal measurements are reported

10.1.2.2 MEASUREMENT REPORT

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH Direction: UE→UTRAN

Information Element	Presence	Range	IE type and	Semantics description
Message Type	Μ		Telefence	
Measurement Information Elements				
Measurement report information		<u>10 to</u> <maxmeas <u>RepCount></u></maxmeas 		Send Measurement Report information for each measurement report in the message (Note 1)
Measurement identity number	M			
Measured Results	<u>C MR</u> required No te 3			
CHOICE event result	<u>C event</u> trigger			<u>Note 1,2</u>
Intra-frequency measurement event results				
Inter-frequency measurement event results				
Inter-system measurement event results				
Traffic volume measurement event results				
Quality measurement event results				

Information element category	Information	elements	REFERENCE	TYPE	NOTE	
	Message Typ	÷		₩		
Measurement	Measuremen	ment Identity Number M		For each		
elements	Event Result	Intra-frequency measurement event results		e	Necessary only in event trigger reporting mode	in this message (Note 1)
	Inter-free measure results Inter-sys measure results Traffic ve measure results	Inter-frequency measurement event results		C	(Note 2)	
		Inter-system measurement event results		C		
		Traffic volume measurement event results		e		
Quality measuremen event results		C		_		
	Measured Re	sults		θ	Necessary only when indicated optionally by Reporting Quantity in Measurement Control	

Condition	Explanation
event trigger	This element is only included in the message which is
	sent in event trigger reporting mode.
<u>MR required</u>	This information element is included by the sender
	only if indicated optionally by Reporting Quantity in
	Measurement Control

Range Bound

<u>MaxMeasRepCount</u>	Maximum number of Measurement reports in a				
	message				

CHOICE event result	Condition under which the given <i>event result</i> is chosen
intra-frequency measurement event results	
inter-frequency measurement event results	
inter-system measurement event results	
traffic volume measurement event results	
Quality measurement event results	

Range bound MaxMeasRepCount

Maximum number of Measurement reports in a message

Condition event trigger

This element is only necessary in event trigger reporting mode.

Condition Note 3

Editors note) Agreed text is as follows, however it doesn't seem very clear: Necessary only when indicated optionally by Reporting Quantity in Measurement Control

Note 1: <u>Whether</u> it is possible to send multipleany measurement results that are identified by different measurement identity numbers in the same Measurement Report is FFS. An alternative solution is to a<u>llowdmit</u> only one measurement identity number per Measurement Report and concatenate different Measurement Reports in the RLC layer instead.

Note 2: If it is possible to send many measurement results that are identified by different events in the same Measurement Report is FFS.

10.1.3 Paging and Notification Messages

10.1.3.1 NOTIFICATION

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: PCCH Direction: UTRAN → UE

Direction: $OTRAN \rightarrow OE$						
	Information Element	Presence	<u>Range</u>	IE type and reference	Semantics description	
	Message Type	Μ				

Information element category	Information elements	REFERENCE	TYPE	NOTE
	Message Type		M	

10.1.3.2 PAGING TYPE 1

This message is used to send information on the paging channel. One or several UEs, in idle or connected mode, can be paged in one message, which also can contain other information.

RLC-SAP: t.b.d. Logical channel: PCCH Direction: UTRAN \rightarrow UE

Information Element	Presence	Range	IE type and	Semantics description
			<u>reterence</u>	
Message Type	M			
UE Information elements				
Paging record-information		<u>10 to</u>		
		<page< td=""><td></td><td></td></page<>		
		Count>		
Paging record	M			
Other information elements				
BCCH modification info	<u>0</u>			FFS

Information element Category	RRC Information element	REFERENCE	TYPE	NOTE
	Message Type		₩	
UE Information elements	Paging record		Μ	One paging record for each UE to be paged.
Other information elements	BCCH modification info		Ð	-FFS

Range bound Page Count

Number of UE's paged in the Paging Type 1 message

Range Bound	Explanation
<u>Page Count</u>	Number of UE's paged in the Paging Type 1 message

10.1.3.3 PAGING TYPE 2

This message is used to page an UE in connected mode, when using the DCCH for CN originated paging.

- RLC-SAP: t.b.d.
- Logical channel: DCCH
- Direction: UTRAN \rightarrow UE

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
CN Information elements				
CN domain identity	M			
UE Information elements				
CN domain identity	M			
Paging cause	M			

Information	RRC Information element	REFERENCE	TYPE	NOTE
element Category				
	Message Type		M	
UE Information	CN domain identity		M	
elements				
	Paging cause		M	

10.1.4 RRC Connection Establishment and maintenance messages

10.1.4.1 RRC CONNECTION RE-ESTABLISHMENT

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: t.b.d. Direction: UTRAN \rightarrow UE

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Physical CH information				
<u>elements</u>				
Default DPCH Offset Value	0			

Information element category	Information elements	REFERENCE	TYPE	NOTE
	Message Type		M	
Physical CH information elements	Default DPCH Offset Value		θ	

10.1.4.2 RRC CONNECTION RE-ESTABLISHMENT COMPLETE

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH Direction: UE \rightarrow UTRAN

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	Μ			

Information element category	-Information elements	REFERENCE	TYPE	NOTE
	Message Type		H	

10.1.4.3 RRC CONNECTION RE-ESTABLISHMENT REQUEST

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: t.b.d Direction: UE \rightarrow UTRAN

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
UE information elements				
<u>S-RNTI</u>	M			FFS whether conveyed on
SRNC identity	M			RRC or MAC.
Measurement information				
<u>elements</u>				
Measurement information		<u>10 to</u>		Send Measurement
		<measrep< td=""><td></td><td>information for each</td></measrep<>		information for each
		Count>		measurement report in the
				message
Measurement identity number	M			Refers to system information.
				Note 1
Measured results	Μ			

Information element category	-Information elements	REFERENCE	TYPE	NOTE	
	Message Type		M		
UE information elements	S-RNTI SRNC identity		M M	FFS whether conveyed on lor MAC.	RRC
Measurement information elements	Measurement identity number		M	Refers to system For each information. Note measured 4 report	ment
	Measured results		₩		

Note 1: The necessity and usage of Measurement identity number in this message is FFS.

Range bound MeasRepCount

Number of measurement reports in the message

Range Bound	Explanation
<u>MeasRepCount</u>	Number of measurement reports in the message

10.1.4.4 RRC CONNECTION RELEASE

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH Direction: UTRAN→UE

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
UE information elements				
Release cause	M			
Number of Quick Repeat	M			

Information element category	-Information elements	REFERENCE	TYPE	NOTE
	Message Type		M	
UE information elements	Release cause		M	
	Number of Quick Repeat		₩	

10.1.4.5 RRC CONNECTION RELEASE COMPLETE

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH Direction: $\text{LIE} \rightarrow \text{LITRAN}$

Direction. $OE \rightarrow OTK$	AN			
Information Element	Presence	<u>Range</u>	IE type and reference	Semantics description
Message Type	M			

Information element category	-Information elements	REFERENCE	TYPE	NOTE
category	Message Type		M	

10.1.4.6 RRC CONNECTION REQUEST

RRC Connection Request is the first message transmitted by the UE when setting up an RRC Connection to the network. RLC-SAP: t.b.d. Logical channel: CCCH Direction: UE \rightarrow UTRAN

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
UE information elements				
Initial UE identity	M			FFS whether conveyed on RRC or MAC.
Establishment cause	M			
Initial UE capability	<u>0</u>			Necessity is FFS
Measurement information elements				
Measurement information		<u>10 to</u> < <u>MeasRep</u> <u>Count></u>		Send Measurement information for each measurement report in the message
Measurement identity number	M			Refers to system information. Note 1
Measured results	M			

Information element category	Information elements	REFERENCE	TYPE	NOTE	
	Message Type		M		
UE information elements	Initial UE identity		Μ	FFS whether conv or MAC.	veyed on RRC
	Establishment cause		₩		
	Initial UE capability		Ð	Necessity is FFS	
Measurement information elements	Measurement identity number Measured results		M	Refers to system information. Note 1	For each measurement report

Note 1: The necessity and usage of Measurement identity number in this message is FFS.

Range bound MeasRepCount

Number of measurement reports in the message

Range Bound	Explanation
<u>MeasRepCoun</u>	Number of measurement reports in the message

10.1.4.7 RRC CONNECTION SETUP

This message is used by the network to accept the establishment of an RRC connection for an UE, including assignment of signalling link information, transport channel information and optionally physical channel information. RLC-SAP: t.b.d. Logical channel: CCCH Direction: UTRAN \rightarrow UE

Information Element	Presence	Range	IE type and	Semantics description
			reference	
Message Type	M			
UE information elements				
Initial UE identity	<u>M</u>			FFS whether conveyed on
S-RNTI	Μ			
SRNC identity	M			
C-RNTI	0			Only if assigned to a common
				transport channel
Activation time	<u>0</u>			
RAB information elements				
RAB identity	M			Indicates the signalling link
Signalling link type	M			
RAB multiplexing info	M			For the signalling link
TrCH information elements				
TFCS	<u>0</u>			Uplink TFCS
TFCS	<u>0</u>			Downlink TFCS
TFC subset	<u>0</u>			
Uplink transport channel		<u>0 to</u>		Send transport channel
informations		< <u>MaxULTr</u>		information for each new
		CHCount>		Uplink transport channel
<u> Hransport channel information</u>		0-to		Send transport channel
				Information for each new
Transport channel identity	N/L	GHOUIII>		
	M			
Downlink transport channel		0 to		Send transport channel
information s		<maxdltr< td=""><td></td><td>information for each new</td></maxdltr<>		information for each new
<u></u>		CHCount>		downlink transport channel
Transport channel information		0 to		Send transport channel
•		< <u>MaxDLTr</u>		information for each new
		CHCount>		downlink transport channel
—Transport channel identity	M			
TFS	<u>M</u>			
PhyCH information elements				
Frequency info	0			
Uplink DPCH power control info	0			
Uplink radio resource	<u>0</u>			
Information	0			
	0			
	<u> </u>			
Downlink radio resource				
information				
Downlink information	Ð	0 to <max< td=""><td></td><td>Send downlink information for</td></max<>		Send downlink information for
		RLcount>		each radio link to be set-up
Primary CCPCH info				<u>_</u>
Downlink DPCH info				
Secondary CCPCH info				
Downlink timeslot info	<u>0</u>			Note 1
SSDT indicator	<u>0</u>			<u>FFS</u>
SSDT Cell ID	<u>C ifSSDT</u>			FFS
Gated Transmission Control info	<u>0</u>			FFS
Default DPCH Offset Value	0			

Information element category	-Information elements	REFERENCE	TYPE	NOTE	
	Message Type		M		
UE information elements	Initial UE identity		M	FFS whether co or MAC.	onveyed on RRC
	S-RNTI		M		
	SRNC identity		M		
	C-RNTI		Ð	Only if assigned transport chann	d to a common Iol
	Activation time		θ		
DAD			NA	la disetse the si	en ellie e lie k
K/\B information	KAB lachtity		IVI N4	indicates the si	gnalling link
elements	DAD multiploying info		IVI N4	For the signallin	a link
olomonto	RAB multiplexing into		IVI	For the signallin	ig link
TrCH	TFCS		θ	Uplink TFCS	
information	TECS		θ	Downlink TFCS	
elements	TFC subset		θ		
	Transport channel identity		M	For each new	Uplink
	TFS		M	transport	transport
				channel	channels
	Transport channel identity		M	For each new	Downlink
	TFS		H	transport	transport
			-	channel	channels
PhyCH	Erequency info		Ω		
information	Uplink DPCH power control info		0		
elements					
	Uplink DPCH info		Ð	Maximum one	Uplink radio
	PRACH info		θ	of these	resources
	Uplink timeslot info		θ		
	Primary CCPCH info		θ	For each radio	Downlink radio
	Downlink DPCH info		θ	link	resources
	Secondary CCPCH info		θ		
	Downlink timeslot info		Ð	Note 1	
					0
			Q	Necessity is FF	ð
	Gated Fransmission Control Info		U	++5	
			H		

Condition	Explanation
<u>ifSSDT</u>	This IE is sent only when SSDT is to be used

Range Bound	Explanation
<u>MaxULTrCHCoun</u>	Maximum number of new uplink transport channels
<u>MaxDLTrCHCount</u>	Maximum number of new downlink transport
	channels
MaxRLcoun	Maximum number of radio links to be set up

CHOICE channel requirement	Condition under which the given <i>channel</i> <u>requirement</u> is chosen
Uplink DPCH info	
PRACH info	

Range bound MaxULTrCHCount

Maximum number of new uplink transport channels

Range bound MaxDLTrCHCount

Maximum number of new downlink transport channels

Range bound MaxRLcount

Maximum number of radio links to be set up

Note 1: It is assumed that the DL timeslot configuration is the same for all radio links, whether or not macro-diversity is supported for TDD.

10.1.4.8 RRC CONNECTION SETUP COMPLETE

This message confirms the establishment of the RRC Connection by the UE. RLC-SAP: t.b.d. Logical channel: DCCH Direction: UE \rightarrow UTRAN

Information Element	Presence	Range	IE type and	Semantics description
			reference	
Message Type	M			
Phy CH information elements	M			
SSDT indicator	<u>0</u>			FFS

Information	-Information elements	REFERENCE	TYPE	NOTE
element				
category				
	Message Type		M	
Phy CH	SSDT indicator		θ	Necessity is FFS
information				
elements				

10.1.4.9 RRC CONNECTION REJECT

This message is transmitted by the network when the requested RRC connection cannot be accepted. RLC-SAP: t.b.d.

Logical channel: CCCH

Direction: UTRAN \rightarrow UE

Information Element	Presence	<u>Range</u>	IE type and reference	Semantics description
Message Type	M			
UE information elements				
Initial UE identity	M			FFS whether conveyed on RRC or MAC.
Rejection cause	M			
Wait time	<u>0</u>			

Information element category	-Information elements	REFERENCE	TYPE	NOTE
	Message Type		₩	
UE information elements	Initial UE identity		M	FFS whether conveyed on RRC or MAC.
	Rejection cause Wait time		M Q	

10.1.4.10 RRC STATUS

This message is transmitted by the network when the network requests UE to release one of several signalling connections.

RLC-SAP: t.b.d.

Logical channel: DCCH

Direction: UTRAN \rightarrow UE

Information Element	Presence	<u>Range</u>	IE type and reference	Semantics description
Message Type	M			
CN information elements				
CN domain identity	M			

Information element category	-Information elements	REFERENCE	TYPE	NOTE
	Message Type		M	
CN information elements	CN domain identity		М	

10.1.4.11 RRC STATUS ACK

This message is transmitted by UE as an acknowledgement for RRC STATUS message. RLC-SAP: t.b.d.

Logical channel: DCCH

Direction: UE \rightarrow UTRAN

Information Element	Presence	Range	IE type and reference	Semantics description
<u>Message Type</u>	M			

Information	-Information elements	REFERENCE	TYPE	NOTE
element				
category				
	Message Type		M	

10.1.5 Radio Access Bearer control messages

10.1.5.1 PHYSICAL CHANNEL RECONFIGURATION

This message is used by UTRAN to assign, replace or release a set of physical channels used by a UE. RLC-SAP: t.b.d. Logical channel: DCCH

Direction: UTRAN \rightarrow UE

Information Element	Presence	Range	IE type and	Semantics description
			<u>reference</u>	
Message Type	M			
UE Information elements				
Activation time	<u>0</u>			
<u>C-RNTI</u>				
	H			
UTRAN mobility Information				
elements				
URA update indicator	<u>C - PCH</u>			
	and			
	optional			
Physical Channel information				
<u>elements</u>				
Frequency info	<u>0</u>			
Uplink DPCH power control info	<u>0</u>			
Uplink radio resource				
<u>information</u>				
CHOICE channel	<u>0</u>			
<u>requirement</u>				
Uplink DPCH info				
PRACH info				
Uplink timeslot info	<u>0</u>			
Downlink radio resource				
<u>information</u>				
Downlink information	<u>Q</u>	<u>0 to <max< u=""></max<></u>		Send downlink information for
		RLcount>		each radio link
Primary CCPCH info				
Downlink DPCH info				
Secondary CCPCH info				For FACH
Secondary CCPCH info				For PCH
Downlink timeslot info	<u>0</u>			Note 1
SSDT indicator	<u>0</u>			FFS
SSDT Cell ID	<u>C ifSSDT</u>			<u>FFS</u>
Gated Transmission Control info	<u>0</u>			FFS
Default DPCH Offset Value	<u>O</u>			

Information element	-Information elements	REFERENCE	TYPE	NOTE	
category					
	Message Type		H		
UE Information	Activation time		θ		
elements	C-RNTI		θ	Only RACH/FA	CH
	LIRA update indicator		0	When PCH sha	ll be used and
mobility			•	when present i	t instructs the LIE
Information				to make URA u	ndating
elements					p ddinig
PhyCH	Uplink DPCH power control info		Ð		
information	Frequency info		θ		
elements	Uplink DPCH info		θ	Maximum one	Uplink radio
	PRACH info		θ	of these	resources
	Uplink time slot info		Ð		1
	Primary CCPCH info		Δ	For each radio	Downlink radio
	Downlink DPCH info		Δ	link	resources
	Secondary CCPCH info		0		100001000
	Secondary CCPCH info		Δ	For PCH	
	Downlink timeslot info		Q	Note 1	-
			-		
	SSDT indicator		Ð	Necessity is FF	Ş
	Gated Transmission Control info		θ	FFS	
	Default DPCH Offset Value		θ		

Condition	Explanation
<u>ifSSDT</u>	This IE is only sent when SSDT is used and when a new DCH is being activated
<u>RACH/FACH</u>	This information element is only included in the sent message when using RACH/FACH
<u>PCH</u>	This information element is only included in the sent message when PCH is being used and is optional even then.

Range Bound	Explanation
<u>MaxRLcount</u>	Maximum number of radio links to be set up

CHOICE channel requirement	<u>Condition under which the given <i>channel</i></u> <u>requirement is chosen</u>
Uplink DPCH info	
PRACH info	

Condition RACH/FACH

This information element is only sent when using RACH/FACH

Condition PCH

This information element is only used when PCH is being used and is optional even then.

Range bound MaxRLcount

Maximum number of radio links to be set up

Note 1: It is assumed that the DL timeslot configuration is the same for all radio links, whether or not macrodiversity is supported for TDD.

10.1.5.2 PHYSICAL CHANNEL RECONFIGURATION COMPLETE

This message is sent from the UE when a physical channel reconfiguration has been done. RLC-SAP: t.b.d. Logical channel: DCCH

Direction: UE \rightarrow UTRAN

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Phy CH information elements				
SSDT indicator	<u>0</u>			Necessity is FFS

Information element category	Information elements	REFERENCE	TYPE	NOTE
	Message Type		M	
Phy CH information elements	SSDT indicator		Q	Necessity is FFS

10.1.5.3 RADIO ACCESS BEARER RECONFIGURATION

This message is sent from UTRAN to reconfigure parameters related to a change of QoS. This procedure can also change the multiplexing of MAC, reconfigure transport channels and physical channels. RLC-SAP: t.b.d.

Logical channel: DCCH Direction: UTRAN \rightarrow UE

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	Μ			
UE Information elements				
Activation time	0			
C-RNTI	C -			
	RACH/FAC			
RAB information elements				
RAB information		<u>0 to</u>		RAB information is sent for
		<u><maxrabc< u=""> ount></maxrabc<></u>		each RAB affected by this message
RAB identity	M			
RLC info	<u>0</u>			<u>FFS</u>
RAB multiplexing info	M			
Transport Channel				
Information Elements				
TFCS	0			for uplink DCHs
TFCS	0			for downlink DCHs
TFC subset	<u>0</u>			for DCHs in uplink
Uplink transport channels				
Transport channel identity	<u>0</u>	<u>0 to</u>		
		< <u>MaxDelTr</u>		
	-	<u>CH></u>		
Reconfigured TrCH	<u>0</u>	<u>0 to</u>		
Information		< <u> AlaxReco</u>		
		<u>nAddTrCH</u>		
Tropponert ob opponel identity	N.4	<u>></u>		
DRAC information		10 to		
	<u>C DRAC</u>			
		nAddTrCH		
		>		
Dynamic Control				
Transmission time validity				
Time duration before retry				
Silent period duration				
before release				
Downlink transport channels				
Transport channel identity	<u>0</u>	<u>0 to</u>		
		< <u>MaxDelTr</u>		
		<u>CH></u>		
Reconfigured TrCH		<u>0 to</u>		
Information				
		NAGATICH		
Transport channel identity	M	2		
TES	M			
Physical Channel information	<u></u>			
elements				
Frequency info	0			
Uplink DPCH power control	Ō			
info	<u> </u>			
Uplink radio resource	0			
information				
CHOICE channel	<u>0</u>			
requirement				
Uplink DPCH info				
PRACH info				
Uplink timeslot info	<u>0</u>			
Downlink radio resource				
<u>information</u>				
Downlink information	<u>0</u>	<u>0 to <max< u=""> RLcount></max<></u>		Send downlink information for each radio link
Primary CCPCH info				
Downlink DPCH info				

Secondary CCPCH info			
Downlink timeslot info	<u>0</u>		Note 1
SSDT indicator	<u>0</u>		FFS
Gated Transmission Control	<u>0</u>		<u>FFS</u>
<u>info</u>			
Default DPCH Offset Value	<u>0</u>		

Information element category	-Information elements	REFERENCE	TYPE	NOTE	
	Message Type		M		
UE Information	Activation time		Ð		
elements	C-RNTI			Only RACH/FA	CH
RAR	RAB identity		M		For each RAP
information	RL C info		Ω	FES	affected by th
elements	RAB multiplexing info		H		message
TrCH	TECS		0	for uplink DCHs	
Information	TFCS		θ	for downlink DCHs	
elements	TFC subset		Ð	for DCHs in upl	ink
	Transport channel identity		Ω	For each	Linlink
			-	removed	transport
				transport	channels
				channel	
	Transport channel identity		Ð	For each	-
				reconfigured or	
	TES		θ	added	
				transport	
				cnannel	-
	Dynamic Control		Q	For each	
	Transmission time validity		θ	reconfigured or	
				transport	
				transport shorp of	
				Channel	
				Controlled by	
				DRAC	
	1				

	Time duration before retry	Ð		
	Silent period duration before release	Ð		
	Transport channel identity	Ð	For each	Downlink
			removed	transport
			transport	channels
			channel	_
	Tranpsort channel identity	Ð	For each	
	TES	Ð	reconfigured or	
			added	
			transport	
			channel	
D 1 011				
PhyCH	Uplink DPCH power control into	Q		
Information				
elements	Frequency info	Ð		
	Uplink DPCH into	θ	Maximum one	Uplink radio
			of these	resources
	PRACHINTO	0		
	Uplink timeslot info	Q		
			– – – – –	
	Primary CCPCH Into	0	For each radio	Downlink radio
	Downlink DPCH into	0	HITK	resources
	Secondary CCPCH into	0		-
	Downlink timeslot into	O	Note 1	
	SSDT indicator	0	Nocossity is EE	c
			THOUGODILY IS I F	9
	Gated Transmission Control info	Δ	FES	
	Default DPCH Offset Value	Q		
		_		

Condition	Explanation
RACH/FACH	This information element is only sent when using
	RACH/FACH
DRAC	These information elements are only sent for
	transport channels which use the DRAC procedure

Range Bound	Explanation
<u>MaxRLcount</u>	Maximum number of radio links
<u>MaxRABcount</u>	Maximum number of RABs to be reconfigured
<u>MaxDelTrCHcount</u>	Maximum number of Transport CHannels to be
	removed
MaxReconAddTrCH	Maximum number of transport channels to add and
	reconfigure

CHOICE channel requirement	Condition under which the given <i>channel</i> requirement is chosen
Uplink DPCH info	
PRACH info	

Condition RACH/FACH

This information element is only sent when using RACH/FACH

Condition DRAC

These information elements are only sent for transport channels which use the DRAC procedure

Range bound MaxRLcount
Maximum number of radio links

Range bound MaxRABcount

Maximum number of RABs to be reconfigured

Range bound MaxDelTrCHcount

Maximum number of Transport CHannels to be removed

Range bound MaxReconAddTrCH

Maximum number of transport channels to add and reconfigure

Note 1: It is assumed that the DL timeslot configuration is the same for all radio links, whether or not macrodiversity is supported for TDD.

10.1.5.4 RADIO ACCESS BEARER RECONFIGURATION COMPLETE

This message is sent from the UE when a RAB and signalling link reconfiguration has been done. RLC-SAP: t.b.d.

Logical channel: DCCH Direction: UE \rightarrow UTRAN

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Phy CH information elements				
SSDT indicator	<u>0</u>			<u>FFS</u>

Information element category	-Information elements	REFERENCE	TYPE	NOTE
	Message Type		M	
Phy CH	SSDT indicator		Q	Necessity is FFS
information elements				
i				

10.1.5.5 RADIO ACCESS BEARER RELEASE

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH Direction: UTRAN \rightarrow UE

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	М			
UE Information elements				
Activation time	0			
C-RNTI	<u>C</u> -			
	RACH/FAC			
RAB information elements				
RAB identity	M	1 0 to		
	—	< <u>MaxReIR</u> ABcount>		
RAB identity	<u>0</u>	<u>0 to</u> < <u>MaxOther</u> RABcount>		
RAB multiplexing info	0			
Transport Channel Information Elements				
TFCS	0			for uplink DCHs
TFCS	0			for downlink DCHs
TFC subset	0			for DCHs in uplink
Uplink transport channels				
Transport channel identity	<u>0</u>	<u>0 to</u> <u><maxdeltr< u=""> CH></maxdeltr<></u>		
Reconfigured TrCH	0	<u>0 to</u>		
information		<u><maxreco< u=""> <u>nAddFFST</u> rCH></maxreco<></u>		
Transport channel identity	М			
TFS	Μ			
DRAC information	C DRAC	1 0 to		
		< <u>MaxReco</u> nAddFFST rCH>		
Dynamic Control				
Transmission time validity				
Time duration before retry				
Silent period duration before release				
Downlink transport channels				
Transport channel identity	<u>0</u>	<u>0 to</u> <u><maxdeltr< u=""> CH></maxdeltr<></u>		
<u>Reconfigured TrCH</u> information	<u>0</u>	<u>0 to</u> <maxreco nAddTrCH ≥</maxreco 		Editor : this limit should probably also be MaxReconAddFFSTrCH
Transport channel identity	Μ			
TFS	M			
Physical Channel information elements				
Frequency info	0			
Uplink DPCH power control	0			
Uplink radio resource	<u>0</u>			
CHOICE channel	<u>0</u>			
Uplink DPCH info				
PRACH info				
Uplink timeslot info	<u>0</u>			
Downlink radio resource information				
Downlink information	<u>0</u>	0 to <max RLcount></max 		Send downlink information for each radio link to be set-up
Primary CCPCH info				

Downlink DPCH info			
Secondary CCPCH info			
Downlink timeslot info	0		Note 1

Information	Information elements	REFERENCE	TYPE	NOTE	
olomont					
category					
Galogory	Massage Turne		N 4		
	Message Type		₩		
			-		
UE Information	Activation time		0		
elements	C-RNTI		Ð	Only RACH/FA	H
RAB	RAB identity		M	For each releas	ed RAB
information	RAB identity		Ð	For each other I	RAB affected by
elements				this message	
	RAB multiplexing info		Ð		
TrCH	TECS		Φ	for uplink DCHs	
information					
elements	TECS		Ð	for downlink DC	Hs
	TFC subset		θ	for DCHs in upli	nk
			-		
	Transport channel identity		Ω	For each	Holiok
	Transport onarmor adonaty		Ŭ	removed	transport
				transport	channels
				channel	onannoio
	Transport channel identity		Ω	For each	
			Δ	reconfigured or	
			•	added (FES)	
				transport	
				channel	
	Dynamic Control		θ	For each	
	Transmission time validity		Q	reconfigured or	
	Time duration before retry		Δ	added (FFS)	
	Silent period duration before release		0	transport	
	Chefficher period duration before release		•	channel,	
				controlled by	
				DRAC	
	Transport channel identity		θ	For each	Downlink
				removed	transport
				transport	channels
				channel	
	Transport channel identity		θ	For each	
	TES		θ	reconfigured or	
				added	
				transport	
				channel	
PhyCH	Uplink DPCH power control info		θ		
information					
elements	Frequency info		Ð		
	Uplink DPCH info		0	Maximum one	Uplink radio
	PRACH info		Q	of these	resources
	Uplink timeslot info		Q		1
			1-		ı
	Primary CCPCH info		Ω	For each radio	Downlink radio
			ŏ	link	resources
	Secondary CCPCH info		0		10001000
	Downlink timeslet info		ŏ	Note 1	
			×		I
1		1	1	1	

Condition	Explanation
<u>RACH/FACH</u>	This information element is only sent when using
	RACH/FACH
DRAC	These information elements are only sent for
	transport channels which use the DRAC procedure

Range Bound	Explanation
<u>MaxRLcount</u>	Maximum number of radio links
<u>MaxDelRABcount</u>	Maximum number of RABs to be released/deleted
<u>MaxOtherRABcount</u>	Maximum number of Other RABs (ie RAB's not
	being released) affected by the procedure
<u>MaxDelTrCHcount</u>	Maximum number of Transport CHannels to be
	removed
<u>MaxReconAddFFSTrCH</u>	Maximum number of transport channels to add (FFS)
	and reconfigure

CHOICE channel requirement	<u>Condition under which the given <i>channel</i></u> <u>requirement is chosen</u>
Uplink DPCH info	
PRACH info	

Condition RACH/FACH

This information element is only sent when using RACH/FACH

Condition DRAC

These information elements are only sent for transport channels which use the DRAC procedure

Range bound MaxRLcount

Maximum number of radio links

Range bound MaxDelRABcount

Maximum number of RABs to be released/deleted

Range bound MaxOtherRABcount

Maximum number of Other RABs (ie RAB's not being released) affected by the procedure

Range bound MaxDelTrCHcount

Maximum number of Transport CHannels to be removed

Range bound MaxReconAddFFSTrCH

Maximum number of transport channels to add (FFS) and reconfigure

Note 1: It is assumed that the DL timeslot configuration is the same for all radio links, whether or not macrodiversity is supported for TDD.

10.1.5.6 RADIO ACCESS BEARER RELEASE COMPLETE

<Functional description of this message to be included here>

RLC-SAP: t.b.d. Logical channel: DCCH Direction: UE \rightarrow UTRAN

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	<u>M</u>			

Information element category	-Information elements	REFERENCE	TYPE	NOTE
	Message Type		M	

10.1.5.7 RADIO ACCESS BEARER SETUP

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH Direction: UTRAN \rightarrow UE

Information Element	Presence	Range	IE type and	Semantics description
			reference	
Message Type	M			
CN Information elements	N.4			
CN domain identity				
Activation time	0			
C-RNTI	<u> </u>			
	RACH/FAC			
	H			
RAB information elements				
RAB identity	M			For the new RAB
RLC info	M			-
RAB multiplexing info	M	0.4-		
Information for other RAB's	₽	<u>U to</u>		
anected by this message				
RAB identity	М	THE BOOMINE		
RAB multiplexing info	M			
Transport Channel	_			
Information Elements				
TFCS	<u>O</u>			for uplink DCHs
TFCS	<u> </u>		<u>_</u>	for downlink DCHs
TFC subset	<u> </u>			for DCHs in uplink
Uplink transport channels				
I ransport channel identity	Ð	<u>0 to</u>		editor should this be FFS
				<u>aiso ?</u>
Reconfigured TrCH	Δ	0 to		
information	<u> </u>	<maxreco< td=""><td></td><td></td></maxreco<>		
		nAddTrCH		
		>		
Transport channel identity	<u>M</u>			
TFS	M			
DRAC information	<u>C DRAC</u>	<u>10 to</u>		
		S		
Dynamic Control				
Transmission time validity				
Time duration before retry				
Silent period duration				
before release				
Downlink transport channels				
I ransport channel identity	<u>0</u>	<u>0 to</u>		FFS
Reconfigured TrCH	θ	0 to		
information	~	<maxreco< td=""><td></td><td></td></maxreco<>		
		nAddTrCH		
		≥		
Transport channel identity	M			
IFS Developed Observation for source	M			
Physical Channel Information				
Frequency info	0		<u> </u>	
Uplink DPCH power control	ŏ			
info	ັ			
Uplink radio resource	<u>0</u>			
information				
CHOICE channel	<u>0</u>			
<u>requirement</u>				
Uplink DPCH info				
PRACH info				
Uplink timeslot into	<u> </u>			
DOWNIINK TADIO TESOUICE		1		

information			
Downlink information	θ	0 to <max< td=""><td>Send downlink information for</td></max<>	Send downlink information for
		RLcount>	each radio link
Primary CCPCH info			
Downlink DPCH info			
Secondary CCPCH info			
Downlink timeslot info	<u>0</u>		Note 1
SSDT indicator	<u>0</u>		<u>FFS</u>
SSDT Cell ID	<u>C ifSSDT</u>		FFS
Gated Transmission Control	<u>0</u>		<u>FFS</u>
<u>info</u>			
Default DPCH Offset Value	0		

Information	-Information elements	REFERENCE	TYPE	NOTE	
element					
category					
	Message Type		M		
CN information elements	NAS binding info		M	Transparent nor stratum info e.a) access - bearer identity.
	CN domain identity				
UE Information	Activation time		Ð		
elements	C-RNTI		θ	Only RACH/FAC	H
RAB	RAB identity		H	For the new RA	₿
information	RLC info		M		
elements	RAB multiplexing info		M		
	RAB identity		θ	For each other I	RAB affected by
	RAB multiplexing info		Ð	this message	
TrCH	TECS		Ð	for uplink DCHs	
Information	7500		_		
elements	+ FCS		Q	tor downlink DC	HS
	TEC subset		0	for DOLla in unli	un la
			Ð	TOF DCHS IN UPI	nk
	Transport channel identity		0	For oach	Uplink
	- ransport channel luchtity		Ð	removed	opiink transport
				transport	channels
				channel	
	Transport channel identity		θ	For each	
	TFS		θ	reconfigured or	
				added	
				transport	
				channel	
	Dynamic Control		0	For each	
	Transmission time validity		0	reconfigured or	
	Filme duration before retry		0	transport	
	Sherri period duration before release		Ð	channel,	
				controlled by	
				DRAC	
	Transport channel identity		Ð	For each	Downlink
				removed (FFS)	transport
				transport chopped	cnanneis
	Transport channel identity		0	Eor each	
	TES		D	reconfigured or	
			Ŭ	added	
				transport	
				channel	
PhyCH	Uplink DPCH power control info		Ð		
information	-				
elements	Frequency info		Ð		
	Liplink DDCH info		0	Movingues and	Liplink redia
			0	of these	
	FRAGE HID		0		resources
			∀		
	Primary CCPCH info		0	Eor oach radio	Downlink radio
	Downlink DPCH info		۵ ۵	link	resources
	Secondary CCPCH infe		Q		
	Downlink timeslot info		0	Note 1	
			-		<u> </u>
	SSDT indicator		θ	Necessity is FF	S
			t		

Gated Transmission Control info	0	FFS
Default DPCH Offset Value	0	

Condition	Explanation
<u>RACH/FACH</u>	This information element is only sent when using RACH/FACH
<u>ifSSDT</u>	This IE is only sent when SSDT is used and when a new DCH is being activated

Range Bound	Explanation
<u>MaxRLcount</u>	Maximum number of radio links
<u>MaxDelTrCHcount</u>	Maximum number of Transport CHannels to be
	removed
<u>MaxReconAddcount</u>	Maximum number of Transport CHannels
	reconfigured or added
<u>MaxOtherRABcount</u>	Maximum number of Other RABs (ie RAB's not
	being released) affected by the procedure

CHOICE channel requirement	Condition under which the given <i>channel</i> requirement is chosen
Uplink DPCH info	
PRACH info	

Condition RACH/FACH

This information element is only sent when using RACH/FACH

Range bound MaxRLcount

Maximum number of radio links to be set up

Range bound MaxDelTrCHcount

Maximum number of Transport CHannels to be removed

Range bound MaxReconAddcount

Maximum number of Transport CHannels reconfigured or added

Range bound MaxOtherRABcount

Maximum number of Other RABs (ie RAB's not being released) affected by the procedure

Note 1: It is assumed that the DL timeslot configuration is the same for all radio links, whether or not macrodiversity is supported for TDD.

10.1.5.8 RADIO ACCESS BEARER SETUP COMPLETE

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH Direction: UE \rightarrow UTRAN

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
Phy CH information elements				
SSDT indicator	0			<u>FFS</u>

Information element category	-Information elements	REFERENCE	TYPE	NOTE
	Message Type		M	
Phy CH information elements	SSDT indicator		Ð	Necessity is FFS

10.1.5.9 TRANSPORT CHANNEL RECONFIGURATION

This message is used by UTRAN to configure the transport channel of a UE. This also includes a possible reconfiguration of physical channels. The message can also be used to assign a TFC subset and reconfigure physical channel. RLC-SAP: t.b.d.

Logical channel: DCCH Direction: UTRAN \rightarrow UE

Message Type M reference UE Information elements Activation time Q C-RNTI RACH/FAC FFS Cansort Channel RACH/FAC FFS Iransport Channel Information Elements FFS TFCS Q for uplink DCHs TFCS stream Q for downlink DCHs TFCS stream Q for downlink DCHs TFCS stream Q for downlink DCHs Reconfigured TiCH Q Q _information C DRAC 19 to _mapped TiCH Q GMaxReco _Transport channel identity for DCHs for Advection TFCS Information C DRAC 19 to _mapped TiCH Q GMaxReco for CHDRA _Transport channel identity Information General for Adveco _Transport channel Q General for Adveco _Transport channels Q General for Adveco _Transport channel identity Transport channels	Information Element	Presence	Range	IE type and	Semantics description
Message Type M Advation time				<u>reference</u>	
UE Information elements	Message Type	M			
Activation time Q C.RNTI C. RACCH/FAC H Information Elements FFS Information Elements 0 IFCS 0 IfCS 0 Information Elements 0 IfCS 0 Information CDRAC	UE Information elements	-			
C-RNTI C- RACH/FAC H/FAC FFS Control only state timer 0 FFS Transport Channel Information Elements 0 for uplink DCHs TFCS 0 for downlink DCHs TFCS stopet 0 for downlink DCHs TFCS stopet 0 for DCHs in uplink Uplink transport channels 0 for DCHs in uplink Reconfigured TiCH 9 0 to «MaxReco on TiCH> for DCHs in uplink TFS 1 1 1 DRAC information C DRAC 19 to «MaxReco on TiCCHDRA C> 1 Dransmission time validity 1 1 1 Time duration before refux 1 1 1 Silent period duration before release 1 1 1 Downlink transport channels 0 1 1 1 Transport channel identity 1 1 1 1 1 Transport channel identity 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Activation time	0			
RACHY-AC FFS Control only state timer Q FFS Information Elements Information Elements Information Elements IFCS Q Information Elements Information Elements IFCS Q Information Elements Information Elements IfFC subset Q Information Information Information Q Information Information Information CDRAC 19 to Information Information CDRAC 19 to Information Transport channel identity Information Information Information Transport channel identity Information Information Information Transport channels Information Information Information Silent period duration Information Information Information Information Information Information Information Information Information Information Information Information Information Physical Channel identity	<u>C-RNTI</u>				
Control only state timer Π FFS Transport Channel Information Elements 0 for uplink DCHs TFCS 0 1 for uplink DCHs TFCS 0 1 for uplink DCHs TFCS 0 1 for downlink DCHs TFCS 0 1 for DCHs in uplink Uplink transport channels Q 1 for DCHs in uplink Reconfigured TrCH Q 0 to _Transport channel identity 11 for DCHs TFS 10 to _DRAC information C DRAC _DVnamic Control C _Transmission time validity 1 _Transport channels 0 _Reconfigured TrCH 0 to _information 1 _Transport channel identity 1 _TFS 1 _Transport channel identity 1 _TFS 1		RACH/FAC			
Control Only state Unity C FFS Information Elements Information Elements Information Elements Information Elements TFCS Q Iff of downlink DCHs Iff of downlink DCHs TFC subset Q Iff of downlink DCHs Iff of downlink DCHs Transport channels Q Iff of downlink DCHs Iff of downlink DCHs Transport channel identity Iff of downlink DCHs Iff of downlink DCHs Iff of downlink DCHs Transport channel identity Iff of downlink DCHs Iff of downlink DCHs Iff of downlink DCHs Transport channel identity Iff of downlink DCHs Iff of downlink Iff of downlink Dreamic Control C C Iff of downlink Iff of downlink Transport channels C C Iff of downlink transport channels Iff of downlink Downlink transport channels 0 to Iff of downlink Iff of downlink Transport channel identity Transport channel identity Iff of downlink transport channel identity Iff of downlink Transport channel identity Transport channel identity Iff of downlink	Control only state times	H			
Transport Channels 0 for uplink DCHs TFCS 0 for downlink DCHs TFCs ubset 0 for DCHs in uplink Uplink transport channels 0 dMaxReco information 0 nTransport channels 0 information CDRAC 10 to dMaxReco information CMaxReco dMaxReco dMaxReco information dMaxReco dMaxReco dMaxReco information dMaxReco dMaxReco dMaxReco information dMaxReco dMaxReco dMaxReco information dift dMaxReco dMaxReco _information dift dMaxReco dMaxReco _information dift dMaxReco dMaxReco <td< td=""><td>Control only state timer</td><td>0</td><td></td><td></td><td>FF5</td></td<>	Control only state timer	0			FF5
Internation Elements O for uplink DCHs TFCS Q for downlink DCHs TFC subset Q for DCHs in uplink Uplink transport channels	Iransport Channel				
IPCS 0 for downlink DCHs TFCS 0 for downlink DCHs IFCS 0 for DCHs in uplink Uplink transport channels 0 information Information CBAC MaxReco Information CDRAC 19 to DRAC information CDRAC 19 to DRAC information CDRAC 19 to Dramic Control CS CS Transmission time validity CS CS Time duration before retry Silent period duration MaxReco before retrasport channels 0 CS Downlink transport channels 0 10 to Reconfigured TrCH 0 to 10 to information <maxreco< td=""> 11 to Transport channel identity TT 11 to TFS Transport channel 11 to Physical Channel information <maxreco< td=""> 11 to information Q 11 to Uplink transport control 0 11 to Information Q 11 to Uplink tradic resource 11 to 11 to information Q 11 to Uplink tradic resource 11 to 11 to Upl</maxreco<></maxreco<>	Information Elements				for unlink DOLLS
TPCS 0 for DOWININ DCHS TFC subset 0 for DCHs in uplink Uplink transport channels 0 information Transport channel identity information information TFS 0 information _DRAC information C_DRAC 19 to <maxreco nTrCHDRA _Drynamic Control C information _Transport channels 0 information _Drynamic Control C information _Transmission time validity information information _Transmission time validity information information _Reconfigured TrCH 0 to <maxreco nTrCH≥ information _Transport channels 0 to information Physical Channel information information information Information Q information Information Q information Uplink DPCH power control Q information Uplink DPCH power control Q information Uplink transport channel Q information Uplink transport channel Q information Uplink DPCH power control Q information Uplink transport info Q information</maxreco </maxreco 		0			for downlink DCHs
IPC studiet 0 IPC CHS in Uplink Reconfigured TrCH 9 0 to _information CDRAC MaxReco Transport channel identity IPC CHS in Uplink Transmission time validity IPC CHS in Uplink Transport channels IPC CHS in Uplink Downlink transport channels IPC CHS in Uplink Physical Channel identity IPC CHS in Uplink TFS IPC CHS in Uplink Physical Channel information IPC CHS in Uplink elements IPC CHO CHS in Uplink Frequency info Q Uplink DPC H info IPC CHS in Uplink Uplink timestor info Q Uplink tinferestor info IPC CHS info <td>TFCS</td> <td>0</td> <td></td> <td></td> <td></td>	TFCS	0			
Optimic variation Q 0 to Information Image: Control information Image: Control information Image: Control information Transport channel identity Image: Control information C.DRAC 10 to Drack information C.DRAC 10 to Image: Control information Transmission time validity Image: Control information Image: Control information Image: Control information Transmission time validity Image: Control information Image: Control information Image: Control information Silent period duration before retry Image: Control information Image: Control information Image: Control information Transport channel identity Image: Control information Image: Control information Image: Control information Information Image: Control information Image: Control information Image: Control information Image: Control information Uplink DPCH power control information Image: Control information Image: Control information Image: Control information Uplink DPCH info Image: Control information Image: Control information Image: Control information Image: Control information C	IFC SUDSEL	0			
Information Image: Second		0	0 to		
Interface Similarited Transport channel identity ITCHs TFS It to DRAC information C DRAC 10 to CMAXReco Introduction C Transmission time validity It to Time duration before retry It to Silent period duration It to before release Downlink transport channels Reconfigured TrCH O to Information It CHs Transport channel identity It CHs TFS It to to Physical Channel information It to to elements It to to Frequency info O Uplink PCH power control It Uplink tradio resource It information O Uplink tradio resource It information O Uplink tradio resource It information It Ownlink tradio resource It information O Ownlink tradio resource It information O Downlink tradio resource It information O Downlink tradio resource It information It <td>information</td> <td>₽</td> <td><u>U IO</u></td> <td></td> <td></td>	information	₽	<u>U IO</u>		
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DRAC information C DRAC 19 to Drack information C DRAC 19 to 	TES				
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Introductor Dynamic Control		0.01010	<maxreco< td=""><td></td><td> </td></maxreco<>		
Dynamic Control C≥ Transmission time validity Image: Control of the control			nTrCHDRA		
Dynamic Control Transmission time validity Transmission time validity Image: Control of the contreconte control of the control of the control of the cont			C>		
Transmission time validity Image: constraint of the second s	Dynamic Control				
Time duration before retry Silent period duration before release Downlink transport channels Dewnlink transport channels Uto Reconfigured TrCH O to information Silent Period Markeco Transport channel identity Image: Comparison of the second market period Markeco Transport channel identity Image: Comparison of the second market period Market perio	Transmission time validity				
Silent period duration before release Image: Silent period duration before release Image: Silent period duration before release Downlink transport channels Image: Silent period duration cMaxReco nTransport channel identity Image: Silent period duration cMaxReco nTrCH> Image: Silent period duration cMaxReco nTrCH> Transport channel identity Image: Silent period duration cMaxReco nTrCH> Image: Silent period duration cMaxReco nTrCH> Image: Silent period duration cMaxReco nTrCH> Physical Channel information elements Image: Silent period duration cMolCE channel Image: Silent period duration cmax Image: Sil	Time duration before retry				
before release Image: Composition of the second seco	Silent period duration				
Downlink transport channels 0 to Reconfigured TrCH 0 to information	before release				
Reconfigured TrCH 0 to information 0 to Transport channel identity 0 TFS 0 Physical Channel information 0 elements 0 Frequency info 0 Uplink DPCH power control 0 information 0 Uplink radio resource 0 information 0 CHOICE channel 0 Uplink DPCH info 0 PRACH info 0 Uplink tradio resource 0 information 0 Uplink timeslot info 0 Downlink radio resource 0 information 0 Uplink timeslot info 0 Downlink radio resource 0 information 0 Downlink information 0 Downlink DPCH info 0 Downlink DPCH info 0 Downlink DPCH info 0 Secondary CCPCH info 0 Downlink DPCH info 0 Secondary CCPCH info 0 Secondary CCP	Downlink transport channels				
information <maxreco nTrCH> Transport channel identity </maxreco 	Reconfigured TrCH		<u>0 to</u>		
Image: market product of the second and the seco	information		<maxreco< td=""><td></td><td></td></maxreco<>		
Transport channel identityImage: constraint of the second and to be second and to			<u>nTrCH></u>		
TFS Image: Constraint of the second seco	Transport channel identity				
Physical Channel information elements Physical Channel information Frequency info Q Uplink DPCH power control information Q Uplink radio resource information Q CHOICE channel Q Uplink DPCH info Q PRACH info Q Uplink timeslot info Q Downlink radio resource information Q Uplink timeslot info Q Downlink radio resource information Q Downlink information Q Secondary CCPCH info Image: Comparison of the comp	TFS				
elements O O Frequency info Q O Uplink DPCH power control Q O info Q Image: Control of the second o	Physical Channel information				
Frequency info Q Q Uplink DPCH power control info Q Image: Second and CPCH info Uplink radio resource information Q Image: Second and CPCH info CHOICE channel Q Image: Second and CPCH info Uplink timeslot info Q Image: Second and CPCH info PRACH info Q Image: Second and CPCH info Downlink radio resource Image: Second and CPCH info Image: Second and CPCH info Downlink information Q 0 to <max RLcount> Send downlink information for each radio link Primary CCPCH info Image: Second and CPCH info Image: Second and CPCH info Image: Second and CPCH info Downlink timeslot info Q Image: Second and CPCH info Image: Second and CPCH info Image: Second and CPCH info SSDT indicator Q Image: Second and CPCH info Image: Second and CPCH info Image: Second and CPCH info SSDT indicator Q Image: Second and CPCH info Image: Second and CPCH info Image: Second and CPCH info SSDT indicator Q Image: Second and CPCH info I</max 	<u>elements</u>				
Uplink DPCH power control info 0 Uplink radio resource information 0 CHOICE channel requirement 0 Uplink DPCH info 0 PRACH info 0 Uplink timeslot info 0 Downlink radio resource information 0 Downlink radio resource information 0 Downlink information Q Downlink information Q Downlink information Q Downlink information Q Downlink by CPCH info 0 Downlink by CPCH info 0 Downlink timeslot info 0 Secondary CCPCH info 0 Downlink timeslot info 0 SSDT indicator 0 SSDT Cell ID C ifSSDT Gated Transmission Control info 0 Defendt DPCH Offreet Velue 0	Frequency info	<u>0</u>			
info Uplink radio resource information Q CHOICE channel Q requirement Q Uplink DPCH info Q PRACH info Q Uplink timeslot info Q Downlink radio resource Q information Q Downlink information Q Downlink information Q Downlink information Q Primary CCPCH info C Secondary CCPCH info C Downlink timeslot info Q Secondary CCPCH info C Downlink timeslot info Q Secondary CCPCH info C Downlink timeslot info Q SSDT indicator Q SSDT Cell ID C ifSSDT Gated Transmission Control Q info Defent PGH Offeet Volume	Uplink DPCH power control	<u>O</u>			
Uplink radio resource information Q CHOICE channel Q requirement Q Uplink DPCH info Q PRACH info Q Uplink timeslot info Q Downlink radio resource information Q Downlink radio resource information Q Downlink information Q Downlink information Q Downlink DPCH info Q Downlink information Q Downlink information Q Downlink DPCH info Q Secondary CCPCH info Q Downlink timeslot info Q Downlink timeslot info Q SSDT indicator Q SSDT Cell ID C ifSSDT Gated Transmission Control info Q Defendt TPCH Offect Value Q	info				
information Q CHOICE channel Q requirement Q Uplink DPCH info Q PRACH info Q Uplink timeslot info Q Downlink radio resource Q information Q O to <max RLcount> Send downlink information for each radio link Primary CCPCH info Q O to <max RLcount> Send downlink information for each radio link Primary CCPCH info Q O Note 1 SSDT indicator Q FFS SSDT cell ID C ifSSDT FFS Gated Transmission Control info Q FFS</max </max 	Uplink radio resource				
CHOICE channel Q requirement	information				
requirement Image: constraint of the second and t	CHOICE channel	<u>0</u>			
Uplink DPCH info	requirement				
PRACH into O Uplink timeslot info Q Downlink radio resource information O to <max RLcount> Downlink information Q Downlink DPCH info Image: Cepe Hord Secondary CCPCH info Image: Cepe Hord Downlink timeslot info Q SSDT indicator Q SSDT Cell ID C ifSSDT Gated Transmission Control Q Info Image: Cepe Hord Default DPCH Offact Value O</max 	Uplink DPCH info				ļ
Uplink timeslot info Q Image: Constraint of the second cons	PRACH info				
Downlink radio resource information Q O to <max RLcount> Send downlink information for each radio link Primary CCPCH info Downlink DPCH info Secondary CCPCH info Downlink timeslot info O SSDT indicator O SSDT Cell ID C ifSSDT Gated Transmission Control O Info Dafault DPCH Offact Value O</max 	Uplink timeslot info	0			
Information Q O to <max RLcount> Send downlink information for each radio link Primary CCPCH info Image: Comparison of the comparison of t</max 	Downlink radio resource				
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Information		0.45		
Primary CCPCH info Each radio link Downlink DPCH info Image: Constant of the second ary CCPCH info Secondary CCPCH info Image: Constant of the second ary CCPCH info Downlink timeslot info O SSDT indicator O SSDT Cell ID C ifSSDT Gated Transmission Control O Info Image: Constant of the second ary	Downlink information	보	U to <max< td=""><td></td><td>Send downlink information for</td></max<>		Send downlink information for
Primary CCPCH info	Drimony CODOLLin fr		KLCOUNT>		
Downlink DPCH III0 Note 1 Secondary CCPCH info 0 Downlink timeslot info 0 SSDT indicator 0 SSDT Cell ID C ifSSDT Gated Transmission Control 0 info 0					
Secondary COPCENTING O Downlink timeslot info O SSDT indicator O SSDT Cell ID C ifSSDT Gated Transmission Control O info O					
Downink timestot mo O Note i SSDT indicator O FFS SSDT Cell ID C ifSSDT FFS Gated Transmission Control info O FFS	<u>Secondary CCPCH Into</u>				Note 1
SSDT Indicator O FFS SSDT Cell ID C ifSSDT FFS Gated Transmission Control info O FFS					
Solution Clisolit FFS Gated Transmission Control info O FFS Default DBCH Offset Value O					
Galed Transmission Control U info Pofeult DBCH Offset Value	Sour Central				
Default DDCH Offeet Value		<u> </u>			
		0			

Information element category	-Information elements	REFERENCE	TYPE	NOTE	
	Message Type		M		
UE Information	Activation time		θ		
elements	C-RNTI		Ð	Only RACH/FA	CH
	Control-only-state-timer		θ	FFS	
TrCH	TECS		θ	for uplink DCHs	;
information				•	
elements	TECS		Ð	for downlink DC	`Hs
	TFC subset		Ð	for DCHs in upl	ink
	Transport channel identity		θ	For each	Uplink
	TFS		θ	reconfigured	transport
				transport	channels
				channel	
	Dynamic Control		Q	For each	
	Transmission time validity		Ð	reconfigured	
	Time duration before retry		θ	transport	
	Silent period duration before release		θ	channel, controlled by	
				DRAC	
					-
	Transport channel identity		θ	For each	Downlink
	TFS		θ	reconfigured transport	transport channels
				channel	
DhuCH	Liplink DDCH power control info		0		
information			A		
elemente	Frequency info		0		
olomonto			₽		
	Unlink DPCH info		0	Maximum one	Liplink radio
	PRACH info		0	of these	resources
	Link timeslot info		0		100001000
			4		
	Primary CCPCH info		0	For each radio	Downlink radio
	Powelink DBCH info		0	FOI CACH IAUIO	
	Secondary CCRCH info		0		10001000
	Downlink timeslet info		0	Noto 1	
			₽		
	SSDT indicator		0	Nocossity is EE	0
			→	TROUGSONY IS FF	0
	Catad Transmission Control info		0		
		<u> </u>	ŏ		
			₽		

Condition	Explanation
ifSSDT	This IE is only sent when SSDT is used and when a
	new DCH is being activated
RACH/FACH	This information element is only sent when using
	RACH/FACH

Range Bound	Explanation
MaxRLcount	Maximum number of radio links to be set up
<u>MaxReconcount</u>	Maximum number of Transport CHannels reconfigured
<u>MaxReconTrCHDRAC</u>	Maximum number of Transport CHannels which are controlled by DRAC and which are reconfigured
CHOICE channel requirement	Condition under which the given <i>channel</i>

	requirement is chosen
Uplink DPCH info	
PRACH info	

Condition RACH/FACH

This information element is only sent when using RACH/FACH

Range bound MaxRLcount

Maximum number of radio links to be set up

Range bound MaxReconcount

Maximum number of Transport CHannels reconfigured

Range bound MaxReconTrCHDRAC

Maximum number of Transport CHannels which are controlled by DRAC and which are reconfigured

Note 1: It is assumed that the DL timeslot configuration is the same for all radio links, whether or not macro-diversity is supported for TDD.

10.1.5.10 TRANSPORT CHANNEL RECONFIGURATION COMPLETE

This message is sent from the UE when a transport channel reconfiguration has been done.

RLC-SAP: t.b.d.

Logical channel: DCCH

Direction: UE \rightarrow UTRAN

Information Element	Presence	<u>Range</u>	IE type and reference	Semantics description
Message Type	M			
Phy CH information elements				
SSDT indicator	<u>0</u>			<u>FFS</u>

Information element category	Information elements	REFERENCE	TYPE	NOTE
	Message Type		M	
Phy CH	SSDT indicator		Φ	Necessity is FFS
information elements				

Note: The usage of this message for indicating the cell the UE will select in the DCH->RACH/FACH case, is FFS.

10.1.5.11 TRANSPORT FORMAT COMBINATION CONTROL

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH Direction: UTRAN→UE

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			
TrCH information elements				
TFC subset	<u>M</u>			For uplink DCH's multiplexed
				onto a CCTrCH

Information	Information elements	REFERENCE	TYPE	NOTE
element				
category				
	Message Type		H	
TrCH	TFC subset		H	for DCHs in UL
information				
elements				

10.1.6 System Information Messages

10.1.6.1 SYSTEM INFORMATION

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: BCCH or DCCH or CCCH Direction: UTRAN \rightarrow UE

NOTE: The division of the system information into messages is FFS.

Information Element	Presence	Range	IE type and	Semantics description
Managene			reference	
Message Type	M			
CN Information elements				
<u>PLIMIN Identity</u>		10 to		Sand CN information for each
				CN domain Information must
		mains>		be included for at least one
		manoz		core network domain type.
CN domain identity	Μ			<u></u>
NAS system information	Μ			
UTRAN mobility information				
elements				
URA identity	M	<u>10 to</u>		
		<maxurac< td=""><td></td><td></td></maxurac<>		
		<u>ount></u>		
Information for periodic cell and	M			
				I he necessity and usage of
Coll selection and re-selection	N/			<u>cell identity is FFS.</u>
info				
UE information				
Uplink access control info	Μ			
DRAC information	Q	0 to		DRAC information is sent for
	_	<maxdra< td=""><td></td><td>each class of terminal</td></maxdra<>		each class of terminal
		Cclasses>		
Transmission probability				
Maximum bit rate				
PhyCH information elements				
PRACH power control info	M			
RACH information	M	<u>10 to</u>		
		< <u>maxRAC</u>		
Fraguanavinfa	0	<u>⊓count></u>		
PRACH info	M			
FACH information	M	10 to		
	<u></u>	<maxfac< td=""><td></td><td></td></maxfac<>		
		Hcount>		
Frequency info	0			
Secondary CCPCH info	M			
PCH information	M	<u>10 to</u>		
		<maxpchc< td=""><td></td><td></td></maxpchc<>		
		<u>ount></u>		
Frequency info	0			
Secondary CCPCH info	M			
Measurement Information				
letro froquency measurement		0 to		
information		<u>0 i0</u> <mayintrafr< td=""><td></td><td></td></mayintrafr<>		
mornation		eqcount>		
Measurement Identity	Μ			Note 1
Number				
Measurement object		0 to <max< del=""></max<>		
<u>—information</u>		<u>MeasObjC</u>		
		ount>		
Intra-frequency cell info	M	<u>1 to <max< u=""></max<></u>		
		MeasObjC		
Intro frequency measurement	N/L	<u>ount></u>		
<u></u>				
Intra-frequency measurement	Μ			
reporting criteria	111			
Intra-frequency reporting	C -			
quantity for RACH reporting	RACHrep			
Inter-frequency measurement		<u>0 to</u>		
information		<maxinterfr< td=""><td></td><td></td></maxinterfr<>		

		eqcount>	
Measurement Identity Number	M		Note 1
<u>Measurement object</u> <u>information</u>		<u>0 to <max< u=""> <u>MeasObjC</u> <u>ount></u></max<></u>	
<u>—Inter-frequency cell info</u>	M	<u>1 to <max< u=""> <u>MeasObjC</u> <u>ount></u></max<></u>	
Inter-frequency measurement quantity	M		
Inter-frequency measurement reporting criteria	M		
Inter-system measurement information		<u>0 to</u> <maxinter Syscount></maxinter 	
<u>Measurement Identity</u> <u>Number</u>	M		Note 1
<u>Measurement object</u> <u>information</u>		<u>0 to <max< u=""> <u>MeasObjC</u> ount≻</max<></u>	
<u>—Inter-system cell info</u>	M	<u>1 to <max< u=""> <u>MeasObjC</u> <u>ount></u></max<></u>	
<u>Inter-system measurement</u> quantity	M		
Inter-system measurement reporting criteria	M		

element category Message Type M Message Type M CN information elements PLMN Identity M CN-domain identity M NAS-system information M	For each Core Network Domain. Information must be included for at least one core
eategory M Message Type M CN information elements PLMN Identity CN domain identity M NAS-system information M	For each Core Network Domain. Information must be included for at least one core
Message Type M CN information elements PLMN Identity M Olements CN domain identity M NAS system information M	For each Core Network Domain. Information must be included for at least one core
CN information olements PLMN Identity M olements CN domain identity M NAS system information M	For each Core Network Domain. Information must be included for at least one core
CN information PLMN Identity M elements CN domain identity M NAS system information M	For each Core Network Domain. Information must be included for at least one core
elements CN domain identity M NAS system information M	For each Core Network Domain. Information must be included for at least one core
NAS system information M	Network Domain. Information must be included for at least one core
	Domain. Information must be included for at least one core
	Information must be included for at least one core
	must be included for at least one core
	included for at least one core
	least one core
	network
	domain type.
UTRAN URA identity M	For each URA
mobility Information for periodic cell and M	Note: not for
information URA update	cach URA any
Cell identity M. The recession	HIDIO
cell identity cell identity cell identity is	FFS.
Cell selection and re-selection info M	
LIE information Uplink access control info	
alements	
Transmission probability O For all UE	For each class
Maximum bit rate	of UE
controlled by	Note2
DRAC	
procedure	
Dby CIT Frequency info	<u>`</u> Ц
THYCH OF CHICAGO M	///
Frequency info	'H on secondary

	Secondary CCPCH info	M]	
	Frequency info	Q	For each PCH	on secondary
	Secondary CCPCH info	M	CCPCH	-
	PRACH power control info	M		
Measurement Information	Measurement Identity Number	M	Note 1	For each Intra- frequency
oloments	Intra-frequency cell info	M	For each measurement object	measurement control
	Intra-frequency measurement quantity	M		
	Intra-frequency measurement reporting criteria	M		
	Intra frequency reporting quantity for RACH reporting	e	Only included if RACH reporting is indicated in the reporting criteria	
	Measurement Identity Number	M	Note 1	For each Inter- frequency
	Inter-frequency cell info	M	For each measurement object	measurement control
	Inter-frequency measurement quantity	M		
	Inter-frequency measurement reporting criteria	M		
	Measurement Identity Number	M	Note 1	For each Inter- svstem
	Inter-system cell info	M	For each measurement object	measurement control
	Inter-system measurement quantity	M		•
	Inter-system measurement reporting criteria	M		
	+ + + + + + + + + + + + + + + + + + + +			1

Condition	Explanation
<u>RACH-rep</u>	This information element is only included if RACH
	reporting is indicated in the reporting criteria

Range Bound	Explanation
<u>MaxCNdomains</u>	Maximum number of CN domains
<u>MaxURAcount</u>	Maximum number of URA's in a cell
<u>MaxDRACclasses</u>	Maximum number of UE classes which would require
	different DRAC parameters
<u>MaxRACHcount</u>	Maximum number of RACH's
<u>MaxFACHcount</u>	Maximum number of FACH's mapped onto
	secondary CCPCH's
<u>MaxPCHcount</u>	Maximum number of PCH's mapped onto secondary

	<u>CCPCH's</u>
<u>MaxIntraFreqCount</u>	Maximum number of intra frequency measurement control
<u>MaxInterFreqCount</u>	Maximum number of inter frequency measurement control
<u>MaxInterSysCount</u>	Maximum number of inter system measurement control
<u>MaxMeasObjCount</u>	Maximum number of Measurement Objects

Condition RACH-rep

This information element is only included if RACH reporting is indicated in the reporting criteria

Range bound MaxCNdomains

Maximum number of CN domains

Range bound MaxURAcount

Maximum number of URA's in a cell

Range bound MaxDRACclasses

Maximum number of UE classes which would require different DRAC parameters

Range bound MaxRACHcount

Maximum number of RACH's

Range bound MaxFACHcount

Maximum number of FACH's mapped onto secondary CCPCH's

Range bound MaxPCHcount

Maximum number of PCH's mapped onto secondary CCPCH's

Range bound MaxIntraFreqCount

Maximum number of intra frequency measurement control

Range bound MaxInterFreqCount

Maximum number of inter frequency measurement control

Range bound MaxInterSysCount

Maximum number of inter system measurement control

Range bound MaxMeasObjCount

Maximum number of Measurement Objects

Note 1: The necessity and usage of Measurement identity number in this message is FFS. Note 2: The split of parameters into several System Information message X is FFS.

10.1.7 Other Messages

10.1.7.1 UE CAPABILITY INFORMATION

<Functional description of this message to be included here>
RLC-SAP: t.b.d.
Logical channel: DCCH
Direction: UE \rightarrow UTRAN

Information Element	Presence	Range	IE type and	Semantics description
			reference	
Message Type	M			
CN information elements				
NAS message	M			Includes the CN capability
				information
UE information elements				
Power control capability	M			
Code resource capability	M			
UE mode capability	M			
Transport CH support capability	<u>0</u>			
Ciphering capability	M			
Macro diversity capability	M			
Other information elements				
Inter-system message	<u>0</u>			Includes inter-system
				classmark

Information	Information elements	REFERENCE	TYPE	NOTE
category				
	Message Type		H	
CN information elements	NAS message		М	Includes the CN capability information
UE information	Power control capability		M	UTRAN
elements	Code resource capability		M	capability
	UE mode capability		₩	information
	Transport CH support capability		θ	
	Ciphering capability		M	
	Macro diversity capability		H	
Other information	Inter-system message		θ	Includes inter-system classmark
elements				

Note: The WG1 and WG4 discussion should be concluded before the contents of this message can be finalized.

10.1.7.2 UE CAPABILITY INFORMATION CONFIRM

<Functional description of this message to be included here> RLC-SAP: t.b.d.

Logical channel: DCCH

Direction: UTRAN \rightarrow UE

Information Element	Presence	Range	IE type and reference	Semantics description
Message Type	M			

Information element category	Information elements	REFERENCE	TYPE	NOTE
oatogory	Message Type		M	

10.1.7.3 DIRECT TRANSFER

<Functional description of this message to be included here> RLC-SAP: t.b.d. Logical channel: DCCH Direction: both

Information Element	Presence	Range	IE type and	Semantics description
			<u>reference</u>	
Message Type	<u>M</u>			
CN information elements				
CN domain identity	M			
NAS message	M			
Measurement information				
<u>elements</u>				
Measured results	0			

Information element category	Information elements	REFERENCE	TYPE	NOTE
	Message Type		M	
CN information elements	CN domain identity		М	
	NAS message		M	
Measurement information elements	Measured results		θ	Intra-frequency measurement related report

10.2 Information element functional definitions

10.2.1 CN Information elements

10.2.1.1 CN domain identity

Points out the core network domain (e.g. IP or PSTN/ISDN CN domain).

10.2.1.2 NAS binding info

A field with non-access stratum information to bind a RAB to the non-access stratum. This information is transparent to RRC.

10.2.1.3 NAS message

A non-access stratum message to be transferred transparently through UTRAN.

10.2.1.4 NAS system information

System information that belongs to the non-access stratum (e.g. LAC, RA code etc). This information is transparent to RRC.

10.2.1.5 PLMN identity

Information Element/Group	Presence	Range	IE type and	Semantics description
<u>name</u>			<u>reference</u>	
MCC, Mobile Country Code	M			
MNC, Mobile Network Code	Μ			

Parameters	REFERENCE	TYPE NOTE
MCC, Mobile Country Code		₩
MNC, Mobile Network Code		₩

10.2.2 UTRAN mobility Information elements

10.2.2.1 Cell identity

Identity of a cell within a PLMN.

Note: The necessity and usage of this information element is FFS.

10.2.2.2 Cell selection and re-selection info

Information Element/Group	Presence	Range	IE type and	Semantics description
name			reference	
Standby allowed reception level	M			The usage of these
<u>(dBm)</u>				parameters needs clarification
				<u>FFS.</u>
Standby prohibited reception	M			
<u>level (dBm)</u>				
Threshold for Cell Re-selection	<u>M</u>			
<u>(dB)</u>				
Allowed reception SIR (dB)	M			
Radio link timeout				

Parameters	REFERENCE	TYPE	NOTE	
Standby allowed reception level (dBm)		M		The usage of these parameters needs clarification FFS.
Standby prohibited reception level (dBm)		M		
Threshold for Cell Re-selection (dB)		M		
Allowed reception SIR (dB)		M		
Radio link timeout				

10.2.2.3 Information for periodic cell and URA update FFS.

10.2.2.4 URA identity

<u>Gives the i</u>Identity of the UTRAN Registration Area. <u>It can be used to indicate to the UE which URA it shall use in case of overlapping URAs.</u>

10.2.2.5 URA update indicator

When present in a message, it instructs the UE to start to update its location on URA level.

10.2.3 UE Information elements

10.2.3.1 Uplink access control info

Information Element/Group	Presence	Range	IE type and reference	Semantics description
Access class	M			FFS
Dynamic persistence level	Μ			FFS

Parameters	REFERENCE	TYPE	NOTE
Access class		M	FFS
Dynamic persistence level		M	FFS

10.2.3.2 C-RNTI

The controlling RNC RNTI identifies an UE having a RRC connection within an controlling RNC.

10.2.3.3 S-RNTI

The serving RNC RNTI is allocated to an UE having a RRC connection and identifies the UE within its serving RNC.

10.2.3.4 SRNC identity

Identifies the serving RNC for an UE having an RRC connection.

10.2.3.5 Initial UE identity

This information element identifies the UE at a request of an RRC connection.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
CHOICE UE Identity	M			
IMSI				International Mobile Subscriber Identity
<u>TMSI + LAI</u>				Temporary Mobile Subscriber Identity and Location Area Identity
<u>P-TMSI + RAI</u>				Packet Temporary Mobile Subscriber Identity and Routing Area Identity
<u>IMEI</u>				International Mobile Subscriber Identity

Parameters	REFERENCE	TYPE	NOTE		
IMSI		θ	International Mobile Subscriber Identity	One of these	
TMSI + LAI		θ	Temporary Mobile Subscriber Identity and Location Area Identity	NAS identities is used	
P-TMSI + RAI		θ	Packet Temporary Mobile Subscriber Identity and Routing Area Identity	1	
IMEI		θ	International Mobile Subscriber Identity		

CHOICE UE Identity	Condition under which the given UE identity is used
IMSI	
TMSI+LAI	
P-TMSI+RAI	
IMEI	

CHOICE UE Identity

One of the four UE identities must be used, the conditions under which each ID is used is as follows

[Note: The use of these identities is pending confirmation from WG1 that the RACH can support the required payload when these types of ID are used]

10.2.3.6 Activation time

Activation Time defines the frame number (or offset to some known frame number) in which the operation/changes caused by the related message should be executed.

Current assumption is that a connection based CFN (Connection Frame Number) that is known by MS and SRNC could be used.

10.2.3.7 Wait time

Wait time defines the time period the UE has to wait before repeating the rejected procedure.

10.2.3.8 Control-only-state timer

This IE indicates for how long the UE shall stay in the control-only-state. *Editors note: the exact usage of this IE needs some clarification*.

10.2.3.9 Paging record

Information Element/Group	Presence	Range	IE type and reference	Semantics description
Paging originator	M	Enumerated (UTRAN,CN)		
Paging cause	<u>C isCN</u>			
CN domain identity	<u>C isCN</u>			
CHOICE Identity	M			
IMSI				For idle mode pages
TMSI				
P-TMSI				
Connected mode ID				For connected mode pages
S-RNTI	M			
SRNC identity	M			

Condition	Explanation
<u>isCN</u>	This information element is included where the page is originated from the CN.

CHOICE Identity	<u>Condition under which the given </u> <i>Identity</i> is chosen
IMSI	For idle mode pages
TMSI	For idle mode pages
<u>P-TMSI</u>	For idle mode pages
Connected mode ID	For connected mode pages

Parameters	REFERENCE	TYPE	NOTE		
Paging originator		H	UTRAN/CN		
Paging cause		C	For CN originated pages		
CN domain identity					
IMSI		Ð	International Mobile Subscriber Identity	One of these	For idle
TMSI		θ	Temporary Mobile Subscriber Identity	formats is mode	
P-TMSI		θ	Packet Temporary Mobile Subscriber Identity	used	pages
S-RNTI		θ	For connected mode pages	•	
SRNC identity					

10.2.3.10 Establishment cause

Cause for an RRC connection establishment request (originating call, emergency call, paging response, location update request, forward inter-system handover etc).

10.2.3.11 Release cause

Cause for release of RRC connection.

10.2.3.12 Rejection cause

Cause for rejection of RRC connection establishment request.

10.2.3.13 Paging cause

Cause for a CN originated page. Editors note: The usage of this IE needs further clarification.

10.2.3.14 Initial UE capability

This is the UE capability information given in the RRC connection request message. The exact type of information is FFS.

10.2.3.15 Power control capability

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
Transmission power capability	M			

Parameters	REFERENCE	TYPE	NOTE
Transmission power capability		М	

Note: The WG1 and WG4 discussion should be concluded before the contents of this IE can be finalized.

10.2.3.16 Code resource capability

Information Element/Group	Presence	Range	IE type and reference	Semantics description
DL multi-code capability				
UL multi-code capability				
DL Spreading factor capability				
UL Spreading factor capability				

Parameters	REFERENCE	TYPE	NOTE
DL multi-code capability			
UL multi-code capability			
DL Spreading factor capability			
UL Spreading factor capability			

Note: The WG1 and WG4 discussion should be concluded before the contents of this IE can be finalized.

10.2.3.17 UE mode capability

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
System capability		0 to <maxsyste mCount></maxsyste 	Enumerated (UMTS, GSM, Othors)	
UMTS capability		0 to <maxmode count></maxmode 	<u>Enumerated</u> (TDD, FDD)	
Chip rate capability				
Radio Frequency capability				
Variable duplex distance capability				

Range Bound	Explanation
MaxSystemCount	Maximum number of Systems supported by the UE
<u>maxModeCount</u>	Maximum number of UMTS modes supported by the UE

Parameters	REFERENCE	TYPE	NOTE
System capability (UMTS/GSM/others)			
UMTS capability (TDD/FDD)			
Chip rate capability			
Radio Frequency capability			
Variable duplex distance capability			

Note: The WG1 and WG4 discussion should be concluded before the contents of this IE can be finalized.

10.2.3.18 Transport channel support capability

Information Element/Group	Presence	Range	IE type and	Semantics description
name			reference	
Maximum number of DCHs			Integer	
Support for Transport CH				

Parameters	REFERENCE	TYPE	NOTE
Maximum number of DCHs			
Support for Transport CH			

Note: The WG1 and WG4 discussion should be concluded before the contents of this IE can be finalized.

10.2.3.19 Ciphering capability

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reterence</u>	
Ciphering Algorithm capability	M		Enumerated	

Parameters	REFERENCE	TYPE	NOTE
Ciphering Algorithm capability		M	

Note: The WG1 and WG4 discussion should be concluded before the contents of this IE can be finalized.

10.2.3.20 Macro diversity capability

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
Maximum number of RLs	M		Integer	

Parameters	REFERENCE	TYPE	NOTE
Maximum number of RLs		М	

Note: The WG1 and WG4 discussion should be concluded before the contents of this IE can be finalized.

10.2.3.21 Cell update cause

Indicates the cause for s cell update. Examples of causes are cell reselection and periodic cell update.

10.2.3.22 URA update cause

Indicates the cause for s URA update. Examples of causes are change of URA and periodic URA update.

10.2.3.23 Number of Quick Repeat

Indicates the number of quick repeat for RRC Connection Release Complete message.

10.2.3.24 Inter-system handover failure cause

The purpose of this IE is to provide a reason for the failure of the Inter-system handover.

10.2.3.25 Transmission probability

Indicates the probability for a mobile to be allowed to transmit on a DCH controlled by DRAC procedure.

10.2.3.26 Maximum bit rate

Indicates the maximum user bit rate allowed on a DCH controlled by DRAC procedure for the transmission period (Transmission time validity).

10.2.3.27 Capability Update Requirement

This IE indicates to the UE, which is capable of inter-system handover, whether it should send a complete update of its capabilities in the given system (e.g. GSM) immediately after having established an RRC connection.

Information Element/Group	Presence	Range	IE type and reference	Semantics description
<u>System</u>	M		Enumerated (GSM)	
Early Capability Update	M		Boolean	

Parameters	REFERENCE	TYPE	NOTE
System		M	E.g. GSM
Early Capability Update		M	Yes / No

10.2.4 Radio Access Bearer Information elements

10.2.4.1 RAB identity

An identification number for the RAB affected by a certain message.

10.2.4.2 RLC info

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
Uplink RLC info				
<u>RLC mode</u>	M		enumerated (Acknowledged, Non Acknowledged or Transparent mode data transfer.)	Indicates iwhat type of RLC entity a certain RAB should use [Note: It is FFS if this parameter always is the same in both UL and DL.]
<u>RLC in-sequence delivery</u>	<u>0</u>		<u>Boolean</u>	Indication if RLC should preserve the order of higher layer PDUs that were transmitted through RLC. [Note: It is FFS if this parameter always is the same in both UL and DL.]
<u>_RLC PDU size</u>	<u>C -</u> <u>ifNotDerive</u> d		<u>Integer</u>	Size of RLC Protocol Data Units.
<u>RLC transmission window size</u>	0		Integer	A flow control parameter used to set the maximum number of RLC PDUs sent without getting them acknowledged
<u>_RLC retransmission info</u>	M			This could be the number of attempts to retransmit a RLC PDU before it is discarded, or different timer values.
Downlink RLC info				
<u>RLC mode</u>	M		enumerated (Acknowledged, Non Acknowledged or Transparent mode data transfer.)	
<u>RLC in-sequence delivery</u>	<u>0</u>		<u>Boolean</u>	
<u>RLC PDU Size</u>	<u>C -</u> ifNotDerive <u>d</u>		Integer	
RLC transmission window size	<u>0</u>		Integer	
<u>RLC retransmission info</u>	M			<u>Is this needed to send to the</u> UE for downlink?

Condition	Explanation
<u>ifNotDerived</u>	RLC PDU size may be derived from transport block
	size and not explicitly transferred across the radio
	interface. In this case the information element is not
	sent.

Condition c ifNotDerived

RLC PDU size may be derived from transport block size and not explicitly transferred across the radio interface

Parameters	REFERENCE	TYPE	NOTE	
RLC mode		₩	Indicates if the RLC entity for a certain RAB should use Acknowledged, Non Acknowledged or Transparent mode data transfer. [Note: It is FFS if this parameter always is the same in both UL and DL.]	Uplink RLC info
RLC in-sequence delivery		θ	Indication if RLC should preserve the order of higher layer PDUs that were transmitted through RLC. [Note: It is FFS if this parameter always is the same in both UL and DL.]	
RLC PDU size		e	Size of RLC Protocol Data Units. See Note 1	
RLC transmission window size		Ð	A flow control parameter used to set the maximum number of RLC PDUs sent without getting them acknowledged	
RLC retransmission info		Μ	This could be the number of attempts to retransmit a RLC PDU before it is discarded, or different timer values.	
RLC mode		H		Downlink
RLC in-sequence delivery		θ		RLC info
RLC PDU Size		M	Note 1	
RLC transmission window size		θ]
RLC retransmission info		Q	Is this needed to send to the UE for downlink?	

Note1: RLC PDU size may be derived from transport block size and not explicitly transfered across the radio interface.

10.2.4.3 Signalling link type

The purpose of the Signalling Link Type information element is to indicate the RLC parameters needed for the signalling link.

Each possible value of Signalling Link Type information element refers to a predefined set of parameters. Details FFS.

10.2.4.4 RAB multiplexing info

A multiplexing option for each possible transport channel this RAB can be multiplexed on.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
Information for each multiplexing option		<u>10 to</u> <maxmuxo ptionsCoun</maxmuxo 		
the Balance of Contention of		<u>t></u>		
	<u> </u>			
I ransport channel identity	<u>0</u>			<u>Channel that this RAB could</u> be mapped onto.
Logical channel identity	<u>O</u>			This parameter is used to distinguish logical channels multiplexed by MAC on a transport channel.
MAC logical channel priority	<u>O</u>			This includes both priority between different users traffic when using a common or shared channel, and between different RABs (or logical channels) traffic for a certain user. Different priorities for one users RABs are mapped (through the MACś T and C/T MUXes) to the TFC selection algorithm. [Note: Usage and precise meaning of this is FFS.]
Downlink multi-plexing				
Transport channel identity	<u>0</u>			
Logical channel identity	0			

Parameters	REFERENCE	TYPE	NOTE		
Transport channel identity		θ	This is the ID of a transport channel that this RAB could be mapped onto.	Uplink multi- plexing	For each multi-
Logical channel identity		Ð	This parameter is used to distinguish logical channels multiplexed by MAC on a transport channel.		plexing option
MAC logical channel priority		Φ	This includes both priority between different users traffic when using a common or shared channel, and between different RABs (or logical channels) traffic for a certain user. Different priorities for one users RABs are mapped (through the MACś T and C/T MUXes) to the TFC selection algorithm. [Note: Usage and precise meaning of this is FFS.]		
Transport channel identity		θ		Downlink	
Logical channel identity		θ		multi- plexing	

Note: The necessity of dividing RAB multiplexing into in uplink and downlink is FFS.

10.2.5 Transport CH Information elements

10.2.5.1 Transport Format Combination Set

Indicates the allowed combinations of already defined Transport formats.

10.2.5.2 Transport Format Combination Subset

Indicates which Transport format combinations in the already defined Transport format combination set that are allowed.

10.2.5.3 Transport channel identity

This information element is used to distinguish transport channels (both common and dedicated transport channels).

10.2.5.4 Transport Format Set (TFS)

Information Element/Group name	Presence	Range	IE type and reference	Semantics description
Transport block size(s)				(dynamic)
Transport Block Set Size(s)				(dynamic)
Transmission time interval				(semi-static)
Type of channel coding				(semi-static)
Rate matching				(semi-static)

Parameters	REFERENCE	TYPE	NOTE
Transport block size(s)			(dynamic)
Transport Block Set Size(s)			(dynamic)
Transmission time interval			(semi-static)
Type of channel coding			(semi static)
Rate matching			(semi static)

10.2.5.5 Dynamic Control

Indicates if this transport channel is controlled by DRAC procedure or not.

10.2.5.6 Transmission time validity

Indicates the duration for which permission is granted on a DCH controlled by DRAC procedure.

10.2.5.7 Time duration before retry

Indicates the time duration before retrying to get the transmission permission on a DCH controlled by DRAC procedure, in case permission has not been granted.

10.2.5.8 Silent period duration before release

Indicates the maximum silent period duration before releasing the resource. This parameter may be merged with the Fkp-b parameter defined in the Transmission stop and resumption control'procedure defined in [1].

(Note: [1] RAN/WG1 S1.14 document)

10.2.6 Physical CH Information elements

10.2.6.1 Frequency info

Information Element/Group	Presence	Range	IE type	Semantics description
name			and	
			<u>reference</u>	
Frequency number	M			Designate the centerfrequency
				of the uplink carrier
Duplex distance	<u>0</u>			
Chip rate	<u>0</u>			
Mode	<u>0</u>	enumerated		
		(TDD, FDD)		

Parameters	REFERENCE	TYPE	NOTE
Frequency number		M	Designate the centerfrequency
			of the uplink carrier
Duplex distance		θ	
Chip rate		θ	
Mode		θ	Designate FDD or TDD mode

10.2.6.2 Primary CCPCH info

Information Element/Group name	Presence	Range	IE type and reference	Semantics description
DL scrambling code	M			DL scrambling code used for Primary CCPCH

Parameters	REFERENCE	TYPE	NOTE
DL scrambling code		M	DL scrambling code used for Primary CCPCH

10.2.6.3 Secondary CCPCH info

Information Element/Group name	Presence	Range	IE type and reference	Semantics description
DL scrambling code	<u>C -</u> DLscode			
Channelization code	M			

Parameters	REFERENCE	TYPE	NOTE
DL scrambling code		θ	Only needed if different from DL
C C			scrambling code of Primary
			CCPCH
Channelization code		М	

Condition	Explanation
DLscode	The DL scrambling code information element is only sent if it is different from the DL scrambling code of the Primary CCPCH

The DL scrambling code information element is only needed if it is different from the DL scrambling code of Primary <u>CCPCH</u>

10.2.6.4 PRACH info

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
Access slot	M	<u>10 to</u>		
		<maxacce< td=""><td></td><td></td></maxacce<>		
		ssSlots>		
Preamble spreading code	M	<u>10 to</u>		
		<maxpcod< td=""><td></td><td></td></maxpcod<>		
		es>		
Preamble signature	M	<u>10 to</u>		
_		<maxpsigs< td=""><td></td><td></td></maxpsigs<>		
		2		
Spreading factor	M	<u>10 to</u>		
-		<maxrates< td=""><td></td><td></td></maxrates<>		
		>		

Range Bound	Explanation
MaxAccessSlots	Maximum number of allowed access slots for the
	preambles
<u>MaxPcodes</u>	Maximum number of codes to use for spreading of the preamble. There is also a one to one mapping from
	preamble code to what scrambling code to use for the
	message part.
<u>MaxPsigs</u>	Maximum number of allowed preamble signatures.
MaxRates	Maximum number of rates or SF that are allowed to use
	on the data part (I-branch) in the message part of the
	random access

Range bound MaxAccessSlots

Maximum number of allowed access slots for the preambles

Range bound MaxPcodes

Maximum number of codes to use for spreading of the preamble. There is also a one to one mapping from preamble code to what scrambling code to use for the message part.

Range bound MaxPsigs

Maximum number of allowed preamble signatures.

Range bound MaxRates

Maximum number of rates or SF that are allowed to use on the data part (I branch) in the message part of the random access

Parameters	REFERENCE	TYPE	NOTE
Access slot		₩	For each allowed access slot for
			the preambles
Preamble spreading code		₩	For each code to use for spreading
			of the preamble. There is also a one
			to one mapping from preamble
			code to what scrambling code to
			use for the message part.
Preamble signature		₩	For each allowed preamble
C C			signature.
Spreading factor		₩	For each rate or SF that are allowed
			to use on the data part (I-branch) in
			the message part of the random
			access

10.2.6.5 PRACH power control info

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
UL target SIR	M			
Primary CCPCH DL TX power	M			
UL interference	M			
Constant value	M			<u>Note: it should be clarified</u> <u>from WG1 whether this is the</u> <u>same as UL target SIR.</u>
AICH transmission timing parameter	M			
Power offset ΔP_0	M			Power step when no acquisition indicator is received
Power offset ΔP_1	M			Power step when negative acquisition is received

Parameters	REFERENCE	TYPE	NOTE
UL target SIR		M	
Primary CCPCH DL TX power		M	
UL interference		M	
Constant value		Μ	Note: it should be clarified from WG1 whether this is the same as UL target SIR.
AICH transmission timing parameter		Μ	
Power offset ΔP_0		Μ	Power step when no acquisition indicator is received
Power offset AP ₁		M	Power step when negative acquisition is received

NOTE: The usage of these parameters needs clarification and are also dependent on the WG1 RACH discussions.

10.2.6.6 Uplink DPCH info

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
UL scrambling code	M			What short or long uplink scrambling code a certain UE should use
DPCCH channelization code	M			SF of the channelization code for control part. [The necessity of this parameter is FFS.]
DPDCH channelization code	M	<u>1⊕ to</u> <maxdpd CHcount></maxdpd 		SF of the channelization code for data part

Parameters	REFERENCE	TYPE	NOTE
UL scrambling code		M	What short or long uplink scrambling code a certain UE
			should use
DPCCH channelization code		₩	SF of the channelization code
			for control part. [The necessity
			of this parameter is FFS.]
DPDCH channelization code		М	SF of the For each
			channelization DPDCH
			code for data
			part

Range Bound	Explanation
<u>MaxDPDCHcount</u>	Maximum number of DPDCH's

Range bound MaxDPDCHcount

Maximum number of DPDCH's

10.2.6.7 Uplink DPCH power control info

Interference level measured for a frequency at the UTRAN access point used by UE to set DPCH initial output power.

10.2.6.8 Downlink DPCH info

Information Element/Group	Presence	Range	IE type and reference	Semantics description
DL scrambling code	<u>C -</u> DLscode			
DL channelization code	<u>₩</u>	<u>10 to</u> <maxdpc Hcount></maxdpc 		Channelization codes to be used in the downlink for DPCH

Parameters	REFERENCE	TYPE	NOTE
DL scrambling code		Φ	Only needed if different from DL scrambling code of Primary CCPCH
DL channelization code		₩	Channelization For each codes to be used DPCH in the downlink for DPCH

Condition	Explanation

DLscode	The DL scrambling code information element is only
	sent if it is different from the DL scrambling code of
	Primary CCPCH

Range Bound	Explanation
<u>MaxDPCHcount</u>	Maximum number of DPCH's

Condition C DLscode

The DL scrambling code information element is only needed if it is different from the DL scrambling code of Primary CCPCH

Range bound MaxDPCHcount

Maximum number of DPCH's

10.2.6.9 Uplink timeslot info

Information Element/Group	Presence	Range	IE type and reference	Semantics description
Slot number	M	<u>10 to</u> <u><maxslotc< u=""> <u>ount></u></maxslotc<></u>		Timeslot to be used in uplink (TDD only)

Parameters	REFERENCE	TYPE	NOTE	
Slot number		H	Timeslot to be	For each slot
			(TDD only)	

Range Bound	Explanation
MaxSlotcount	Maximum number of slots

Range bound MaxSlotcount

Maximum number of slots

10.2.6.10 Downlink timeslot info

Information Element/Group	Presence	Range	IE type and reference	Semantics description
Slot number	M	<u>10 to</u> <u><maxslotc< u=""> <u>ount></u></maxslotc<></u>		Timeslot to be used in downlink (TDD only)

Range Bound	Explanation			
<u>MaxSlotcount</u>	Maximum number of slots			
Parameters	REFERENCE	TYPE	NOTE	
-------------	-----------	------	------------------	---------------
Slot number		H	Timeslot to be	For each slot
			used in	
			downlink (TDD	
			only)	

10.2.6.11 SSDT indicator

This information element indicates the status (e.g. initiated/terminated) of the Site Selection

Diversity Transmit power control (SSDT). In the direction UTRAN to UE it is used to change the SSDT status. In the direction UE to UTRAN it is used to confirm the SSDT status by the UE. The parameter 'code word set' indicates how cell identities are coded (using many bits or few, values are long, medium, or short).

Information Element/Group	Presence	Range	IE type and reference	Semantics description
Code Word Set	M		Enumerated (long, medium, short, SSDT off)	

Parameters	REFERENCE	TYPE	NOTE
Code Word Set		M	Values: long, medium, short,
			SSDT off

10.2.6.12 SSDT cell identity

This IE is used to associate a cell identity with a given radio link

Information Element/Group	Presence	Range	IE type and reference	Semantics description
temporary id	M			

Parameters	REFERENCE	TYPE	NOTE
temporary id		M	

10.2.6.13 Gated Transmission Control info (FFS)

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
Gating pattern	M		Enumerated	
			(periodical or	
			random)	
			<u>FFS</u>	
Gating rate	M		Enumerated	
-			<u>(no</u>	
			gating,1/2	
			gating, 1/4	
			gating or 1/8	
			gating	
			<u>(FFS))</u>	
Gating activation time	M		<u>FFS</u>	

Parameters	REFERENCE	TYPE	NOTE
Gating pattern		М	Indicates periodical or random (FFS)
Gating rate		Μ	Indicates no gating, 1/2 gating, 1/4 gating or 1/8 gating (FFS)
Gating activation time		M	FFS

10.2.6.14 Default DPCH Offset Value

Indicates the default offset value within interleaving size at a resolution of 512chip (1/5 slot) to offset CFN in the UE. This is used to distribute discontinuous transmission periods in time and also to distribute NodeB-RNC transmission traffics in time. Even though the CFN is offset by DOFF, the start timing of the interleaving will be the timing that CFN mod (interleaving size)²²0 (e.g. interleaving size: 2,4,8) in both UE and SRNC.

10.2.7 Measurement Information elements

10.2.7.1 Measurement Identity Number

A reference number that is used by the UTRAN at modification and release of the measurement, and by the UE in the measurement report.

10.2.7.2 Measurement Command

One out of three different measurement commands

- Setup: Setup a new measurement.
- Modify: Modify a previously specified measurement, e.g. change the reporting criteria.
- Release: Stop a measurement and clear all information in the UE that are related to that measurement.

10.2.7.3 Measurement Type

One of the types from a predefined list where each type describes what the UE shall measure. The types are:

- Intra-frequency measurements
- Inter-frequency measurements
- Inter-system measurements
- Traffic volume measurements
- Quality measurements

10.2.7.4 Reference time difference to cell

The reference time difference to cell indicates the time difference between the primary CCPCH of the current cell and the primary CCPCH of a neighbouring cell. It is notified to UE by System Information or Measurement Control message.

In case of macro-diversity the reference is the primary CCPCH of one the cells used in the active set.

Editors note: Exactly how the reference cell is pointed out in this case in the messages is FFS.

10.2.7.5 Measured time difference to cell

The measured time difference to cell indicates the time difference which is measured by UE between CFN in the UE and the SFN of the target neighbouring cell. It is notified to SRNC by Measurement Report message or Measurement Information Element in other RRC messages.

10.2.7.6 Measurement reporting mode

Contains the type of Measurement Report transfer mode and the indication of periodical/event trigger.

Information Element/Group	Presence	Range	IE type and	Semantics
name			reference	description
Measurement Report Transfer	Μ		enumerated	
Mode			(Acknowledged /	
			Unacknowledged)	
Periodical Reporting / Event	Μ		enumerated	
Trigger Reporting Mode			(Periodical	
			reporting / Event	
			trigger)	

-Parameters	REFERENCE	TYPE	NOTE
Measurement Report Transfer Mode		₩	Acknowledged / Unacknowledged
Periodical Reporting / Event Trigger Reporting Mode		M	Periodical reporting / Event trigger

10.2.7.7 Intra-frequency cell info

Contains the measurement object information for an intra-frequency measurement.

Information Element/Group	Presence	Range	IE type and	Semantics description
<u>name</u>			<u>reference</u>	
Primary CCPCH info	M			
Primary CCPCH DL TX power	<u>0</u>			
<u>UL load</u>	<u>0</u>			<u>FFS</u>
SFN Measurement Indicator	M			

Parameters	REFERENCE	TYPE	NOTE
Primary CCPCH info		M	
Primary CCPCH DL TX power		0	
UL load		0	FES
SFN Measurement Indicator		M	

10.2.7.8 Inter-frequency cell info

Contains the measurement object information for an inter-frequency measurement.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			reference	
Frequency info	Μ			
Primary CCPCH info	M			
Primary CCPCH DL TX power	0			<u>FFS</u>
<u>UL load</u>	<u>0</u>			<u>FFS</u>
Reference time difference to cell	0			<u>FFS</u>

-Parameters	REFERENCE	TYPE	NOTE
Frequency info		M	
Primary CCPCH info		M	
Primary CCPCH DL TX power		0	FFS
UL load		θ	FFS
Reference time difference to cell		θ	FFS

10.2.7.9 Inter-system cell info

Contains the measurement object information for an inter-system measurement.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			reference	
System type	M		enumerated	
			<u>(GSM,)</u>	
System specific measurement			enumerated	
<u>info</u>			(frequency,	
			timeslot, colour	
			code, output	
			power.)	

-Parameters	REFERENCE	TYPE	NOTE
System type		M	E.g. GSM
System specific measurement info			E.g frequency, timeslot, colour
			code, output power.

10.2.7.10 Traffic volume measurement object

Contains the measurement object information for a traffic volume measurement.

Information Element/Group name	Presence	Range	IE type and reference	Semantics description
Target Transport CH ID	M			

Parameters	REFERENCE	TYPE	NOTE
Target Transport CH ID		M	

10.2.7.11 Quality measurement object (FFS)

(Note: Only the section is made.)

10.2.7.12 Intra-frequency measurement quantity

The quantity the UE shall measure in case of intra-frequency measurement. It also includes the filtering of the measurements.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			reference	
Primary CCPCH RX E _c /I ₀	<u>0</u>			One of these is mandatory
Primary CCPCH RX SIR	<u>O FFS</u>			
(RSCP/ISCP)				
Primary CCPCH RX power	<u>O FFS</u>			
(RSCP)				
Path loss	<u>O FFS</u>			
Path loss plus UL load	<u>O FFS</u>			

-Parameters	REFERENCE	TYPE	NOTE	
Primary CCPCH RX E _g /I ₀		θ		One of these is
Primary CCPCH RX SIR (RSCP/ISCP)		θ	FFS	mandatory
Primary CCPCH RX power (RSCP)		φ	FFS	
Path loss		φ	FFS	
Path loss plus UL load		0	FFS	

(Note: Above measurements except for Ec/Io are not concluded in WG1)

10.2.7.13 Inter-frequency measurement quantity (FFS)

The quantity the UE shall measure in case of inter-frequency measurement. It also includes the filtering of the measurements.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
E_{o}/I_{0}	<u>O FFS</u>			One of these is mandatory
DL Path loss	<u>O FFS</u>			
SIR	<u>O FFS</u>			
DL path loss plus UL	<u>O FFS</u>			
interference				
Received signal code power	<u>O FFS</u>			
(RSCP)				

-Parameters	REFERENCE	TYPE	NOTE	
<mark>∈</mark> ¢4₀		θ	FFS	One of these is
DL Path loss		θ	FFS	mandatory
SIR		0	FFS	
DL path loss plus UL interference		0	FFS	
Received signal code power (RSCP)		0	FFS	

10.2.7.14 Inter-system measurement quantity (FFS)

The quantity the UE shall measure in case of inter-system measurement. It also includes the filtering of the measurements.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			reference	
<u>E₀/I₀</u>	O FFS			One of these is mandatory
Signal strength	<u>0</u>			
Path loss	O FFS			
Colour code	<u>C - GSM</u>			

-Parameters	REFERENCE	TYPE	NOTE	
E₀H₀		θ	FFS	One of these is
Signal strength		θ		mandatory
Path loss		0	FFS	
Colour code		M	GSM only	

Condition	Explanation
GSM	This information element is only sent when the
	system being measured is a GSM system

Condition C GSM

This information elemt is conditional on the system being a GSM system

10.2.7.15 Traffic volume measurement quantity

Information Element/Group	Presence	<u>Range</u>	<u>IE type and</u> <u>reference</u>	Semantics description
RLC buffer payload	M			

Contains the measurement of	uantity	^{information}	n for a	traffic	volume	measurement
contains the measurement e	1 counter y	momuno	ii ioi u	uante	, oranic	measurement

-Parameters	REFERENCE	TYPE	NOTE
RLC buffer payload		₩	

(Note: If there is no other measurement quantity, this parameter can be removed since it can be implicitly known by UE.)

10.2.7.16 UE internal measurement quantity

The quantity the UE shall measure in case of UE internal measurement.

Information Element/Group	Presence	Range	IE type and	Semantics description
<u>name</u>			<u>reference</u>	
<u>UE Tx power</u>	0			One of these is mandatory
UE RSSI	0			

Parameters	REFERENCE	TYPE	NOTE	
UE Tx power		0		One of these is
UE RSSI		φ		mandatory

10.2.7.17 Quality measurement quantity (FFS)

(Note: Only the section is made.)

10.2.7.18 Intra-frequency reporting quantity

Contains the reporting quantity information for an intra-frequency measurement.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
Primary CCPCH RX E ₀ /I ₀	0			
Primary CCPCH RX SIR	<u>0</u>			<u>FFS</u>
(RSCP/ISCP)				
Primary CCPCH RX power	<u>0</u>			<u>FFS</u>
(RSCP)				
Path loss plus UL load	<u>0</u>			FFS
Measured time difference to cell	<u>0</u>			
DL Transport CH BLER	<u>0</u>			
DL Transport CH BER	0			<u>FFS</u>
UE Transmission Power	<u>0</u>			
UE Position	0			
Cell ID	0			FFS

-Parameters	REFERENCE	TYPE	NOTE
Primary CCPCH RX E ₆ /I ₀		θ	
Primary CCPCH RX SIR (RSCP/ISCP)		θ	FFS
Primary CCPCH RX power (RSCP)		0	FFS
Path loss plus UL load		0	FFS
Measured time difference to cell		θ	
DL Transport CH BLER		0	
DL Transport CH BER		θ	FFS
UE Transmission Power		θ	
UE Position		θ	
Cell ID		0	FFS

(Note: It is FFS whether the reporting quantity parameters used in different measurement types can be used commonly for all types of reporting quantity. If they can, only "Reporting Quantity" is enough instead of specifying 5 types of reporting quantity.)

10.2.7.19 Intra-frequency reporting quantity for RACH reporting

Co	ontains tl	he reporting	quantity	y inform	ation fo	or an in	tra-fre	quency	measurement	report.	, which is sen	t on the	RACH	H.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
Primary CCPCH RX E _c /I ₀	0			
Primary CCPCH RX SIR (RSCP/ISCP)	<u>O</u>			<u>FFS</u>
Primary CCPCH RX power (RSCP)	0			<u>FFS</u>
Path loss plus UL load	0			<u>FFS</u>
Measured time difference to cell	0			
DL Transport CH BLER	0			<u>FFS</u>
DL Transport CH BER	0			<u>FFS</u>
UE Transmission Power	0			<u>FFS</u>
UE Position	0			<u>FFS</u>
Cell ID	0			<u>FFS</u>

-Parameters	REFERENCE	TYPE	NOTE
Primary CCPCH RX E _v /I ₀		θ	
Primary CCPCH RX SIR (RSCP/ISCP)		θ	FFS
Primary CCPCH RX power (RSCP)		θ	FFS
Path loss plus UL load		θ	FFS
Measured time difference to cell		θ	
DL Transport CH BLER		θ	FFS
DL Transport CH BER		θ	FFS
UE Transmission Power		θ	FFS
UE Position		θ	FFS
Cell ID		Ð	FFS

10.2.7.20 Inter-frequency reporting quantity (FFS)

(Note: Only the section is made.)

10.2.7.21 Inter-system reporting quantity (FFS)

10.2.7.22 Traffic volume reporting quantity

Contains the reporting quantity information for a traffic volume measurement.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			reference	
RLC buffer payload for each	<u>0</u>			
RAB				
DL Transport CH BLER	<u>0</u>			
DL Transport CH BER	<u>0</u>			FFS
UE Transmission Power	<u>0</u>			
UE Position	<u>0</u>			
Cell ID	<u>0</u>			FFS

-Parameters	REFERENCE	TYPE	NOTE
RLC buffer payload for each RAB		0	
DL Transport CH BLER		0	
DL Transport CH BER		0	FFS
UE Transmission Power		0	
UE Position		θ	
Cell ID		Φ	FFS

(Note: It is FFS whether the reporting quantity parameters used in different measurement types can be used commonly for all types of reporting quantity. If they can, only "Reporting Quantity" is enough instead of specifying 5 types of reporting quantity.

10.2.7.23 Quality reporting quantity (FFS)

(Note: Only the section is made.)

10.2.7.24 Intra-frequency measurement reporting criteria

The triggering of the event-triggered reporting for an intra-frequency measurement. All events concerning intra-frequency measurements are labeled 1x where x is a, b, c...

Event 1a: A Primary CCPCH enters the Reporting Range [Note1]

Event 1b: A Primary CCPCH leaves the Reporting Range [Note2]

Event 1c: A Non-active Primary CCPCH becomes better than an active Primary CCPCH [Note3]

Event 1d: Change of best cell [Note4, 5]

Event 1e: Other types of ranking of Primary CCPCHs (FFS)

Information Element/Group name	Presence	Range	IE type and reference	Semantics description
Max number of reporting cells	M			Common parameter for all events
RACH measurement reporting parameters				Group name
Maximum number of reported cells on RACH	M			
Parameters required for each event		0 to <maxevent count></maxevent 		
Event ID	M			<u>1a, 1b, 1c, 1d or 1e</u>
<u>Reporting Range</u>	<u>C - clause</u> <u>1</u>			In event 1a,1b
<u>Hysteresis</u>	<u>C & O -</u> <u>clause 2</u>			<u>In event 1a, 1b, 1c,1d</u>
<u>Reporting deactivation</u> <u>threshold</u>	<u>C - clause</u> <u>3</u>			In event 1a Indicates the maximum number of cells allowed in the active set in order for event 1a to occur. Value 0 indicates "not applicable".
<u>Replacement activation</u> <u>threshold</u>	<u>C - clause</u> <u>4</u>			In event 1c Indicates the minimum number of cells allowed in the active set in order for event 1c to occur. Value 0 indicates "not applicable".
Time to trigger	M			Indicates the period of time between the timing of event detection and the timing of sending Measurement Report.
Amount of reporting	M			Measurement for the indicated Transport CH ID is teleased" after the indicated amount of reporting from the UE itself. FFS
<u>Reporting interval</u>	M			Indicates the interval of periodical reporting when such reporting is triggered by an event. A zero value indicates that event triggered periodical reporting shall not be applied.

-Parameters		REFERENCE	TYPE	NOTE
Common parameter for all events	Max number of reporting cells		M	
For each event	Event ID		M	1a, 1b, 1c, 1d or 1e
	Reporting Range		C	In event 1a,1b
	Hysteresis		θ	In event 1a, 1b, 1c,1d
	Reporting deactivation threshold		e	In event 1a Indicates the maximum number of cells allowed in the active set in order for event 1a to occur.
				Value 0 indicates "not applicable".

	Replacement activation threshold	£	In event 1c Indicates the minimum number of cells allowed in the active set in order for event 1c to occur. Value 0 indicates "not applicable".
	Time to trigger	M	Indicates the period of time between the timing of event detection and the timing of sending Measurement Report.
	Amount of reporting	M	Measurement for the indicated Transport CH ID is feleased" after the indicated amount of reporting from the UE itself. FFS
	Reporting interval	M	Indicates the interval of periodical reporting when such reporting is triggered by an event. A zero value indicates that event triggered periodical reporting shall not be applied.
	Maximum number	м	
neasurement reporting	of reported cells	IVI	

Condition	Explanation
<u>Clause 1</u>	This parameter is only sent in event 1a,1b
<u>Clause 2</u>	This parameter is only sent in event 1a,1b, 1c,1d
<u>Clause 3</u>	This parameter is only sent in event 1a
Clause 4	This parameter is only sent in event 1c

Condition C Clause 1

This parameter is only sent in event 1a,1b

Condition C& O Clause 2

This parameter is only sent in event 1a,1b, 1c,1d

Condition C Clause 3

This parameter is only sent in event 1a

Condition C Clause 4

This parameter is only sent in event 1c

[Note1: whether or not PCCPCH can be active is FFS]

[Note2: whether or not PCCPCH can be non-active is FFS]

[Note3: Details are FFS: It has been suggested to divide this event into two cases; I) a non-active PCCPCH exceeds the weakest active PCCPCH, II) a non-active PCCPCH exceeds the strongest active PCCPCH]

[Note4: When best PCCPCH in active set changes, all active cells are reported.]

[Note5: Whether this event can result in the reporting of non-active cells in addition to active cells is FFS.]

10.2.7.25 Inter-frequency measurement reporting criteria (FFS)

The triggering of the measurement report, e.g. periodical, event-triggered or immediate reporting for an inter-frequency measurement. Here is also specified if the measurement report should be transmitted using either acknowledged or unacknowledged data transfer on the DCCH.

Information Element/Group	Presence	<u>Range</u>	IE type and reference	Semantics description

Parameters	REFERENCE	TYPE	NOTE	

10.2.7.26 Inter-system measurement reporting criteria (FFS)

The triggering of the measurement report, e.g. periodical, event-triggered or immediate reporting for an inter-system measurement. Here is also specified if the measurement report should be transmitted using either acknowledged or unacknowledged data transfer on the DCCH.

10.2.7.27 Traffic volume measurement reporting criteria

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
Parameters sent for each		<u>10 to</u>		
transport channel		<maxtrch< td=""><td></td><td></td></maxtrch<>		
		<u>count></u>		
Transport CH ID	M			
Threshold	M			
—Time to trigger	M			Indicates the period of time
				between the timing of event
				detection and the timing of
				sending Measurement Report.
—Pending time after trigger	M			Indicates the period of time
				during which it is forbidden to
				send any new measurement
				reports with the same
				measurement ID even if the
				triggering condition is fulfilled
				again.
<u>—Amount of reporting</u>	M			Measurement for the indicated
				Transport CH ID is "released"
				after the indicated amount of
				reporting from the UE itself.
				FFS
<u>—Reporting interval</u>	M			Indicates the interval of periodical
				report during the event is in the
				detected state
				<u>FFS</u>

Contains the measurement reporting criteria information for a traffic volume measurement.

Parameters	REFERENCE	TYPE	NOTE
Common parameter			

For each	Transport CH ID	M	
transport CH	Threshold	M	
	Time to trigger	M	Indicates the period of time
			between the timing of event
			detection and the timing of
			sending Measurement Report.
	Pending time after	M	Indicates the period of time
	trigger		during which it is forbidden to
			send any new measurement
			reports with the same
			measurement ID even if the
			triggering condition is fulfilled
			again.
	Amount of reporting	M	Measurement for the indicated
			Transport CH ID is "released"
			after the indicated amount of
			reporting from the UE itself.
			FFS
	Reporting interval	M	Indicates the interval of periodical
			report during the event is in the
			detected state
			FFS

Range Bound	Explanation
<u>MaxTrCHcount</u>	Maximum number of transport channels

Range bound MaxTrCHcount

Maximum number of transport channels

10.2.7.28 Quality measurement reporting criteria (FFS)

(Note: Only the section is made.)

10.2.7.29 UE internal measurement reporting criteria

The triggering of the event-triggered reporting for a UE internal measurement. All events concerning UE internal measurements are labelled 6x where x is a, b, c...

Event 6a: The UE Tx power becomes larger than an absolute threshold

Event 6b: The UE Tx power becomes less than an absolute threshold

Event 6c: The UE Tx power reaches its minimum value

Event 6d: The UE Tx power reaches its maximum value

Event 6e: The UE RSSI reaches the UEs dynamic receiver range

Information Element/Group	Presence	Range	IE type and	Semantics description
name			reference	
Parameters sent for each UE		<u>10 to</u>		
internal measurement event		<maxevent< td=""><td></td><td></td></maxevent<>		
		<u>count></u>		
Event ID	M			<u>6a, 6b, 6c, 6d or 6e</u>
Time-to-trigger	M			Indicates the period of time
				between the timing of event
				detection and the timing of
				sending Measurement Report.
Tx power threshold	C - clause			In event 6a, 6b
	1			

For each event	Event ID	М	6a, 6b, 6c, 6d or 6e
	Time-to-trigger	М	Indicates the period of time between the timing of event detection and the timing of sending Measurement Report.
	Tx power threshold	С	In event 6a, 6b

Condition	Explanation
<u>Clause 1</u>	This parameter is only sent in event 6a,6b

Condition C Clause 1

This parameter is only sent in event 6a,6b

10.2.7.30 Periodical reporting criteria

Contains the periodical reporting criteria information. It is necessary only in the periodical reporting mode.

Information Element/Group	Presence	Range	IE type and	Semantics description
<u>name</u>			reference	
Max number of reporting cells	<u>0</u>			Indicates the maximum
				number of cells to report.
Amount of reporting	<u>0</u>			Measurement is "released"
				after the indicated amount of
				reporting from the UE itself
Reporting interval	<u>0</u>			Indicates the interval of
-				periodical report.

Parameters		REFERENCE	TYPE	NOTE
Max r	umber of		0	Indicates the maximum number of
report	ing cells			cells to report.
Amou	nt of reporting		θ	Measurement is "released" after
				the indicated amount of reporting
				from the UE itself
Repor	ting interval		θ	Indicates the interval of
	-			periodical report.

10.2.7.31 Intra-frequency measurement event results

This IE contains the measurement event results that are reported to UTRAN for intra-frequency measurements.

Information Element/Group	Presence	Range	IE type and reference	Semantics description
Event ID	M			
Primary CCPCH info	Μ			

Parameters	REFERENCE	TYPE	NOTE
Event ID		M	
Primary CCPCH info		M	

10.2.7.32 Inter-frequency measurement event results (FFS)

This IE contains the measurement event results that are reported to UTRAN for inter-frequency measurements. The further division of this IE into parameters is FFS.

10.2.7.33 Inter-system measurement event results (FFS)

This IE contains the measurement event results that are reported to UTRAN for inter-system measurements. The further division of this IE into parameters is FFS.

10.2.7.34 Traffic volume measurement event results

Contains the event result for a traffic volume measurement.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			reterence	
Transport CH ID	M			

-Parameters	REFERENCE	TYPE	NOTE
Transport CH ID		M	

10.2.7.35 Quality measurement event results (FFS)

(Note: Only the section is made.)

10.2.7.36 Measured results

Contains the measured results of the quantity indicated optionally by Reporting Quantity in Measurement Control. "Measured results" can be used for both event trigger mode and periodical reporting mode.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			reference	
RAB ID	<u>0</u>			
+ RLC buffers payload				
PCCPCH Info	<u>0</u>			
<u>+ Primary CCPCH RX E₀/I₀</u>				
PCCPCH Info	<u>0</u>			<u>FFS</u>
+ Primary CCPCH RX SIR				
(RSCP/ISCP)				
PCCPCH Info	<u>0</u>			<u>FFS</u>
+ Primary CCPCH RX power				
(RSCP)				
PCCPCH Info	<u>0</u>			<u>FFS</u>
+ Path loss				
PCCPCH Info	<u>O</u>			<u>FFS</u>
+ Path loss plus UL load				
PCCPCH Info	<u>o</u>			
+ Measured time difference to cell				
DL Transport CH BLER	<u>O</u>			
DL Transport CH BER	<u>0</u>			<u>FFS</u>
UE Transmission Power	<u>0</u>			
UE Position	<u>0</u>			
Cell ID	<u>0</u>			FFS

-Parameters	REFERENCE	TYPE	NOTE
RAB ID		θ	
+ RLC buffers payload			
PCCPCH Info		0	
+ Primary CCPCH RX E ₀ /I ₀			
PCCPCH Info		0	FFS
+ Primary CCPCH RX SIR			
(RSCP/ISCP)			
PCCPCH Info		0	FFS
+ Primary CCPCH RX power (RSCP)			
PCCPCH Info		0	FFS
+ Path loss			
PCCPCH Info		θ	FFS
+ Path loss plus UL load			
PCCPCH Info		0	
+ Measured time difference to cell			
DL Transport CH BLER		0	
DL Transport CH BER		0	FFS
UE Transmission Power		θ	
UE Position		θ	
Cell ID		θ	FFS

10.2.7.37 SFN Measurement Indicator

Indicates whether the UE should read cell SFN of the target neighbour cell or not.

10.2.8 Other Information elements

10.2.8.1 BCCH modification info

Indicates modification of the System Information on BCCH.

Information Element/Group	Presence	<u>Range</u>	IE type and reference	Semantics description
BCCH modification type	M			<u>FFS</u>
Modification time	0			<u>FFS</u>

Parameters	REFERENCE	TYPE	NOTE
BCCH modification type		M	FFS
Modification time		0	FFS

10.2.8.2 Inter-system message

This Information Element contains one or several messages that are structured and coded according to the specification used for the system type indicated by the first parameter.

Information Element/Group	Presence	Range	IE type and	Semantics description
name			<u>reference</u>	
System type	M		Enumerated (GSM,)	
Message(s)	M			Formatted and coded according to specification for the indicated system type.

Parameters	REFERENCE	TYPE	NOTE
System type		M	E.g. GSM
Message(s)		M	Formatted and coded
			according to specification for
			the indicated system type.