TSG-RAN Meeting #16 Marco Island, FL, USA, 4 - 7 June 2002

Title: Agreed CRs (Release '99 and Rel-4/Rel-5 category A) to TS 25.331 (4)

Source: TSG-RAN WG2

Agenda item: 7.2.3

Doc-1st-	Status-	Spec	CR	Rev	Phase	Subject	Cat	Version	Versio
R2-021431	agreed	25.331	1427	1	R99	Periodic cell update clarifications	F	3.10.0	3.11.0
R2-021432	agreed	25.331	1428	1	Rel-4	Periodic cell update clarifications	Α	4.4.0	4.5.0
R2-021433	agreed	25.331	1429	1	Rel-5	Periodic cell update clarifications	Α	5.0.0	5.1.0
R2-021322	agreed	25.331	1430		R99	Multiple cells triggering event 1D	F	3.10.0	3.11.0
R2-021323	agreed	25.331	1431		Rel-4	Multiple cells triggering event 1D	Α	4.4.0	4.5.0
R2-021324	agreed	25.331	1432		Rel-5	Multiple cells triggering event 1D	Α	5.0.0	5.1.0
R2-021331	agreed	25.331	1433		R99	Disjoint Active Sets in the Active Set Update procedure	F	3.10.0	3.11.0
R2-021332	agreed	25.331	1434		Rel-4	Disjoint Active Sets in the Active Set Update procedure	А	4.4.0	4.5.0
R2-021333	agreed	25.331	1435		Rel-5	Disjoint Active Sets in the Active Set Update procedure	Α	5.0.0	5.1.0
R2-021334	agreed	25.331	1436		R99	Deletion on compressed mode patterns when moving to CELL_FACH state	F	3.10.0	3.11.0
R2-021335	agreed	25.331	1437		Rel-4	Deletion on compressed mode patterns when moving to CELL_FACH state	А	4.4.0	4.5.0
R2-021336	agreed	25.331	1438		Rel-5	Deletion on compressed mode patterns when moving to CELL_FACH state	Α	5.0.0	5.1.0
R2-021344	agreed	25.331	1439		R99	TDD C-RNTI in Cell DCH	F	3.10.0	3.11.0
R2-021345	agreed	25.331	1440		Rel-4	TDD C-RNTI in Cell DCH	Α	4.4.0	4.5.0
R2-021346	agreed	25.331	1441		Rel-5	TDD C-RNTI in Cell DCH	Α	5.0.0	5.1.0
R2-021347	agreed	25.331	1442		R99	CCTrCH Release in TDD	F	3.10.0	3.11.0
R2-021472	agreed	25.331	1443	1	Rel-4	CCTrCH Release in TDD	Α	4.4.0	4.5.0
R2-021473	agreed	25.331	1444	1	Rel-5	CCTrCH Release in TDD	Α	5.0.0	5.1.0

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		Note that T316 is the only other timer that can be set to the value "infinity", but T316 is only applicable to CELL_PCH and URA_PCH states, and UTRAN MOBILITY INFORMATION message can not be received in those states.							RAN			
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Clauses affected:

Other specs	ж	Other core specifications #	2	25.331 v4.4.0, CR 1428r1
•		·	2	25.331 v5.0.0, CR 1429r1
affected:		Test specifications		
		O&M Specifications		
	•	<u> </u>		
Other comments:	\mathfrak{R}	A detailed description of the issue i	is i	ncluded in R2-020759 "Periodic cell update
		clarifications", Qualcomm		

How to create CRs using this form:

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

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

8.1.3.6 Reception of an RRC CONNECTION SETUP message by the UE

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

If the values are different, the UE shall:

1> ignore the rest of the message.

If the values are identical, the UE shall:

- 1> stop timer T300, and act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:
 - 2> if the UE will be in the CELL_FACH state at the conclusion of this procedure:
 - 3> if the IE "Frequency info" is included:
 - 4> select a suitable UTRA cell according to [4] on that frequency;
 - 3> select PRACH according to subclause 8.5.17;
 - 3> select Secondary CCPCH according to subclause 8.5.19;
 - 3> ignore the IE "UTRAN DRX cycle length coefficient" and stop using DRX.
- 1> perform the physical layer synchronization procedure as specified in [29];
- 1> enter UTRA RRC connected mode, in a state according to subclause 8.6.3.3;
- 1> submit an RRC CONNECTION SETUP COMPLETE message to the lower layers on the uplink DCCH after successful state transition per subclause 8.6.3.3, with the contents set as specified below:
 - 2> set the IE "RRC transaction identifier" to:
 - 3> the value of "RRC transaction identifier" in the entry for the RRC CONNECTION SETUP message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry.
 - 2> if the USIM or SIM is present:
 - 3> set the "START" for each CN domain in the IE "START list" in the RRC CONNECTION SETUP COMPLETE message with the corresponding START value that is stored in the USIM [50] if present, or as stored in the UE if the SIM is present; and then
 - 3> set the START value stored in the USIM [50] if present, and as stored in the UE if the SIM is present for any CN domain to the value "THRESHOLD" of the variable START_THRESHOLD.
 - 2> if neither the USIM nor SIM is present:
 - 3> set the "START" for each CN domain in the IE "START list" in the RRC CONNECTION SETUP COMPLETE message to zero;
 - 3> set the value of "THRESHOLD" in the variable "START_THRESHOLD" to the default value [40].
 - 2> retrieve its UTRA UE radio access capability information elements from variable UE_CAPABILITY_REQUESTED; and then
 - 2> include this in IE "UE radio access capability" and IE "UE radio access capability extension", provided this IE is included in variable UE_CAPABILITY_REQUESTED;
 - 2> retrieve its inter-RAT-specific UE radio access capability information elements from variable UE_CAPABILITY_REQUESTED; and then

2> include this in IE "UE system specific capability".

When the RRC CONNECTION SETUP COMPLETE message has been submitted to lower layers for transmission the UE shall:

- 1> if the UE has entered CELL_FACH state:
 - 2> start timer T305 using its initial value if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in the variable TIMERS_AND_CONSTANTS system information.org/ the variable TIMERS_AND_CONSTANTS system.information.org/ system.information.org/ system.information.org/ system.information.org/ https://system.information.org/ system.information.org/ https://system.information.org/ system.information.org/ system.information.org/ system.information.org/ <a href="https://system.info
- 1> store the contents of the variable UE_CAPABILITY_REQUESTED in the variable UE_CAPABILITY_TRANSFERRED;
- 1> initialise variables upon entering UTRA RRC connected mode as specified in subclause 13.4;
- 1> consider the procedure to be successful;

And the procedure ends.

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8.2.2.3 Reception of RADIO BEARER SETUP or RADIO BEARER RECONFIGURATION or RADIO BEARER RELEASE or TRANSPORT CHANNEL RECONFIGURATION or PHYSICAL CHANNEL RECONFIGURATION message by the UE

The UE shall be able to receive any of the following messages:

- RADIO BEARER SETUP message; or
- RADIO BEARER RECONFIGURATION message; or
- RADIO BEARER RELEASE message; or
- TRANSPORT CHANNEL RECONFIGURATION message; or
- PHYSICAL CHANNEL RECONFIGURATION message;

and perform a hard handover, even if no prior UE measurements have been performed on the target cell and/or frequency.

If the UE receives:

- a RADIO BEARER SETUP message; or
- a RADIO BEARER RECONFIGURATION message; or
- a RADIO BEARER RELEASE message; or
- a TRANSPORT CHANNEL RECONFIGURATION message; or
- a PHYSICAL CHANNEL RECONFIGURATION message:

it shall:

- 1> set the variable ORDERED_RECONFIGURATION to TRUE;
- 1> perform the physical layer synchronisation procedure as specified in [29];
- 1> act upon all received information elements as specified in subclause 8.6, unless specified in the following and perform the actions below.

The UE may first release the physical channel configuration used at reception of the reconfiguration message. The UE shall then:

- 1> in FDD, if the IE "PDSCH code mapping" is included but the IE "PDSCH with SHO DCH Info" is not included and if the DCH has only one link in its active set:
 - 2> act upon the IE "PDSCH code mapping" as specified in subclause 8.6; and
 - 2> infer that the PDSCH will be transmitted from the cell from which the downlink DPCH is transmitted.
- 1> enter a state according to subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

- 1> handle the message as if IE "RB information to reconfigure" was absent.
- NOTE: The RADIO BEARER RECONFIGURATION message always includes the IE "RB information to reconfigure". UTRAN has to include it even if it does not require the reconfiguration of any RB.

If after state transition the UE enters CELL_DCH state, the UE shall, after the state transition:

- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI.

In FDD, if after state transition the UE leaves CELL_DCH state, the UE shall, after the state transition:

- 1> remove any DSCH-RNTI from MAC;
- 1> clear the variable DSCH_RNTI.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4].
- 1> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> if the UE is in CELL_PCH or URA_PCH state:
 - 4> initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - 4> proceed as below.
- 1> start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in the-variable TIMERS_AND_CONSTANTS system information block type 1;
- 1> select PRACH according to subclause 8.5.17;

- 1> select Secondary CCPCH according to subclause 8.5.19;
- 1> use the transport format set given in system information;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> ignore that IE and stop using DRX.
- 1> if the contents of the variable C_RNTI is empty:
 - 2> perform a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> if the UE is in CELL_PCH or URA_PCH state:
 - 4> initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - 4> proceed as below.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency;
 - 2> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 3> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.

The UE shall transmit a response message as specified in subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- 1> if the received reconfiguration message included the IE "Downlink counter synchronisation info"; or
- 1> if the received reconfiguration message is a RADIO BEARER RECONFIGURATION and the IE "New U-RNTI" is included:
 - 2> re-establish RB2;
 - 2> set the new uplink and downlink HFN of RB2 to MAX(uplink HFN of RB2, downlink HFN of RB2);
 - 2> increment by one the downlink and uplink HFN values for RB2;
 - 2> calculate the START value according to subclause 8.5.9;
 - 2> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info".
- 1> if the received reconfiguration message did not include the IE "Downlink counter synchronisation info":
 - 2> if the variable START_VALUE_TO_TRANSMIT is set:
 - 3> include and set the IE "START" to the value of that variable.
 - 2> if the variable START_VALUE_TO_TRANSMIT is not set and the IE "New U-RNTI" is included:
 - 3> calculate the START value according to subclause 8.5.9;

- 3> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info".
- 2> if the received reconfiguration message caused a change in the RLC size for any RB using RLC-AM:
 - 3> calculate the START value according to subclause 8.5.9;
 - 3> include the calculated START values for the CN domain associated with the corresponding RB identity in the IE "START list" in the IE "Uplink counter synchronisation info".
- 1> if the received reconfiguration message contained the IE "Ciphering mode info" or contained the IE "Integrity protection mode info":
 - 2> set the IE "Status" in the variable SECURITY_MODIFICATION for all the CN domains in the variable SECURITY_MODIFICATION to "Affected".
- 1> if the received reconfiguration message contained the IE "Ciphering mode info":
 - 2> include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the received reconfiguration message did not contain the IE "Ciphering activation time for DPCH" in IE "Ciphering mode info":
 - 2> if prior to this procedure there exist no transparent mode RLC radio bearers:
 - 3> if, at the conclusion of this procedure, the UE will be in CELL_DCH state; and
 - 3> if, at the conclusion of this procedure, at least one transparent mode RLC radio bearer exists:
 - 4> include the IE "COUNT-C activation time" and specify a CFN value for this IE.
 - 2> if prior to this procedure there exists at least one transparent mode RLC radio bearer:
 - 3> if, at the conclusion of this procedure, no transparent mode RLC radio bearers exist:
 - 4> include the IE "COUNT-C activation time" and specify a CFN value for this IE.
- 1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> if the variable PDCP_SN_INFO is not empty:
 - 2> include the IE "RB with PDCP information list" and set it to the value of the variable PDCP_SN_INFO.
- 1> in TDD, if the procedure is used to perform a handover to a cell where timing advance is enabled, and the UE can calculate the timing advance value in the new cell (i.e. in a synchronous TDD network):
 - 2> set the IE "Uplink Timing Advance" according to subclause 8.6.6.26.
- 1> if the IE "Integrity protection mode info" was present in the received reconfiguration message:
 - 2> start applying the new integrity protection configuration in the uplink for signalling radio bearer RB2 from and including the transmitted response message.

If after state transition the UE enters CELL_PCH or URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4].

- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C RNTI;
- 1> start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in the-variable TIMERS AND CONSTANTSsystem-information-block-type-1;
- 1> select Secondary CCPCH according to subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> set the variable INVALID_CONFIGURATION to TRUE.
- 1> if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> the procedure ends.
- 1> if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE:
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure is successfully completed:
 - 3> the procedure ends.
- 1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause 8.3.1 is fulfilled:
 - 2> initiate a URA update procedure according to subclause 8.3.1 using the cause "URA reselection";
 - 2> when the URA update procedure is successfully completed:
 - 3> the procedure ends.

8.3.3.3 Reception of UTRAN MOBILITY INFORMATION message by the UE

When the UE receives a UTRAN MOBILITY INFORMATION message, it shall:

- 1> act on received information elements as specified in subclause 8.6;
- 1> if the IE "UE Timers and constants in connected mode" is present:
 - 2> store the values of the IE "UE Timers and constants in connected mode" in the variable TIMERS_AND_CONSTANTS, replacing any previously stored value for each timer and constant; and
 - 2> for each updated timer value:
 - 3> start using the new value next time the timer is started;

- NOTE: If a new value of timer T305 is included in the IE "UE Timers and constants in connected mode", and the old value of timer T305 is "infinity", the UE will not use the new value of the timer T305 until the next cell reselection.
 - 2> for each updated constant value:
 - 3> start using the new value directly;
- 1> if the IE "CN domain specific DRX cycle length coefficient" is present:
 - 2> store the value of the IE "CN domain specific DRX cycle length coefficient" for that CN domain, replacing any previously stored value; and
 - 2> use the value to determine the connected mode paging occasions according to [4].
- 1> set the IE "RRC transaction identifier" in the UTRAN MOBILITY INFORMATION CONFIRM message to the value of "RRC transaction identifier" in the entry for the UTRAN MOBILITY INFORMATION message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info" or contained the IE "Integrity protection mode info":
 - 2> set the IE "Status" in the variable SECURITY_MODIFICATION for all the CN domains in the variable SECURITY_MODIFICATION to "Affected";
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info":
 - 2> include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the variable PDCP_SN_INFO is non-empty:
 - 2> include the IE "RB with PDCP information list" in the UTRAN MOBILITY INFORMATION CONFIRM message and set it to the value of the variable PDCP_SN_INFO.
- 1> if the received UTRAN MOBILITY INFORMATION message included the IE "Downlink counter synchronisation info":
 - 2> re-establish RB2;
 - 2> set the new uplink and downlink HFN of RB2 to MAX(uplink HFN of RB2, downlink HFN of RB2);
 - 2> increment by one the downlink and uplink HFN values for RB2;
 - 2> calculate the START value according to subclause 8.5.9;
 - 2> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the UTRAN MOBILITY INFORMATION CONFIRM message.
- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC;
- 1> if the IE "Integrity protection mode info" was present in the UTRAN MOBILITY INFORMATION message:
 - 2> start applying the new integrity protection configuration in the uplink for signalling radio bearer RB2 from and including the transmitted UTRAN MOBILITY INFORMATION CONFIRM message.
- 1> if the IE "Downlink counter synchronisation info" was included in the received UTRAN MOBILITY INFORMATION message:
 - 2> when RLC has confirmed the successful transmission of the response message:
 - 3> re-establish all AM and UM RLC entities with RB identities larger than 4 and set the first 20 bits of all their HFN values to the START value included in the response message for the corresponding CN domain;

- 3> re-establish the RLC entities with RB identities 1, 3 and 4 and set the first 20 bits of all their HFN values to the START value included in the response message for the CN domain stored in the variable LATEST_CONFIGURED_CN_DOMAIN;
- 3> set the remaining bits of the HFN values of all UM RLC entities to zero;
- 3> re-initialise the PDCP header compression entities of each radio bearer in the variable ESTABLISHED_RABS as specified in [36].
- 1> if the variable PDCP_SN_INFO is empty; and
 - 2> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info":
 - 3> when RLC has confirmed the successful transmission of the UTRAN MOBILITY INFORMATION CONFIRM message, perform the actions below.
 - 2> if the UTRAN MOBILITY INFORMATION message did not contain the IE "Ciphering mode info":
 - 3> when RLC has been requested to transmit the UTRAN MOBILITY INFORMATION CONFIRM message, perform the actions below.
- 1> if the variable PDCP_SN_INFO is non-empty:
 - 2> when RLC has confirmed the successful transmission of the UTRAN MOBILITY INFORMATION CONFIRM message:
 - 3> for each radio bearer in the variable PDCP_SN_INFO:
 - 4> if the IE "RB started" in the variable ESTABLISHED_RABS is set to "started":
 - 5> configure the RLC entity for that radio bearer to "continue".
 - 3> clear the variable PDCP_SN_INFO.
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info":
 - 2> resume data transmission on any suspended radio bearer and signalling radio bearer mapped on RLC-AM or RLC-UM;
 - 2> set the IE "Reconfiguration" in the variable CIPHERING_STATUS to FALSE; and
 - 2> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Integrity protection mode info":
 - 2> allow the transmission of RRC messages on all signalling radio bearers with any RRC SN;
 - 2> set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE; and
 - 2> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO.
- 1> clear the variable SECURITY_MODIFICATION.

The procedure ends.

[...]

Clauses affected:

			СН	ANGE	REQ	UE	ST				CR-Form-v5
¥	25.	331	CR 142	28	жrev	r1	¥	Current ver	sion:	4.4.0	ж
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the \mathbb{X} symbols.											
Proposed change affects: 第 (U)SIM ME/UE Radio Access Network X Core Network											
Title: ♯	Peri	odic c	ell update	clarificatio	ns						
Source: #	TSG	S-RAN	WG2								
Work item code: ₩	TEI							Date: ♯	13	May 2002	2
	H H O L Detail	(corrections) (c) (corrections) (d) (corrections) (e) (corrections)	the following ection) responds to lition of featuctional modifications of BGPP TR 2	a correctio ire), fication of f cation) the above	n in an ea eature)		lease	2	f the for (GSN) (Rele (Rele (Rele (Rele	L-4 bllowing rela M Phase 2) ease 1996) ease 1998) ease 1999) ease 4) ease 5)	
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		the Using is "infusing perior	IE, it is stat I the new v finity", i.e. i I the new v	ed that: "7 alue next f periodic alue of T3	The UE s time the cell upda 305. This	hall: timer i te is d mean:	for is sta lisab s tha	each update arted". If the oled, the UE at it is not po d, unless the	ed tim old va will was ssible	ner value: alue of tim ait forever to re-ena	start er T305 before ble
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		Note that T316 is the only other timer that can be set to the value "infinity" T316 is only applicable to CELL_PCH and URA_PCH states, and UTRAN MOBILITY INFORMATION message can not be received in those states.							Ň		
		This	change ma	y only aff	ect UTRA	N imp	olem	entations.			
		This change should not affect existing test procedures, since section 8.3.1.3 <i>Cell Update: periodical cell update in CELL_FACH</i> of TS 34.123-1 has already been corrected accordingly.									
		Isola	ted Impac	t Change	Analysi	s.					
								procedure. like indicate	ed in t	he CR.	
Consequences if not approved:	æ	the U	IE in CELL te), while tl	_FACH is ne periodi	using a r c cell upo	new va date is	alue still	N implements of the timer disabled in t as been lost	T305 the UI	(periodic	cell

第 8.1.3.6, 8.2.2.3, 8.3.3.3

Other specs	ж	Other core specifications	\mathfrak{H}	25.331 v3.10.0, CR 1427r1
,		·		25.331 v5.0.0, CR 1429r1
affected:		Test specifications		
	Ī	Test specifications O&M Specifications		
	_	<u> </u>		
Other comments:	\mathfrak{H}	A detailed description of the is	sue is	s included in R2-020759 "Periodic cell update
		clarifications", Qualcomm		

How to create CRs using this form:

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- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
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8.1.3.6 Reception of an RRC CONNECTION SETUP message by the UE

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

If the values are different, the UE shall:

1> ignore the rest of the message.

If the values are identical, the UE shall:

- 1> stop timer T300, and act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:
 - 2> if the UE will be in the CELL_FACH state at the conclusion of this procedure:
 - 3> if the IE "Frequency info" is included:
 - 4> select a suitable UTRA cell according to [4] on that frequency;
 - 3> select PRACH according to subclause 8.5.17;
 - 3> select Secondary CCPCH according to subclause 8.5.19;
 - 3> ignore the IE "UTRAN DRX cycle length coefficient" and stop using DRX.
- 1> perform the physical layer synchronisation procedure as specified in [29];
- 1> enter UTRA RRC connected mode, in a state according to subclause 8.6.3.3;
- 1> submit an RRC CONNECTION SETUP COMPLETE message to the lower layers on the uplink DCCH after successful state transition per subclause 8.6.3.3, with the contents set as specified below:
 - 2> set the IE "RRC transaction identifier" to:
 - 3> the value of "RRC transaction identifier" in the entry for the RRC CONNECTION SETUP message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry.
 - 2> if the USIM or SIM is present:
 - 3> set the "START" for each CN domain in the IE "START list" in the RRC CONNECTION SETUP COMPLETE message with the corresponding START value that is stored in the USIM [50] if present, or as stored in the UE if the SIM is present; and then
 - 3> set the START value stored in the USIM [50] if present, and as stored in the UE if the SIM is present for any CN domain to the value "THRESHOLD" of the variable START_THRESHOLD.
 - 2> if neither the USIM nor SIM is present:
 - 3> set the "START" for each CN domain in the IE "START list" in the RRC CONNECTION SETUP COMPLETE message to zero;
 - 3> set the value of "THRESHOLD" in the variable "START_THRESHOLD" to the default value [40].
 - 2> retrieve its UTRA UE radio access capability information elements from variable UE_CAPABILITY_REQUESTED; and then
 - 2> include this in IE "UE radio access capability" and IE "UE radio access capability extension", provided this IE is included in variable UE_CAPABILITY_REQUESTED;
 - 2> retrieve its inter-RAT-specific UE radio access capability information elements from variable UE_CAPABILITY_REQUESTED; and then

2> include this in IE "UE system specific capability".

When the RRC CONNECTION SETUP COMPLETE message has been submitted to lower layers for transmission the UE shall:

- 1> if the UE has entered CELL_FACH state:
 - 2> start timer T305 using its initial value if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1the variable TIMERS_AND_CONSTANTS.
- 1> store the contents of the variable UE_CAPABILITY_REQUESTED in the variable UE_CAPABILITY_TRANSFERRED;
- 1> initialise variables upon entering UTRA RRC connected mode as specified in subclause 13.4;
- 1> consider the procedure to be successful;

And the procedure ends.

 $[\ldots]$

8.2.2.3 Reception of RADIO BEARER SETUP or RADIO BEARER RECONFIGURATION or RADIO BEARER RELEASE or TRANSPORT CHANNEL RECONFIGURATION or PHYSICAL CHANNEL RECONFIGURATION message by the UE

The UE shall be able to receive any of the following messages:

- RADIO BEARER SETUP message; or
- RADIO BEARER RECONFIGURATION message; or
- RADIO BEARER RELEASE message; or
- TRANSPORT CHANNEL RECONFIGURATION message; or
- PHYSICAL CHANNEL RECONFIGURATION message;

and perform a hard handover, even if no prior UE measurements have been performed on the target cell and/or frequency.

If the UE receives:

- a RADIO BEARER SETUP message; or
- a RADIO BEARER RECONFIGURATION message; or
- a RADIO BEARER RELEASE message; or
- a TRANSPORT CHANNEL RECONFIGURATION message; or
- a PHYSICAL CHANNEL RECONFIGURATION message:

it shall:

- set the variable ORDERED_RECONFIGURATION to TRUE;
- perform the physical layer synchronisation procedure as specified in [29];
- act upon all received information elements as specified in subclause 8.6, unless specified in the following and perform the actions below.

The UE may first release the physical channel configuration used at reception of the reconfiguration message. The UE shall then:

- in FDD, if the IE "PDSCH code mapping" is included but the IE "PDSCH with SHO DCH Info" is not included and if the DCH has only one link in its active set:
 - act upon the IE "PDSCH code mapping" as specified in subclause 8.6; and
 - infer that the PDSCH will be transmitted from the cell from which the downlink DPCH is transmitted.
- enter a state according to subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

- handle the message as if IE "RB information to reconfigure" was absent.

NOTE: The RADIO BEARER RECONFIGURATION message always includes the IE "RB information to reconfigure". UTRAN has to include it even if it does not require the reconfiguration of any RB.

If after state transition the UE enters CELL_DCH state, the UE shall, after the state transition:

- remove any C-RNTI from MAC;
- clear the variable C_RNTI.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

- if the IE "Frequency info" is included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4] on that frequency.
- if the IE "Frequency info" is not included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4].
- if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - when the cell update procedure completed successfully:
 - if the UE is in CELL_PCH or URA_PCH state:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - proceed as below.
- start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in the-variable TIMERS_AND_CONSTANTS system information block type-1;
- select PRACH according to subclause 8.5.17;
- select Secondary CCPCH according to subclause 8.5.19;
- use the transport format set given in system information;
- if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

- ignore that IE and stop using DRX.
- if the contents of the variable C_RNTI is empty:
 - perform a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - when the cell update procedure completed successfully:
 - if the UE is in CELL_PCH or URA_PCH state:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - proceed as below.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

- if the IE "Frequency info" is included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4] on that frequency;
 - if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - when the cell update procedure completed successfully:
 - proceed as below.

The UE shall transmit a response message as specified in subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- if the received reconfiguration message included the IE "Downlink counter synchronisation info":
 - re-establish RB2;
 - set the new uplink and downlink HFN of RB2 to MAX(uplink HFN of RB2 | downlink HFN of RB2) + 1;
 - increment by one the downlink and uplink HFN values for RB2;
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info".
- if the received reconfiguration message did not include the IE "Downlink counter synchronisation info":
 - if the variable START_VALUE_TO_TRANSMIT is set:
 - include and set the IE "START" to the value of that variable.
 - if the variable START_VALUE_TO_TRANSMIT is not set and the IE "New U-RNTI" is included:
 - calculate the START value according to subclause 8.5.9;
 - include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info".
- if the received reconfiguration message contained the IE "Ciphering mode info":
 - include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.

- if the received reconfiguration message contained the IE "Integrity protection mode info" with the IE "Integrity protection mode command" set to "Modify":
 - include and set the IE "Uplink integrity protection activation info" to the value of the variable INTEGRITY_PROTECTION_ACTIVATION_INFO.
- if the received reconfiguration message did not contain the IE "Ciphering activation time for DPCH" in IE "Ciphering mode info":
 - if prior to this procedure there exist no transparent mode RLC radio bearers:
 - if, at the conclusion of this procedure, the UE will be in CELL_DCH state; and
 - if, at the conclusion of this procedure, at least one transparent mode RLC radio bearer exists:
 - include the IE "COUNT-C activation time" and specify a CFN value for this IE.
 - if prior to this procedure there exists at least one transparent mode RLC radio bearer:
 - if, at the conclusion of this procedure, no transparent mode RLC radio bearers exist:
 - include the IE "COUNT-C activation time" and specify a CFN value for this IE.
- set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- clear that entry;
- if the variable PDCP_SN_INFO is not empty:
 - include the IE "RB with PDCP information list" and set it to the value of the variable PDCP_SN_INFO.
- in TDD, if the procedure is used to perform a handover to a cell where timing advance is enabled, and the UE can calculate the timing advance value in the new cell (i.e. in a synchronous TDD network):
 - set the IE "Uplink Timing Advance" according to subclause 8.6.6.26.
- if the IE "Integrity protection mode info" was present in the received reconfiguration message:
 - start applying the new integrity protection configuration in the uplink for signalling radio bearer RB2 from and including the transmitted response message.

If after state transition the UE enters CELL_PCH or URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- if the IE "Frequency info" is included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4] on that frequency.
- if the IE "Frequency info" is not included in the received reconfiguration message:
 - select a suitable UTRA cell according to [4].
- prohibit periodical status transmission in RLC;
- remove any C-RNTI from MAC;
- clear the variable C_RNTI;
- start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in the-variable TIMERS AND CONSTANTS system information block type 1;
- select Secondary CCPCH according to subclause 8.5.19;
- if the IE "UTRAN DRX cycle length coefficient" is included in the same message:

- use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in subclause 8.6.3.2.
- if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - set the variable INVALID_CONFIGURATION to TRUE.
- if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - when the cell update procedure completed successfully:
 - the procedure ends.
- if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE:
 - initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - when the cell update procedure is successfully completed:
 - the procedure ends.
- if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause 8.3.1 is fulfilled:
 - initiate a URA update procedure according to subclause 8.3.1 using the cause "URA reselection";
 - when the URA update procedure is successfully completed:
 - the procedure ends.

8.3.3.3 Reception of UTRAN MOBILITY INFORMATION message by the UE

When the UE receives a UTRAN MOBILITY INFORMATION message, it shall:

- 1> act on received information elements as specified in subclause 8.6;
- 1> if the IE "UE Timers and constants in connected mode" is present:
 - 2> store the values of the IE "UE Timers and constants in connected mode" in the variable TIMERS_AND_CONSTANTS, replacing any previously stored value for each timer and constant; and
 - 2> for each updated timer value:
 - 3> start using the new value next time the timer is started;
- NOTE: If a new value of timer T305 is included in the IE "UE Timers and constants in connected mode", and the old value of timer T305 is "infinity", the UE will not use the new value of the timer T305 until the next cell reselection.
 - 2> for each updated constant value:
 - 3> start using the new value directly;
- 1> if the IE "CN domain specific DRX cycle length coefficient" is present:
 - 2> store the value of the IE "CN domain specific DRX cycle length coefficient" for that CN domain, replacing any previously stored value; and

- 2> use the value to determine the connected mode paging occasions according to [4].
- 1> set the IE "RRC transaction identifier" in the UTRAN MOBILITY INFORMATION CONFIRM message to the value of "RRC transaction identifier" in the entry for the UTRAN MOBILITY INFORMATION message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info" or contained the IE "Integrity protection mode info":
 - 2> set the IE "Status" in the variable SECURITY_MODIFICATION for all the CN domains in the variable SECURITY MODIFICATION to "Affected";
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info":
 - 2> include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the variable PDCP_SN_INFO is non-empty:
 - 2> include the IE "RB with PDCP information list" in the UTRAN MOBILITY INFORMATION CONFIRM message and set it to the value of the variable PDCP_SN_INFO.
- 1> if the received UTRAN MOBILITY INFORMATION message included the IE "Downlink counter synchronisation info":
 - 2> re-establish RB2;
 - 2> set the new uplink and downlink HFN of RB2 to MAX(uplink HFN of RB2, downlink HFN of RB2);
 - 2> increment by one the downlink and uplink HFN values for RB2;
 - 2> calculate the START value according to subclause 8.5.9;
 - 2> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the UTRAN MOBILITY INFORMATION CONFIRM message.
- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC;
- 1> if the IE "Integrity protection mode info" was present in the UTRAN MOBILITY INFORMATION message:
 - 2> start applying the new integrity protection configuration in the uplink for signalling radio bearer RB2 from and including the transmitted UTRAN MOBILITY INFORMATION CONFIRM message.
- 1> if the IE "Downlink counter synchronisation info" was included in the received UTRAN MOBILITY INFORMATION message:
 - 2> when RLC has confirmed the successful transmission of the response message:
 - 3> re-establish all AM and UM RLC entities with RB identities larger than 4 and set the first 20 bits of all their HFN values to the START value included in the response message for the corresponding CN domain;
 - 3> re-establish the RLC entities with RB identities 1, 3 and 4 and set the first 20 bits of all their HFN values to the START value included in the response message for the CN domain stored in the variable LATEST_CONFIGURED_CN_DOMAIN;
 - 3> set the remaining bits of the HFN values of all UM RLC entities to zero;
 - 3> re-initialise the PDCP header compression entities of each radio bearer in the variable ESTABLISHED_RABS as specified in [36].
- 1> if the variable PDCP_SN_INFO is empty; and
 - 2> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info":

- 3> when RLC has confirmed the successful transmission of the UTRAN MOBILITY INFORMATION CONFIRM message, perform the actions below.
- 2> if the UTRAN MOBILITY INFORMATION message did not contain the IE "Ciphering mode info":
 - 3> when RLC has been requested to transmit the UTRAN MOBILITY INFORMATION CONFIRM message, perform the actions below.
- 1> if the variable PDCP_SN_INFO is non-empty:
 - 2> when RLC has confirmed the successful transmission of the UTRAN MOBILITY INFORMATION CONFIRM message:
 - 3> for each radio bearer in the variable PDCP_SN_INFO:
 - 4> if the IE "RB started" in the variable ESTABLISHED_RABS is set to "started":
 - 5> configure the RLC entity for that radio bearer to "continue".
 - 3> clear the variable PDCP_SN_INFO.
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info":
 - 2> resume data transmission on any suspended radio bearer and signalling radio bearer mapped on RLC-AM or RLC-UM;
 - 2> set the IE "Reconfiguration" in the variable CIPHERING_STATUS to FALSE; and
 - 2> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Integrity protection mode info":
 - 2> allow the transmission of RRC messages on all signalling radio bearers with any RRC SN;
 - 2> set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE; and
 - 2> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO.
- 1> clear the variable SECURITY_MODIFICATION.

The procedure ends.

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Other comments:	\mathfrak{H}	A detailed description of the is	sue is	s included in R2-020759 "Periodic cell update
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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.1.3.6 Reception of an RRC CONNECTION SETUP message by the UE

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

If the values are different, the UE shall:

1> ignore the rest of the message.

If the values are identical, the UE shall:

- 1> stop timer T300, and act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following:
 - 2> if the UE will be in the CELL_FACH state at the conclusion of this procedure:
 - 3> if the IE "Frequency info" is included:
 - 4> select a suitable UTRA cell according to [4] on that frequency;
 - 3> select PRACH according to subclause 8.5.17;
 - 3> select Secondary CCPCH according to subclause 8.5.19;
 - 3> ignore the IE "UTRAN DRX cycle length coefficient" and stop using DRX.
- 1> perform the physical layer synchronisation procedure as specified in [29];
- 1> enter UTRA RRC connected mode, in a state according to subclause 8.6.3.3;
- 1> submit an RRC CONNECTION SETUP COMPLETE message to the lower layers on the uplink DCCH after successful state transition per subclause 8.6.3.3, with the contents set as specified below:
 - 2> set the IE "RRC transaction identifier" to:
 - 3> the value of "RRC transaction identifier" in the entry for the RRC CONNECTION SETUP message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 3> clear that entry.
 - 2> if the USIM or SIM is present:
 - 3> set the "START" for each CN domain in the IE "START list" in the RRC CONNECTION SETUP COMPLETE message with the corresponding START value that is stored in the USIM [50] if present, or as stored in the UE if the SIM is present; and then
 - 3> set the START value stored in the USIM [50] if present, and as stored in the UE if the SIM is present for any CN domain to the value "THRESHOLD" of the variable START_THRESHOLD.
 - 2> if neither the USIM nor SIM is present:
 - 3> set the "START" for each CN domain in the IE "START list" in the RRC CONNECTION SETUP COMPLETE message to zero;
 - 3> set the value of "THRESHOLD" in the variable "START_THRESHOLD" to the default value [40].
 - 2> retrieve its UTRA UE radio access capability information elements from variable UE_CAPABILITY_REQUESTED; and then
 - 2> include this in IE "UE radio access capability" and IE "UE radio access capability extension", provided this IE is included in variable UE_CAPABILITY_REQUESTED;
 - 2> retrieve its inter-RAT-specific UE radio access capability information elements from variable UE_CAPABILITY_REQUESTED; and then

2> include this in IE "UE system specific capability".

When the RRC CONNECTION SETUP COMPLETE message has been submitted to lower layers for transmission the UE shall:

- 1> if the UE has entered CELL_FACH state:
 - 2> start timer T305 using its initial value if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1the variable TIMERS_AND_CONSTANTS.
- 1> store the contents of the variable UE_CAPABILITY_REQUESTED in the variable UE_CAPABILITY_TRANSFERRED;
- 1> initialise variables upon entering UTRA RRC connected mode as specified in subclause 13.4;
- 1> consider the procedure to be successful;

And the procedure ends.

 $[\ldots]$

8.2.2.3 Reception of RADIO BEARER SETUP or RADIO BEARER RECONFIGURATION or RADIO BEARER RELEASE or TRANSPORT CHANNEL RECONFIGURATION or PHYSICAL CHANNEL RECONFIGURATION message by the UE

The UE shall be able to receive any of the following messages:

- RADIO BEARER SETUP message; or
- RADIO BEARER RECONFIGURATION message; or
- RADIO BEARER RELEASE message; or
- TRANSPORT CHANNEL RECONFIGURATION message; or
- PHYSICAL CHANNEL RECONFIGURATION message;

and perform a hard handover, even if no prior UE measurements have been performed on the target cell and/or frequency.

If the UE receives:

- a RADIO BEARER SETUP message; or
- a RADIO BEARER RECONFIGURATION message; or
- a RADIO BEARER RELEASE message; or
- a TRANSPORT CHANNEL RECONFIGURATION message; or
- a PHYSICAL CHANNEL RECONFIGURATION message:

it shall:

- 1> set the variable ORDERED_RECONFIGURATION to TRUE;
- 1> perform the physical layer synchronisation procedure as specified in [29];
- 1> act upon all received information elements as specified in subclause 8.6, unless specified in the following and perform the actions below.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE may first release the physical channel configuration used at reception of the reconfiguration message. The UE shall then:

- 1> in FDD, if the IE "PDSCH code mapping" is included but the IE "PDSCH with SHO DCH Info" is not included and if the DCH has only one link in its active set:
 - 2> act upon the IE "PDSCH code mapping" as specified in subclause 8.6; and
 - 2> infer that the PDSCH will be transmitted from the cell from which the downlink DPCH is transmitted.
- 1> enter a state according to subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

- 1> handle the message as if IE "RB information to reconfigure" was absent.
- NOTE: The RADIO BEARER RECONFIGURATION message always includes the IE "RB information to reconfigure". UTRAN has to include it even if it does not require the reconfiguration of any RB.

If after state transition the UE enters CELL_DCH state, the UE shall, after the state transition:

- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI.

In FDD, if after state transition the UE leaves CELL_DCH state, the UE shall, after the state transition:

- 1> remove any DSCH-RNTI from MAC;
- 1> clear the variable DSCH_RNTI.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration;
- 1> if "DPCH frame offset" is included for one or more RLs in the active set:
 - 2> use its value to determine the beginning of the DPCH frame in accordance with the following:
 - 3> if the received IE "DPCH frame offset" is across the value range border compared to the DPCH frame offset currently used by the UE:
 - 4> consider it to be a request to adjust the timing with 256 chips across the frame border (e.g. if the UE receives value 0 while the value currently used is 38144 consider this as a request to adjust the timing with +256 chips).
 - 3> if after taking into account value range borders, the received IE "DPCH frame offset" corresponds to a request to adjust the timing with a step exceeding 256 chips:
 - 4> set the variable INVALID CONFIGURATION to FALSE.
 - 3> and the procedure ends.
 - 2> adjust the radio link timing accordingly.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:

- 2> select a suitable UTRA cell according to [4].
- 1> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> if the UE is in CELL_PCH or URA_PCH state:
 - 4> initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - 4> proceed as below.
- 1> start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1the variable TIMERS_AND_CONSTANTS;
- 1> select PRACH according to subclause 8.5.17;
- 1> select Secondary CCPCH according to subclause 8.5.19;
- 1> use the transport format set given in system information;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> ignore that IE and stop using DRX.
- 1> remove any H-RNTI stored;
- 1> clear the variable H_RNTI;
- 1> if the contents of the variable C_RNTI is empty:
 - 2> perform a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> if the UE is in CELL_PCH or URA_PCH state:
 - 4> initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - 4> proceed as below.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency;
 - 2> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 3> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.

The UE shall transmit a response message as specified in subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- 1> if the received reconfiguration message included the IE "Downlink counter synchronisation info"; or
- 1> if the received reconfiguration message is a RADIO BEARER RECONFIGURATION and the IE "New U-RNTI" is included:
 - 2> re-establish RB2;
 - 2> set the new uplink and downlink HFN of RB2 to MAX(uplink HFN of RB2, downlink HFN of RB2);
 - 2> increment by one the downlink and uplink HFN values for RB2;
 - 2> calculate the START value according to subclause 8.5.9;
 - 2> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info".
- 1> if the received reconfiguration message did not include the IE "Downlink counter synchronisation info":
 - 2> if the variable START_VALUE_TO_TRANSMIT is set:
 - 3> include and set the IE "START" to the value of that variable.
 - 2> if the variable START_VALUE_TO_TRANSMIT is not set and the IE "New U-RNTI" is included:
 - 3> calculate the START value according to subclause 8.5.9;
 - 3> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info".
 - 2> if the received reconfiguration message caused a change in the RLC size for any RB using RLC-AM:
 - 3> calculate the START value according to subclause 8.5.9;
 - 3> include the calculated START values for the CN domain associated with the corresponding RB identity in the IE "START list" in the IE "Uplink counter synchronisation info".
- 1> if the received reconfiguration message contained the IE "Ciphering mode info" or contained the IE "Integrity protection mode info":
 - 2> set the IE "Status" in the variable SECURITY_MODIFICATION for all the CN domains in the variable SECURITY_MODIFICATION to "Affected".
- 1> if the received reconfiguration message contained the IE "Ciphering mode info":
 - 2> include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the received reconfiguration message did not contain the IE "Ciphering activation time for DPCH" in IE "Ciphering mode info":
 - 2> if prior to this procedure there exist no transparent mode RLC radio bearers:
 - 3> if, at the conclusion of this procedure, the UE will be in CELL_DCH state; and
 - 3> if, at the conclusion of this procedure, at least one transparent mode RLC radio bearer exists:
 - 4> include the IE "COUNT-C activation time" and specify a CFN value for this IE.
 - 2> if prior to this procedure there exists at least one transparent mode RLC radio bearer:
 - 3> if, at the conclusion of this procedure, no transparent mode RLC radio bearers exist:
 - 4> include the IE "COUNT-C activation time" and specify a CFN value for this IE.
- 1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;

- 1> if the variable PDCP_SN_INFO is not empty:
 - 2> include the IE "RB with PDCP information list" and set it to the value of the variable PDCP_SN_INFO.
- 1> in TDD, if the procedure is used to perform a handover to a cell where timing advance is enabled, and the UE can calculate the timing advance value in the new cell (i.e. in a synchronous TDD network):
 - 2> set the IE "Uplink Timing Advance" according to subclause 8.6.6.26.
- 1> if the IE "Integrity protection mode info" was present in the received reconfiguration message:
 - 2> start applying the new integrity protection configuration in the uplink for signalling radio bearer RB2 from and including the transmitted response message.

If after state transition the UE enters CELL_PCH or URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4].
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> remove any H-RNTI stored;
- 1> clear the variable H_RNTI;
- 1> start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in the-variable TIMERS_AND_CONSTANTS system information block type 1;
- 1> select Secondary CCPCH according to subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> set the variable INVALID_CONFIGURATION to TRUE.
- 1> if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> the procedure ends.
- 1> if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE:
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure is successfully completed:

- 3> the procedure ends.
- 1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause 8.3.1 is fulfilled:
 - 2> initiate a URA update procedure according to subclause 8.3.1 using the cause "URA reselection";
 - 2> when the URA update procedure is successfully completed:
 - 3> the procedure ends.

8.3.3.3 Reception of UTRAN MOBILITY INFORMATION message by the UE

When the UE receives a UTRAN MOBILITY INFORMATION message, it shall:

- 1> act on received information elements as specified in subclause 8.6;
- 1> if the IE "UE Timers and constants in connected mode" is present:
 - 2> store the values of the IE "UE Timers and constants in connected mode" in the variable TIMERS_AND_CONSTANTS, replacing any previously stored value for each timer and constant; and
 - 2> for each updated timer value:
 - 3> start using the new value next time the timer is started;
- NOTE: If a new value of timer T305 is included in the IE "UE Timers and constants in connected mode", and the old value of timer T305 is "infinity", the UE will not use the new value of the timer T305 until the next cell reselection.
 - 2> for each updated constant value:
 - 3> start using the new value directly;
- 1> if the IE "CN domain specific DRX cycle length coefficient" is present:
 - 2> store the value of the IE "CN domain specific DRX cycle length coefficient" for that CN domain, replacing any previously stored value; and
 - 2> use the value to determine the connected mode paging occasions according to [4].
- 1> set the IE "RRC transaction identifier" in the UTRAN MOBILITY INFORMATION CONFIRM message to the value of "RRC transaction identifier" in the entry for the UTRAN MOBILITY INFORMATION message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info" or contained the IE "Integrity protection mode info":
 - 2> set the IE "Status" in the variable SECURITY_MODIFICATION for all the CN domains in the variable SECURITY_MODIFICATION to "Affected";
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info":
 - 2> include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the variable PDCP_SN_INFO is non-empty:
 - 2> include the IE "RB with PDCP information list" in the UTRAN MOBILITY INFORMATION CONFIRM message and set it to the value of the variable PDCP_SN_INFO.
- 1> if the received UTRAN MOBILITY INFORMATION message included the IE "Downlink counter synchronisation info":

- 2> re-establish RB2;
- 2> set the new uplink and downlink HFN of RB2 to MAX(uplink HFN of RB2, downlink HFN of RB2);
- 2> increment by one the downlink and uplink HFN values for RB2;
- 2> calculate the START value according to subclause 8.5.9;
- 2> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the UTRAN MOBILITY INFORMATION CONFIRM message.
- 1> transmit a UTRAN MOBILITY INFORMATION CONFIRM message on the uplink DCCH using AM RLC;
- 1> if the IE "Integrity protection mode info" was present in the UTRAN MOBILITY INFORMATION message:
 - 2> start applying the new integrity protection configuration in the uplink for signalling radio bearer RB2 from and including the transmitted UTRAN MOBILITY INFORMATION CONFIRM message.
- 1> if the IE "Downlink counter synchronisation info" was included in the received UTRAN MOBILITY INFORMATION message:
 - 2> when RLC has confirmed the successful transmission of the response message:
 - 3> re-establish all AM and UM RLC entities with RB identities larger than 4 and set the first 20 bits of all their HFN values to the START value included in the response message for the corresponding CN domain;
 - 3> re-establish the RLC entities with RB identities 1, 3 and 4 and set the first 20 bits of all their HFN values to the START value included in the response message for the CN domain stored in the variable LATEST_CONFIGURED_CN_DOMAIN;
 - 3> set the remaining bits of the HFN values of all UM RLC entities to zero;
 - 3> re-initialise the PDCP header compression entities of each radio bearer in the variable ESTABLISHED_RABS as specified in [36].
- 1> if the variable PDCP_SN_INFO is empty; and
 - 2> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info":
 - 3> when RLC has confirmed the successful transmission of the UTRAN MOBILITY INFORMATION CONFIRM message, perform the actions below.
 - 2> if the UTRAN MOBILITY INFORMATION message did not contain the IE "Ciphering mode info":
 - 3> when RLC has been requested to transmit the UTRAN MOBILITY INFORMATION CONFIRM message, perform the actions below.
- 1> if the variable PDCP_SN_INFO is non-empty:
 - 2> when RLC has confirmed the successful transmission of the UTRAN MOBILITY INFORMATION CONFIRM message:
 - 3> for each radio bearer in the variable PDCP_SN_INFO:
 - 4> if the IE "RB started" in the variable ESTABLISHED_RABS is set to "started":
 - 5> configure the RLC entity for that radio bearer to "continue".
 - 3> clear the variable PDCP_SN_INFO.
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Ciphering mode info":
 - 2> resume data transmission on any suspended radio bearer and signalling radio bearer mapped on RLC-AM or RLC-UM;
 - 2> set the IE "Reconfiguration" in the variable CIPHERING_STATUS to FALSE; and

- 2> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the UTRAN MOBILITY INFORMATION message contained the IE "Integrity protection mode info":
 - 2> allow the transmission of RRC messages on all signalling radio bearers with any RRC SN;
 - 2> set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE; and
 - 2> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO.
- 1> clear the variable SECURITY_MODIFICATION.

The procedure ends.

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How to create CRs using this form:

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

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

14.1.2.4 Reporting event 1D: Change of best cell

When an intra-frequency measurement configuring event 1d is set up, the UE shall:

- 1> create a variable TRIGGERED_1D_EVENT related to that measurement, which shall initially contain the best cell in the active set when the measurement is initiated;
- 1> delete this variable when the measurement is released.

When event 1D is configured in the UE, the UE shall:

1> if "Measurement quantity" is "pathloss" and Equation 1 below is fulfilled for a primary CPICH that is not stored in "Best cell" in variable BEST_CELL_1D_EVENT, or if "Measurement quantity" is "CPICH Ec/N0" or "CPICH RSCP", and Equation 2 below is fulfilled for a primary CPICH that is not stored in "Best cell" in variable BEST_CELL_1D_EVENT:

NOTE: If the equations are simultaneously fulfilled for more than one primary CPICH, the UE should report only one event 1D, triggered by the best primary CPICH.

- 2> if all required reporting quantities are available for that cell, and if the equations have been fulfilled for a time period indicated by "Time to trigger":
 - 3> set "best cell" in the variable BEST_CELL_1D_EVENT to that primary CPICH that triggered the event;
 - 3> send a measurement report with IEs set as below:
 - 4> set in "intra-frequency measurement event results"; "Intrafrequency event identity" to "1d" and "cell measurement event results" to the CPICH info of the primary CPICH that triggered the report.
 - 4> set the IE "measured results" and the IE "additional measured results" according to subclause 8.4.2.

NOTE: Event 1D can be triggered by an active or by a non-active CPICH.

This event is only applicable to the CELL_DCH state. Upon transition to CELL_DCH the UE shall:

1> set "best cell" in the variable BEST_CELL_1D_EVENT to the best cell of the primary CPICHs included in the active set.

Equation 1 (Triggering condition for pathloss)

$$10 Log M_{otBes} \leq 10 Log M_{est} - H_{U}/2$$

Equation 2 (Triggering condition for all the other measurement quantities)

$$10 Log M_{NotBest} \ge 10 Log M_{Best} + H_{ld}/2$$

The variables in the formula are defined as follows:

M_{NotBest} is the measurement result of a cell not stored in "best cell" in the variable BEST_CELL_1D_EVENT.

 M_{Best} is the measurement result of the cell stored in "best cell" in variable BEST_CELL_1D_EVENT.

 H_{1d} is the hysteresis parameter for the event 1d.

If the measurement results are pathloss or CPICH-Ec/No then $M_{Not Best}$ and M_{Best} are expressed as ratios.

If the measurement result is CPICH-RSCP then $M_{Not Best}$ and M_{Best} are expressed in mW.

NOTE: The cell individual offsets for the two cells being compared shall not be taken into account when checking whether this event has been triggered or not.

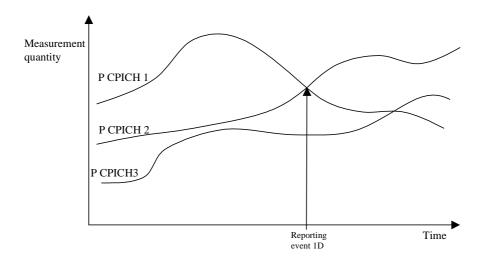


Figure 14.1.2.4-1 [Informative]: A primary CPICH becomes better than the previously best primary CPICH

In this figure, the parameters hysteresis and time to trigger, as well as the cell individual offsets for all cells are equal to 0.

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How to create CRs using this form:

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

14.1.2.4 Reporting event 1D: Change of best cell

When an intra-frequency measurement configuring event 1d is set up, the UE shall:

- 1> create a variable TRIGGERED_1D_EVENT related to that measurement, which shall initially contain the best cell in the active set when the measurement is initiated;
- 1> delete this variable when the measurement is released.

When event 1D is configured in the UE, the UE shall:

1> if "Measurement quantity" is "pathloss" and Equation 1 below is fulfilled for a primary CPICH that is not stored in "Best cell" in variable BEST_CELL_1D_EVENT, or if "Measurement quantity" is "CPICH Ec/N0" or "CPICH RSCP", and Equation 2 below is fulfilled for a primary CPICH that is not stored in "Best cell" in variable BEST_CELL_1D_EVENT:

NOTE: If the equations are simultaneously fulfilled for more than one primary CPICH, the UE should report only one event 1D, triggered by the best primary CPICH.

- 2> if all required reporting quantities are available for that cell, and if the equations have been fulfilled for a time period indicated by "Time to trigger":
 - 3> set "best cell" in the variable BEST_CELL_1D_EVENT to that primary CPICH that triggered the event;
 - 3> send a measurement report with IEs set as below:
 - 4> set in "intra-frequency measurement event results"; "Intrafrequency event identity" to "1d" and "cell measurement event results" to the CPICH info of the primary CPICH that triggered the report.
 - 4> set the IE "measured results" and the IE "additional measured results" according to subclause 8.4.2.

NOTE: Event 1D can be triggered by an active or by a non-active CPICH.

This event is only applicable to the CELL_DCH state. Upon transition to CELL_DCH the UE shall:

1> set "best cell" in the variable BEST_CELL_1D_EVENT to the best cell of the primary CPICHs included in the active set.

Equation 1 (Triggering condition for pathloss)

$$10 Log M_{otBes} \leq 10 Log M_{est} - H_{U}/2$$

Equation 2 (Triggering condition for all the other measurement quantities)

$$10 Log M_{NotBest} \ge 10 Log M_{Best} + H_{ld}/2$$

The variables in the formula are defined as follows:

M_{NotBest} is the measurement result of a cell not stored in "best cell" in the variable BEST_CELL_1D_EVENT.

 M_{Best} is the measurement result of the cell stored in "best cell" in variable BEST_CELL_1D_EVENT.

 H_{1d} is the hysteresis parameter for the event 1d.

If the measurement results are pathloss or CPICH-Ec/No then $M_{Not Best}$ and M_{Best} are expressed as ratios.

If the measurement result is CPICH-RSCP then $M_{Not Best}$ and M_{Best} are expressed in mW.

NOTE: The cell individual offsets for the two cells being compared shall not be taken into account when checking whether this event has been triggered or not.

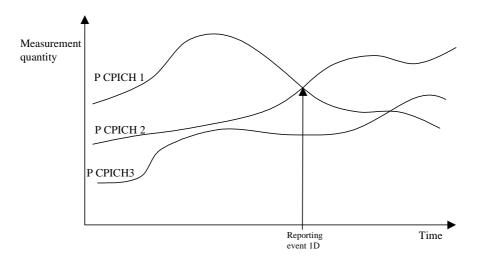


Figure 14.1.2.4-1 [Informative]: A primary CPICH becomes better than the previously best primary CPICH

In this figure, the parameters hysteresis and time to trigger, as well as the cell individual offsets for all cells are equal to 0.

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How to create CRs using this form:

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

14.1.2.4 Reporting event 1D: Change of best cell

When an intra-frequency measurement configuring event 1d is set up, the UE shall:

- 1> create a variable TRIGGERED_1D_EVENT related to that measurement, which shall initially contain the best cell in the active set when the measurement is initiated;
- 1> delete this variable when the measurement is released.

When event 1D is configured in the UE, the UE shall:

1> if "Measurement quantity" is "pathloss" and Equation 1 below is fulfilled for a primary CPICH that is not stored in "Best cell" in variable BEST_CELL_1D_EVENT, or if "Measurement quantity" is "CPICH Ec/N0" or "CPICH RSCP", and Equation 2 below is fulfilled for a primary CPICH that is not stored in "Best cell" in variable BEST_CELL_1D_EVENT:

NOTE: If the equations are simultaneously fulfilled for more than one primary CPICH, the UE should report only one event 1D, triggered by the best primary CPICH.

- 2> if all required reporting quantities are available for that cell, and if the equations have been fulfilled for a time period indicated by "Time to trigger":
 - 3> set "best cell" in the variable BEST_CELL_1D_EVENT to that primary CPICH that triggered the event;
 - 3> send a measurement report with IEs set as below:
 - 4> set in "intra-frequency measurement event results"; "Intrafrequency event identity" to "1d" and "cell measurement event results" to the CPICH info of the primary CPICH that triggered the report.
 - 4> set the IE "measured results" and the IE "additional measured results" according to subclause 8.4.2.

NOTE: Event 1D can be triggered by an active or by a non-active CPICH.

This event is only applicable to the CELL_DCH state. Upon transition to CELL_DCH the UE shall:

1> set "best cell" in the variable BEST_CELL_1D_EVENT to the best cell of the primary CPICHs included in the active set.

Equation 1 (Triggering condition for pathloss)

$$10 Log M_{otBes} \leq 10 Log M_{est} - H_{U}/2$$

Equation 2 (Triggering condition for all the other measurement quantities)

$$10 Log M_{NotBest} \ge 10 Log M_{Best} + H_{ld}/2$$

The variables in the formula are defined as follows:

M_{NotBest} is the measurement result of a cell not stored in "best cell" in the variable BEST_CELL_1D_EVENT.

 M_{Best} is the measurement result of the cell stored in "best cell" in variable BEST_CELL_1D_EVENT.

 H_{1d} is the hysteresis parameter for the event 1d.

If the measurement results are pathloss or CPICH-Ec/No then $M_{Not Best}$ and M_{Best} are expressed as ratios.

If the measurement result is CPICH-RSCP then $M_{Not Best}$ and M_{Best} are expressed in mW.

NOTE: The cell individual offsets for the two cells being compared shall not be taken into account when checking whether this event has been triggered or not.

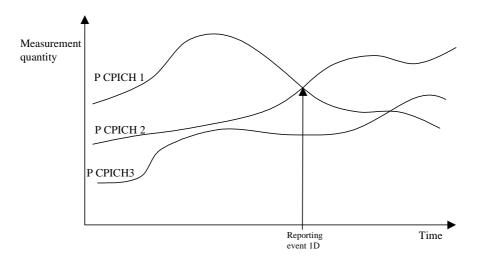


Figure 14.1.2.4-1 [Informative]: A primary CPICH becomes better than the previously best primary CPICH

In this figure, the parameters hysteresis and time to trigger, as well as the cell individual offsets for all cells are equal to 0.

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

8.3.4 Active set update

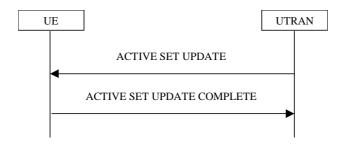


Figure 8.3.4-1: Active Set Update procedure, successful case



Figure 8.3.4-2: Active Set Update procedure, failure case

8.3.4.1 General

The purpose of the active set update procedure is to update the active set of the connection between the UE and UTRAN. This procedure shall be used in CELL_DCH state. The UE should keep on using the old RLs while configuring the new RLs. Also the UE should keep the transmitter turned on during the procedure. This procedure is only used in FDD mode.

8.3.4.2 Initiation

The procedure is initiated when UTRAN orders a UE in CELL_DCH state, to make the following modifications of the active set of the connection:

- a) Radio link addition;
- b) Radio link removal;
- c) Combined radio link addition and removal.

In case a) and c), UTRAN should:

1> prepare new additional radio link(s) in the UTRAN prior to the command to the UE.

In all cases, UTRAN should:

- 1> send an ACTIVE SET UPDATE message on downlink DCCH using AM or UM RLC:
- 1> create active sets that contain at least one common radio link across a DPCH frame boundary as the result of one or multiple (parallel) active set update procedures.

UTRAN should include the following information:

1> IE "Radio Link Addition Information": Downlink DPCH information and other optional parameters relevant for the radio links to be added along with the IE "Primary CPICH info" used for the reference ID to indicate which radio link to add. This IE is needed in cases a) and c) listed above;

1> IE "Radio Link Removal Information": IE "Primary CPICH info" used for the reference ID to indicate which radio link to remove. This IE is needed in cases b) and c) listed above.

8.3.4.3 Reception of an ACTIVE SET UPDATE message by the UE

Upon reception of an ACTIVE SET UPDATE message the UE shall act upon all received information elements as specified in 8.6, unless specified otherwise in the following. The UE shall:

- 1> first add the RLs indicated in the IE "Radio Link Addition Information";
- 1> remove the RLs indicated in the IE "Radio Link Removal Information". If the UE active set is full or becomes full, an RL, which is included in the IE "Radio Link Removal Information" for removal, shall be removed before adding RL, which is included in the IE "Radio Link Addition Information" for addition;
- 1> perform the physical layer synchronisation procedure as specified in [29];
- 1> if the ACTIVE SET UPDATE message contained the IE "Ciphering mode info" or contained the IE "Integrity protection mode info":
 - 2> set the IE "Status" in the variable SECURITY_MODIFICATION for all the CN domains in the variable SECURITY MODIFICATION to "Affected".
- 1> if the ACTIVE SET UPDATE message contained the IE "Ciphering mode info":
 - 2> include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the variable PDCP_SN_INFO is non-empty:
 - 2> include the IE "RB with PDCP information list" in the ACTIVE SET UPDATE COMPLETE message; and
 - 2> set it to the value of the variable PDCP SN INFO.
- 1> if the IE "TFCI combining indicator" associated with a radio link to be added is set to TRUE:
 - 2> if a DSCH transport channel is assigned and there is a 'hard' split in the TFCI field:
 - 3> configure Layer 1 to soft-combine TFCI (field 2) of this new link with those links already in the TFCI (field 2) combining set.
- 1> if the received ACTIVE SET UPDATE message included the IE "Downlink counter synchronisation info":
 - 2> calculate the START value according to subclause 8.5.9;
 - 2> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info" in the ACTIVE SET UPDATE COMPLETE message.
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE COMPLETE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> transmit an ACTIVE SET UPDATE COMPLETE message on the uplink DCCH using AM RLC without waiting for the Physical Layer synchronization;
- 1> if the IE "Integrity protection mode info" was present in the ACTIVE SET UPDATE message:
 - 2> start applying the new integrity protection configuration in the uplink for signalling radio bearer RB2 from and including the transmitted ACTIVE SET UPDATE COMPLETE message.
- 1> if the IE "Downlink counter synchronisation info" was included in the received ACTIVE SET UPDATE message:
 - 2> when RLC has confirmed the successful transmission of the response message:

- 3> re-initialise the PDCP header compression entities of each radio bearer in the variable ESTABLISHED_RABS as specified in [36].
- 1> if the variable PDCP_SN_INFO is empty:
 - 2> if the ACTIVE SET UPDATE message contained the IE "Ciphering mode info":
 - 3> when RLC has confirmed the successful transmission of the ACTIVE SET UPDATE COMPLETE message:
 - 4> perform the actions below.
 - 2> if the ACTIVE SET UPDATE message did not contain the IE "Ciphering mode info":
 - 3> when RLC has been requested to transmit the ACTIVE SET UPDATE COMPLETE message:
 - 4> perform the actions below.
- 1> if the variable PDCP_SN_INFO is non-empty:
 - 2> when RLC has confirmed the successful transmission of the ACTIVE SET UPDATE COMPLETE message:
 - 3> for each radio bearer in the variable PDCP_SN_INFO:
 - 4> if the IE "RB started" in the variable ESTABLISHED RABS is set to "started":
 - 5> configure the RLC entity for that radio bearer to "continue".
 - 3> clear the variable PDCP_SN_INFO.
- 1> if the ACTIVE SET UPDATE message contained the IE "Ciphering mode info":
 - 2> resume data transmission on any suspended radio bearer and signalling radio bearer mapped on RLC-AM or RLC-UM;
 - 2> set the IE "Reconfiguration" in the variable CIPHERING_STATUS to FALSE; and
 - 2> clear the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the ACTIVE SET UPDATE message contained the IE "Integrity protection mode info":
 - 2> allow the transmission of RRC messages on all signalling bearers with any RRC SN;
 - 2> set the IE "Reconfiguration" in the variable INTEGRITY_PROTECTION_INFO to FALSE; and
 - 2> clear the variable INTEGRITY_PROTECTION_ACTIVATION_INFO.
- 1> clear the variable SECURITY_MODIFICATION;
- 1> the procedure ends on the UE side.

8.3.4.4 Unsupported configuration in the UE

- If UTRAN instructs the UE to use a configuration that it does not support, the UE shall:
 - 1> keep the active set as it was before the ACTIVE SET UPDATE message was received;
 - 1> transmit an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC;
 - 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 1> clear that entry;
 - 1> set the IE "failure cause" to "configuration unsupported";
 - 1> when the ACTIVE SET UPDATE FAILURE message has been submitted to lower layers for transmission:

2> the procedure ends on the UE side.

8.3.4.5 Invalid configuration

If any of the following conditions are valid:

- a radio link indicated by the IE "Downlink DPCH info for each RL" in the IE "Radio link addition information" has a different spreading factor than the spreading factor for the radio links in the active set that will be established at the time indicated by the IE "Activation time"; and/or
- a radio link in the IE "Radio link addition information" is also present in the IE "Radio Link Removal Information"; and/or
- the IE "Radio Link Removal Information" contains all the radio links which are part of or will be part of the active set at the time indicated by the IE "Activation time"; and/or
- the IE "TX Diversity Mode" is not set to "none" and it indicates a diversity mode that is different from the one currently used in all or part of the active set; and/or
- a radio link indicated by the IE "Radio Link Removal Information" does not exist in the active set; and/or
- after the removal of all radio links indicated by the IE "Radio Link Removal Information" and the addition of all radio links indicated by the IE "Radio Link Addition Information" the active set would contain more than the maximum allowed number of radio links; and/or
- the variable INVALID CONFIGURATION is set to TRUE:

the UE shall:

- 1> keep the active set as it was before the ACTIVE SET UPDATE message was received;
- 1> transmit an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to "Invalid configuration";
- 1> When the ACTIVE SET UPDATE FAILURE message has been submitted to lower layers for transmission:
 - 2> the procedure ends on the UE side.

If the following condition is valid:

- the active set update procedure results in active sets that do not contain at least one common radio link before and after a DPCH frame boundary;

the UE behaviour is not specified.

8.3.4.5a Incompatible simultaneous reconfiguration

If the variable INCOMPATIBLE_SECURITY_RECONFIGURATION becomes set to TRUE due to the received ACTIVE SET UPDATE message, the UE shall:

- 1> transmit a ACTIVE SET UPDATE FAILURE message on the uplink DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to the cause value "incompatible simultaneous reconfiguration";

- 1> when the ACTIVE SET UPDATE FAILURE message has been delivered to lower layers for transmission:
 - 2> set the variable INCOMPATIBLE_SECURITY_RECONFIGURATION to FALSE;
 - 2> continue with any ongoing processes and procedures as if the ACTIVE SET UPDATE message has not been received;
 - 2> and the procedure ends.

If the variable ORDERED_RECONFIGURATION is set to TRUE; and

- 1> if the activation time for the procedure that has set variable ORDERED_RECONFIGURATION and the activation time for the Active Set Update procedure are within a time window of 5 frames, the UE may:
 - 2> transmit a ACTIVE SET UPDATE FAILURE message on the uplink DCCH using AM RLC;
 - 2> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
 - 2> clear that entry;
 - 2> set the IE "failure cause" to the cause value "incompatible simultaneous reconfiguration";
 - 2> when the ACTIVE SET UPDATE FAILURE message has been delivered to lower layers for transmission:
 - 3> continue with any ongoing processes and procedures as if the ACTIVE SET UPDATE message has not been received:
 - 3> and the procedure ends.

8.3.4.6 Reception of the ACTIVE SET UPDATE COMPLETE message by the UTRAN

When the UTRAN has received the ACTIVE SET UPDATE COMPLETE message,

- 1> the UTRAN may remove radio link(s) that are indicated to remove to the UE in case b) and c); and
- 1> the procedure ends on the UTRAN side.

8.3.4.7 Reception of the ACTIVE SET UPDATE FAILURE message by the UTRAN

When the UTRAN has received the ACTIVE SET UPDATE FAILURE message, the UTRAN may delete radio links that were included in the IE "Radio Link Addition Information" for addition. The procedure ends on the UTRAN side.

8.3.4.8 Invalid ACTIVE SET UPDATE message

If the ACTIVE SET UPDATE message contains a protocol error causing the variable PROTOCOL_ERROR_REJECT to be set to TRUE according to clause 9, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a ACTIVE SET UPDATE FAILURE message on the uplink DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Rejected transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to the cause value "protocol error";
- 1> include the IE "Protocol error information" with contents set to the value of the variable PROTOCOL_ERROR_INFORMATION;
- 1> when the ACTIVE SET UPDATE FAILURE message has been delivered to lower layers for transmission:

- 2> continue with any ongoing processes and procedures as if the invalid ACTIVE SET UPDATE message has not been received;
- 2> and the procedure ends.

8.3.4.9 Reception of an ACTIVE SET UPDATE message in wrong state

If the UE is in another state than CELL_DCH state upon reception of the ACTIVE SET UPDATE message, the UE shall perform procedure specific error handling as follows. The UE shall:

- 1> transmit a ACTIVE SET UPDATE FAILURE message on the uplink DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to the cause value "protocol error";
- 1> include the IE "Protocol error information" with the IE "Protocol error cause" set to "Message not compatible with receiver state";
- 1> when the ACTIVE SET UPDATE FAILURE message has been delivered to lower layers for transmission:
 - 2> continue with any ongoing processes and procedures as if the ACTIVE SET UPDATE message has not been received;
 - 2> and the procedure ends.

	CHANGE REQUEST	CR-Form-v5						
*	25.331 CR 1434 ** rev - ** (Current version: 4.4.0 **						
For <u>HELP</u> on us	sing this form, see bottom of this page or look at the	pop-up text over the 🛱 symbols.						
Proposed change a	nffects: ### (U)SIM ME/UE X Radio Acc	ess Network X Core Network						
Title: 第	Disjoint Active Sets in the Active Set Update proce	dure						
Source: #	TSG-RAN WG2							
Work item code: ₩	TEI	Date: **Box						
Category: 第	Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900.	Release: REL-4 Use one of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)						
Reason for change: It is not sufficiently clear if the UE can have disjoint active sets across a frame boundary as the result of one or more (parallel) active set procedures. Summary of change: It is proposed to clearly note that a single ACTIVE SET UPDATE message can not completely replace an existing active set. Moreover, the same should apply								
	If the active set update procedure creates disj frame boundary, the UE behaviour is not specificated Impact Change Analysis. This change clarifies the active set update procedure to the content of the content of the corrected affect implementations behaving I affect implementations supporting the corrected in the corrected of	oint active sets across a DPCH sified. Discontinuous across a DPCH sified. Discontinuous across a DPCH sified.						
Consequences if not approved:	# If UTRAN tries to assign disjoint active sets to physical layer synchronization, resulting in a disjoint active sets to							
Clauses affected:	⋇ 8.3.4.2, 8.3.4.5							
Other specs		3.10.0, CR 1433 5.0.0, CR 1435 23-1						
Other comments:	# A CR to TS 34.123-1 will be proposed at next definition of test 8.3.4.3, which is included in 0							

How to create CRs using this form:

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

8.3.4.2 Initiation

The procedure is initiated when UTRAN orders a UE in CELL_DCH state, to make the following modifications of the active set of the connection:

- a) Radio link addition;
- b) Radio link removal;
- c) Combined radio link addition and removal.

In case a) and c), UTRAN should:

1> prepare new additional radio link(s) in the UTRAN prior to the command to the UE.

In all cases, UTRAN should:

- 1> send an ACTIVE SET UPDATE message on downlink DCCH using AM or UM RLC;
- 1> create active sets that contain at least one common radio link across a DPCH frame boundary as the result of one or multiple (parallel) active set update procedures.

UTRAN should include the following information:

- 1> IE "Radio Link Addition Information": Downlink DPCH information and other optional parameters relevant for the radio links to be added along with the IE "Primary CPICH info" used for the reference ID to indicate which radio link to add. This IE is needed in cases a) and c) listed above;
- 1> IE "Radio Link Removal Information": IE "Primary CPICH info" used for the reference ID to indicate which radio link to remove. This IE is needed in cases b) and c) listed above.

[...]

8.3.4.5 Invalid configuration

If any of the following conditions are valid:

- a radio link indicated by the IE "Downlink DPCH info for each RL" in the IE "Radio link addition information" has a different spreading factor than the spreading factor for the radio links in the active set that will be established at the time indicated by the IE "Activation time"; and/or
- a radio link in the IE "Radio link addition information" is also present in the IE "Radio Link Removal Information"; and/or
- the IE "Radio Link Removal Information" contains all the radio links which are part of or will be part of the active set at the time indicated by the IE "Activation time"; and/or
- the IE "TX Diversity Mode" is not set to "none" and it indicates a diversity mode that is different from the one currently used in all or part of the active set; and/or
- a radio link indicated by the IE "Radio Link Removal Information" does not exist in the active set; and/or
- after the removal of all radio links indicated by the IE "Radio Link Removal Information" and the addition of all
 radio links indicated by the IE "Radio Link Addition Information" the active set would contain more than the
 maximum allowed number of radio links; and/or
- the variable INVALID_CONFIGURATION is set to TRUE:

the UE shall:

- 1> keep the active set as it was before the ACTIVE SET UPDATE message was received;
- 1> transmit an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC;

- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to "Invalid configuration";
- 1> When the ACTIVE SET UPDATE FAILURE message has been submitted to lower layers for transmission:
 - 2> the procedure ends on the UE side.

If the following condition is valid:

the active set update procedure results in active sets that do not contain at least one common radio link before and after a DPCH frame boundary;

the UE behaviour is not specified.

			CHA	ANGE	REQ	UE	ST				CR-Form-v5
*	25	.331	CR 143	5	жrev	-	ж	Current vers	ion:	5.0.0	¥
For <u>HELP</u> on t	using	this for	m, see botto	om of this	page or	look a	at the	e pop-up text	over	the ♯ syl	mbols.
Proposed change	affec	ts: #	(U)SIM	ME/	UE X	Radi	о Ас	cess Network	κ <mark>χ</mark>	Core No	etwork
Title:	€ Dis	joint A	ctive Sets in	the Activ	e Set Up	odate	proc	edure			
Source:	f TS	G-RAN	WG2								
Work item code: ₩	g TE	l						Date: ∺	13	May 2002	<u>></u>
Category: अ	Deta	F (corr A (corr B (add C (fun D (edia iled exp	the following rection) responds to a dition of featuctional modificatorial modifi	a correction re), cation of fe ation) the above (in an ea eature)		elease	Use <u>one</u> of 2 e) R96 R97 R98 R99 REL-4	the fo (GSN (Rele (Rele (Rele (Rele (Rele	-	
Reason for chang	e: #	It is r	not sufficient	ly clear if	the UE	can ha	ave c	disjoint active	sets	across a	frame
_		boun	dary as the	result of c	ne or m	ore (p	arall	lel) active set	proc	edures.	
Summary of chang	ge: #	not co to the frame Isola This It wo	e active set use boundary, ated Impact change claruld not affect	eplace an rallel activate protection the UE be considered the actimplement of the constant of	existing ye set up ocedure ehaviour Analysis ctive set	active odate create is no s. upda	e set processes dis t spe ate processes	sjoint active s ecified.	ne sa ets a	me shoul cross a D	d apply
Consequences if	ж	If UT	RAN tries to	assign d	isjoint ad	ctive s	ets t	to the UE, the	UE '	will likely	lose the
not approved:								dropped call.		,	
Clauses affected:	ж	8.3.4	.2, 8.3.4.5								
Other specs affected:	¥	X Te	ther core sp est specifica &M Specific	tions	s ¥	25.	331	v3.10.0, CR 1 v4.4.0, CR 14 23-1			
Other comments:	ж							t T1 meeting GCF Packag		der to alig	ın the

How to create CRs using this form:

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

8.3.4.2 Initiation

The procedure is initiated when UTRAN orders a UE in CELL_DCH state, to make the following modifications of the active set of the connection:

- a) Radio link addition;
- b) Radio link removal;
- c) Combined radio link addition and removal.

In case a) and c), UTRAN should:

1> prepare new additional radio link(s) in the UTRAN prior to the command to the UE.

In all cases, UTRAN should:

- 1> send an ACTIVE SET UPDATE message on downlink DCCH using AM or UM RLC;
- 1> create active sets that contain at least one common radio link across a DPCH frame boundary as the result of one or multiple (parallel) active set update procedures.

UTRAN should include the following information:

- 1> IE "Radio Link Addition Information": Downlink DPCH information and other optional parameters relevant for the radio links to be added along with the IE "Primary CPICH info" used for the reference ID to indicate which radio link to add. This IE is needed in cases a) and c) listed above;
- 1> IE "Radio Link Removal Information": IE "Primary CPICH info" used for the reference ID to indicate which radio link to remove. This IE is needed in cases b) and c) listed above.

[...]

8.3.4.5 Invalid configuration

If any of the following conditions are valid:

- a radio link indicated by the IE "Downlink DPCH info for each RL" in the IE "Radio link addition information" has a different spreading factor than the spreading factor for the radio links in the active set that will be established at the time indicated by the IE "Activation time"; and/or
- a radio link in the IE "Radio link addition information" is also present in the IE "Radio Link Removal Information"; and/or
- the IE "Radio Link Removal Information" contains all the radio links which are part of or will be part of the active set at the time indicated by the IE "Activation time"; and/or
- the IE "TX Diversity Mode" is not set to "none" and it indicates a diversity mode that is different from the one currently used in all or part of the active set; and/or
- a radio link indicated by the IE "Radio Link Removal Information" does not exist in the active set; and/or
- after the removal of all radio links indicated by the IE "Radio Link Removal Information" and the addition of all
 radio links indicated by the IE "Radio Link Addition Information" the active set would contain more than the
 maximum allowed number of radio links; and/or
- the variable INVALID_CONFIGURATION is set to TRUE:

the UE shall:

- 1> keep the active set as it was before the ACTIVE SET UPDATE message was received;
- 1> transmit an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC;

- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to "Invalid configuration";
- 1> When the ACTIVE SET UPDATE FAILURE message has been submitted to lower layers for transmission:
 - 2> the procedure ends on the UE side.

If the following condition is valid:

the active set update procedure results in active sets that do not contain at least one common radio link before and after a DPCH frame boundary;

the UE behaviour is not specified.

, ,												CR-Form-v5
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ж	25.	.331	CR	1436		жrev	-	¥	Current ver	sion:	3.10.0) [#]
For <u>HELP</u> on	using t	this for	m, see	bottom	of this	page or	look	at th	ne pop-up tex	t over	the ¥ sy	mbols.
Proposed change	e affec	ts: ೫	(U)	SIM	ME	/UE <mark>X</mark>	Rad	io A	ccess Netwo	rk X	Core N	etwork
Title:	₩ Del	etion o	on com	pressed	mode	patterns	whe	n mo	oving to CEL	L_FAC	CH	
Source:	₩ TS	G-RAN	WG2									
Work item code:	₩ TEI								Date: #	13	May 2002	2
Category:	Deta	F (corn A (corn B (add C (fun D (edi iled exp	rection) respond dition of ctional i torial mo planatio	feature), modificati odificatio	orrection ion of f n) above	n in an ea		eleas	Release: # Use one o 2 se) R96 R97 R98 R99 REL-4 REL-5	f the fo (GSN (Rele (Rele (Rele (Rele (Rele	-	
	20	4 10									· · · · · · · · · · · · · · · · · · ·	
Reason for chang	<i>је:</i> ж	partic 2.—The enter deleted are construction or "P is not the sinstruction of the sins	cular in the intersing CE ced who leleted of igura apparamensible cell in the	ter-frequence te	uency nd inte CH. In ing CE when scage Linfo" on for elete c delete ACH, ck to C 3.4.1.3 nly to c ription	or inter-F r-frequer particula ELL_FAC the trans which ind (for TDD this disc always), s the inter and, any ELL_DC CELL_DC CELL_DC Only me	RAT new market the control of the co	nease east interinted into C dather uence the lattern attern	essed mode surements have ments are properties of the interfee	treate tr	be delete ad differer ints are al measure to a H info" (fo licated ce edure se cedure th hen rese a new "DI infiguratio rate patte tterns.	d. httly when ways ments or FDD) httl. There ems to be at lecting a PCH info" on CFN rns, while
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not approvea:	compressed mode patterns) that could never be used again.								
Clauses affected:	第 8.4.1.6.2, 8.4.1.6.3, 8.4.1.6a, 10.3.6.34								
Other specs	*	Other core specifications	ж	25.331 v4.4.0, CR 1437					
-		·		25.331 v5.0.0, CR 1438					
affected:		Test specifications							
		O&M Specifications							
	<u></u>								
Other comments:	\mathfrak{H}								

The UE would store inter-frequency measurements (and corresponding

How to create CRs using this form:

Consequences if

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

8.4.1.6.2 Inter-frequency measurement

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

- 1> stop the inter-frequency type measurement reporting assigned in a MEASUREMENT CONTROL message;
- 1> if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or
- 1> if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or
- 1> if the transition is not due to a reconfiguration message:
 - 2> delete the measurements of type inter-frequency associated with the variable MEASUREMENT_IDENTITY and delete the corresponding compressed mode pattern-:
- 1> begin monitoring cells listed in the IE "inter-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);
- 1> in CELL FACH state:
 - 2> perform measurements on other frequencies according to the IE "FACH measurement occasion info".

8.4.1.6.3 Inter-RAT measurement

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

- 1> stop the inter-RAT type measurement reporting assigned in a MEASUREMENT CONTROL message;
- 1> delete the measurements of type inter-RAT associated with the variable MEASUREMENT_IDENTITY and delete the corresponding compressed mode pattern;
- 1> begin monitoring cells listed in the IE "inter-RAT cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);
- 1> in CELL FACH state:
 - 2> perform measurements on other systems according to the IE "FACH measurement occasion info".

[...]

8.4.1.6a Actions in CELL_FACH/CELL_PCH/URA/PCH state upon cell re-selection

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

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

[...]

10.3.6.34 DPCH Compressed Mode Status Info

This information element indicates status information of the compressed mode used by the UE in order to perform interfrequency and inter-RAT measurements.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
TGPS reconfiguration CFN	MP		Integer (0255)	Connection Frame Number of the frame where already active Transmission Gap Pattern Sequences shall be deactivated
Transmission gap pattern sequence	MP	1 to <maxtgp S></maxtgp 		
>TGPSI	MP		TGPSI 10.3.6.82	Transmission Gap Pattern Sequence Identifier
>TGPS Status Flag	MP		Enumerated(active, inactive)	This flag indicates the current status of the Transmission Gap Pattern Sequence, whether it shall be active or inactive.
>TGCFN	CV-Active		Integer (0255)	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.

Condition	Explanation
Active	This IE is mandatory present when the value of the IE "TGPS Status Flag" is "Active" and not needed otherwise.

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		CHAN	IGE REQ	UEST		Ск-гогт-v5
ж <mark>2</mark>	5.331	CR 1437	жrev	- #	Current version:	4.4.0 **
For <u>HELP</u> on using	g this forr	n, see bottom	of this page or	look at the	pop-up text ove	r the 業 symbols.
Proposed change affe	ects: #	(U)SIM	ME/UE X	Radio Aco	cess Network X	Core Network
Title: 第 D	eletion o	n compressed	mode patterns	when mov	ving to CELL_FA	СН
Source: # T	SG-RAN	WG2				
Work item code: ₩ <mark>⊤</mark>	El				<i>Date:</i>	May 2002
De	e <u>one</u> of the F (correct A (correct B (addited C (funct D (edited tailed exp	esponds to a co ition of feature), itional modificati orial modification	rrection in an ea ion of feature) n) above categorie		Use <u>one</u> of the force of the f	EL-4 ollowing releases: M Phase 2) ease 1996) ease 1997) ease 1998) ease 1999) ease 4) ease 5)
			_		•	·
Reason for change:	partic 2. The enteri delete are de recon or "Pr is no the se instru new c when The te can b the se	ular inter-freque inter-RAT and ng CELL_FAC and me celeted, except figuration messimary CCPCH apparent reasonsible one (decets the UE to exell in CELL_Facever going bace aused, not one mantics description in the celeted of the cele	Jency or inter-Food inter-frequence. Judy in	RAT measurer, the inter- H, while the sition to CE sluded the land	rements have to rements are treated. RAT measurements e inter-frequency inter-frequency inter-frequency inter-frequency inter-frequency in the inter-frequency inter-frequency in the i	ed differently when ents are always measurements to a children (for FDD) dicated cell. There seedure seems to be exedure that when reselecting a a new "DPCH info" onfiguration CFN vate patterns, while atterns.
Summary of change: 8	the codelete 2. It is processing order to the code to	orresponding in ed. c proposed to a dures, so that urements whe ler to avoid contics description ted Impact Change clarifie ald not affect in	nter-frequency align the inter-f the UE shall a in transitioning infusion betwee on it is propose nange Analysi s the inter-freq inplementations	requency plays deleted to the CELen the proceed to removes.	ode patterns at the AT measurements or the the inter-frequence to the inter-frequence the semantics of the semantics of the semantics of the indicated in the functionality of the semantics of the semantic of the semant	inter-RAT ency n and the description. dures. the CR, it would

not approved:	compressed mode patterns) that could never be used again.								
Clauses affected:	8.4.1.6.2 , 8.4.1.6.3 , 8.4.1.6a , 10.3.6.34								
Other specs		Other core specifications	\mathbf{x}	25.331 v3.10.0, CR 1436					
_		·		25.331 v5.0.0, CR 1438					
affected:		Test specifications							
		O&M Specifications							
Other comments:	\mathbf{x}								

The UE would store inter-frequency measurements (and corresponding

How to create CRs using this form:

Consequences if

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

8.4.1.6.2 Inter-frequency measurement

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

- 1> stop the inter-frequency type measurement reporting assigned in a MEASUREMENT CONTROL message;
- 1> if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or
- 1> if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or
- 1> if the transition is not due to a reconfiguration message:
 - 2> delete the measurements of type inter-frequency associated with the variable MEASUREMENT_IDENTITY and delete the corresponding compressed mode pattern-:
- 1> begin monitoring cells listed in the IE "inter-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);
- 1> in CELL FACH state:
 - 2> perform measurements on other frequencies according to the IE "FACH measurement occasion info".

8.4.1.6.3 Inter-RAT measurement

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

- 1> stop the inter-RAT type measurement reporting assigned in a MEASUREMENT CONTROL message;
- 1> delete the measurements of type inter-RAT associated with the variable MEASUREMENT_IDENTITY and delete the corresponding compressed mode pattern;
- 1> begin monitoring cells listed in the IE "inter-RAT cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);
- 1> in CELL FACH state:
 - 2> perform measurements on other systems according to the IE "FACH measurement occasion info".

[...]

8.4.1.6a Actions in CELL_FACH/CELL_PCH/URA/PCH state upon cell re-selection

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

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

[...]

10.3.6.34 DPCH Compressed Mode Status Info

This information element indicates status information of the compressed mode used by the UE in order to perform interfrequency and inter-RAT measurements.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
TGPS reconfiguration CFN	MP		Integer (0255)	Connection Frame Number of the frame where already active Transmission Gap Pattern Sequences shall be deactivated
Transmission gap pattern sequence	MP	1 to <maxtgp S></maxtgp 		
>TGPSI	MP		TGPSI 10.3.6.82	Transmission Gap Pattern Sequence Identifier
>TGPS Status Flag	MP		Enumerated(active, inactive)	This flag indicates the current status of the Transmission Gap Pattern Sequence, whether it shall be active or inactive.
>TGCFN	CV-Active		Integer (0255)	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.

Condition	Explanation
Active	This IE is mandatory present when the value of the IE "TGPS Status Flag" is "Active" and not needed otherwise.

												CR-Form-1/5
CHANGE REQUEST												
ж	25	.331	CR	1438		жrev	-	¥	Current ve	rsion:	5.0.0	¥
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the x symbols.												
Proposed change affects: \$\% (U)SIM ME/UE X Radio Access Network X Core Network												
Title:	₩ De	letion (on com	pressed	mode	patterns	whe	n mo	oving to CEL	L_FA	CH	
Source:	₩ TS	G-RAN	WG2									
Work item code:	ж TE	I							Date:	∺ 13	May 2002	
Category: # A												
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not approved:	compressed mode patterns) that could never be used again.				
Clauses affected:	8.4.1.6.2 , 8.4.1.6.3 , 8.4.1.6a , 10.3.6.34				
Other specs	ж 🔽	Other core specifications	ж	25.331 v3.10.0, CR 1436	
_		·		25.331 v4.4.0, CR 1437	
affected:		Test specifications			
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Other comments:	\mathfrak{H}				

The UE would store inter-frequency measurements (and corresponding

How to create CRs using this form:

Consequences if

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

8.4.1.6.2 Inter-frequency measurement

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

- 1> stop the inter-frequency type measurement reporting assigned in a MEASUREMENT CONTROL message;
- 1> if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or
- 1> if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or
- 1> if the transition is not due to a reconfiguration message:
 - 2> delete the measurements of type inter-frequency associated with the variable MEASUREMENT_IDENTITY and delete the corresponding compressed mode pattern-:
- 1> begin monitoring cells listed in the IE "inter-frequency cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);
- 1> in CELL FACH state:
 - 2> perform measurements on other frequencies according to the IE "FACH measurement occasion info".

8.4.1.6.3 Inter-RAT measurement

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

- 1> stop the inter-RAT type measurement reporting assigned in a MEASUREMENT CONTROL message;
- 1> delete the measurements of type inter-RAT associated with the variable MEASUREMENT_IDENTITY and delete the corresponding compressed mode pattern;
- 1> begin monitoring cells listed in the IE "inter-RAT cell info list" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11);
- 1> in CELL FACH state:
 - 2> perform measurements on other systems according to the IE "FACH measurement occasion info".

[...]

8.4.1.6a Actions in CELL_FACH/CELL_PCH/URA/PCH state upon cell re-selection

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

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

[...]

10.3.6.34 DPCH Compressed Mode Status Info

This information element indicates status information of the compressed mode used by the UE in order to perform interfrequency and inter-RAT measurements.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
TGPS reconfiguration CFN	MP		Integer (0255)	Connection Frame Number of the frame where already active Transmission Gap Pattern Sequences shall be deactivated
Transmission gap pattern sequence	MP	1 to <maxtgp S></maxtgp 		
>TGPSI	MP		TGPSI 10.3.6.82	Transmission Gap Pattern Sequence Identifier
>TGPS Status Flag	MP		Enumerated(active, inactive)	This flag indicates the current status of the Transmission Gap Pattern Sequence, whether it shall be active or inactive.
>TGCFN	CV-Active		Integer (0255)	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.

Condition	Explanation
Active	This IE is mandatory present when the value of the IE "TGPS Status Flag" is "Active" and not needed otherwise.

R2-021344

Syeoligju, Korea, way 13 – way 17, 2002									
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¥ 25	<mark>.331</mark> CR	1439 #1	rev	- #	Current version:	3.10.0 [#]			
For <u>HELP</u> on using	For HELP on using this form, see bottom of this page or look at the pop-up text over the % symbols.								
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Title: 第 TDE	C-RNTI in C	ell DCH							
Source: # TSC	G-RAN WG2								
Work item code:					<i>Date:</i>	/2002			
Deta	F (correction) A (correspond B (addition of C (functional D (editorial m	ds to a correction in feature), modification of featu odification) ns of the above cate	ıre)		2 (GSI e) R96 (Rela R97 (Rela R98 (Rela R99 (Rela REL-4 (Rela	ollowing releases: M Phase 2) ease 1996) ease 1997) ease 1998) ease 1999) ease 4) ease 5)			
Reason for change: ೫	updated ind	icating change o	f cell.	Deletion		sary if P-CCPCH is ilts in unnecessary overhead.			
Summary of change: ₩		DCH the C-RNTI without specified I			l when signalled F	P-CCPCH indicates			
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Clauses affected: #	8.2.2.3								
Other specs # affected:	- Other co	re specifications cifications ecifications	ж		v4.4.0, CR 1440 v5.0.0, CR 1441				

Other comments:

8.2.2.3 Reception of RADIO BEARER SETUP or RADIO BEARER RECONFIGURATION or RADIO BEARER RELEASE or TRANSPORT CHANNEL RECONFIGURATION or PHYSICAL CHANNEL RECONFIGURATION message by the UE

The UE shall be able to receive any of the following messages:

- RADIO BEARER SETUP message; or
- RADIO BEARER RECONFIGURATION message; or
- RADIO BEARER RELEASE message; or
- TRANSPORT CHANNEL RECONFIGURATION message; or
- PHYSICAL CHANNEL RECONFIGURATION message;

and perform a hard handover, even if no prior UE measurements have been performed on the target cell and/or frequency.

If the UE receives:

- a RADIO BEARER SETUP message; or
- a RADIO BEARER RECONFIGURATION message; or
- a RADIO BEARER RELEASE message; or
- a TRANSPORT CHANNEL RECONFIGURATION message; or
- a PHYSICAL CHANNEL RECONFIGURATION message:

it shall:

- 1> set the variable ORDERED RECONFIGURATION to TRUE;
- 1> perform the physical layer synchronisation procedure as specified in [29];
- 1> act upon all received information elements as specified in subclause 8.6, unless specified in the following and perform the actions below.

The UE may first release the physical channel configuration used at reception of the reconfiguration message. The UE shall then:

- 1> in FDD, if the IE "PDSCH code mapping" is included but the IE "PDSCH with SHO DCH Info" is not included and if the DCH has only one link in its active set:
 - 2> act upon the IE "PDSCH code mapping" as specified in subclause 8.6; and
 - 2> infer that the PDSCH will be transmitted from the cell from which the downlink DPCH is transmitted.
- 1> enter a state according to subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

NOTE: The RADIO BEARER RECONFIGURATION message always includes the IE "RB information to reconfigure". UTRAN has to include it even if it does not require the reconfiguration of any RB.

If after state transition the UE enters CELL_DCH state, the UE shall, after the state transition:

- 1> in FDD, or
- 1> in the case for TDD when "Primary CCPCH Info" is included indicating a new target cell and "New C-RNTI" is not specified:
 - 2> remove any C-RNTI from MAC;
- 4_2> clear the variable C_RNTI.

In FDD, if after state transition the UE leaves CELL_DCH state, the UE shall, after the state transition:

- 1> remove any DSCH-RNTI from MAC;
- 1> clear the variable DSCH_RNTI.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.
- 1> In TDD if "Primary CCPCH Info" is included indicating a new target cell and "New C-RNTI" is not specified:
 - 2> remove any C-RNTI from MAC;
 - 2> clear the variable C RNTI.

If after state transition the UE enters CELL FACH state, the UE shall, after the state transition:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4].
- 1> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> if the UE is in CELL_PCH or URA_PCH state:
 - 4> initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - 4> proceed as below.
- 1> start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- 1> select PRACH according to subclause 8.5.17;
- 1> select Secondary CCPCH according to subclause 8.5.19;

- 1> use the transport format set given in system information;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> ignore that IE and stop using DRX.
- 1> if the contents of the variable C_RNTI is empty:
 - 2> perform a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> if the UE is in CELL_PCH or URA_PCH state:
 - 4> initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - 4> proceed as below.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency;
 - 2> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 3> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.

The UE shall transmit a response message as specified in subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- 1> if the received reconfiguration message included the IE "Downlink counter synchronisation info"; or
- 1> if the received reconfiguration message is a RADIO BEARER RECONFIGURATION and the IE "New U-RNTI" is included:
 - 2> re-establish RB2;
 - 2> set the new uplink and downlink HFN of RB2 to MAX(uplink HFN of RB2, downlink HFN of RB2);
 - 2> increment by one the downlink and uplink HFN values for RB2;
 - 2> calculate the START value according to subclause 8.5.9;
 - 2> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info".
- 1> if the received reconfiguration message did not include the IE "Downlink counter synchronisation info":
 - 2> if the variable START_VALUE_TO_TRANSMIT is set:
 - 3> include and set the IE "START" to the value of that variable.
 - 2> if the variable START_VALUE_TO_TRANSMIT is not set and the IE "New U-RNTI" is included:
 - 3> calculate the START value according to subclause 8.5.9;

- 3> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info".
- 2> if the received reconfiguration message caused a change in the RLC size for any RB using RLC-AM:
 - 3> calculate the START value according to subclause 8.5.9;
 - 3> include the calculated START values for the CN domain associated with the corresponding RB identity in the IE "START list" in the IE "Uplink counter synchronisation info".
- 1> if the received reconfiguration message contained the IE "Ciphering mode info" or contained the IE "Integrity protection mode info":
 - 2> set the IE "Status" in the variable SECURITY_MODIFICATION for all the CN domains in the variable SECURITY MODIFICATION to "Affected".
- 1> if the received reconfiguration message contained the IE "Ciphering mode info":
 - 2> include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the received reconfiguration message did not contain the IE "Ciphering activation time for DPCH" in IE "Ciphering mode info":
 - 2> if prior to this procedure there exist no transparent mode RLC radio bearers:
 - 3> if, at the conclusion of this procedure, the UE will be in CELL_DCH state; and
 - 3> if, at the conclusion of this procedure, at least one transparent mode RLC radio bearer exists:
 - 4> include the IE "COUNT-C activation time" and specify a CFN value for this IE.
 - 2> if prior to this procedure there exists at least one transparent mode RLC radio bearer:
 - 3> if, at the conclusion of this procedure, no transparent mode RLC radio bearers exist:
 - 4> include the IE "COUNT-C activation time" and specify a CFN value for this IE.
- 1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> if the variable PDCP_SN_INFO is not empty:
 - 2> include the IE "RB with PDCP information list" and set it to the value of the variable PDCP_SN_INFO.
- 1> in TDD, if the procedure is used to perform a handover to a cell where timing advance is enabled, and the UE can calculate the timing advance value in the new cell (i.e. in a synchronous TDD network):
 - 2> set the IE "Uplink Timing Advance" according to subclause 8.6.6.26.
- 1> if the IE "Integrity protection mode info" was present in the received reconfiguration message:
 - 2> start applying the new integrity protection configuration in the uplink for signalling radio bearer RB2 from and including the transmitted response message.

If after state transition the UE enters CELL_PCH or URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency.

- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4].
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- 1> select Secondary CCPCH according to subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> set the variable INVALID_CONFIGURATION to TRUE.
- 1> if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> the procedure ends.
- 1> if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE:
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure is successfully completed:
 - 3> the procedure ends.
- 1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause 8.3.1 is fulfilled:
 - 2> initiate a URA update procedure according to subclause 8.3.1 using the cause "URA reselection";
 - 2> when the URA update procedure is successfully completed:
 - 3> the procedure ends.

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8.2.2.3 Reception of RADIO BEARER SETUP or RADIO BEARER RECONFIGURATION or RADIO BEARER RELEASE or TRANSPORT CHANNEL RECONFIGURATION or PHYSICAL CHANNEL RECONFIGURATION message by the UE

The UE shall be able to receive any of the following messages:

- RADIO BEARER SETUP message; or
- RADIO BEARER RECONFIGURATION message; or
- RADIO BEARER RELEASE message; or
- TRANSPORT CHANNEL RECONFIGURATION message; or
- PHYSICAL CHANNEL RECONFIGURATION message;

and perform a hard handover, even if no prior UE measurements have been performed on the target cell and/or frequency.

If the UE receives:

- a RADIO BEARER SETUP message; or
- a RADIO BEARER RECONFIGURATION message; or
- a RADIO BEARER RELEASE message; or
- a TRANSPORT CHANNEL RECONFIGURATION message; or
- a PHYSICAL CHANNEL RECONFIGURATION message:

it shall:

- 1> set the variable ORDERED RECONFIGURATION to TRUE;
- 1> perform the physical layer synchronisation procedure as specified in [29];
- 1> act upon all received information elements as specified in subclause 8.6, unless specified in the following and perform the actions below.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE may first release the physical channel configuration used at reception of the reconfiguration message. The UE shall then:

- 1> in FDD, if the IE "PDSCH code mapping" is included but the IE "PDSCH with SHO DCH Info" is not included and if the DCH has only one link in its active set:
 - 2> act upon the IE "PDSCH code mapping" as specified in subclause 8.6; and
 - 2> infer that the PDSCH will be transmitted from the cell from which the downlink DPCH is transmitted.
- 1> enter a state according to subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

NOTE: The RADIO BEARER RECONFIGURATION message always includes the IE "RB information to reconfigure". UTRAN has to include it even if it does not require the reconfiguration of any RB.

If after state transition the UE enters CELL_DCH state, the UE shall, after the state transition:

- 1> in FDD, or
- 1> in the case for TDD when "Primary CCPCH Info" is included indicating a new target cell and "New C-RNTI" is not specified:
 - 2> remove any C-RNTI from MAC;
- 4____2> clear the variable C_RNTI.

In FDD, if after state transition the UE leaves CELL_DCH state, the UE shall, after the state transition:

- 1> remove any DSCH-RNTI from MAC;
- 1> clear the variable DSCH_RNTI.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration.
- 1> In TDD if "Primary CCPCH Info" is included indicating a new target cell and "New C-RNTI" is not specified:
 - 2> remove any C-RNTI from MAC;
 - 2> clear the variable C RNTI.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4].
- 1> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> if the UE is in CELL_PCH or URA_PCH state:
 - 4> initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";

- 4> proceed as below.
- 1> start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- 1> select PRACH according to subclause 8.5.17;
- 1> select Secondary CCPCH according to subclause 8.5.19;
- 1> use the transport format set given in system information;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> ignore that IE and stop using DRX.
- 1> if the contents of the variable C_RNTI is empty:
 - 2> perform a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> if the UE is in CELL_PCH or URA_PCH state:
 - 4> initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - 4> proceed as below.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL_FACH state, the UE shall:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency;
 - 2> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 3> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.

The UE shall transmit a response message as specified in subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- 1> if the received reconfiguration message included the IE "Downlink counter synchronisation info"; or
- 1> if the received reconfiguration message is a RADIO BEARER RECONFIGURATION and the IE "New U-RNTI" is included:
 - 2> re-establish RB2;
 - 2> set the new uplink and downlink HFN of RB2 to MAX(uplink HFN of RB2, downlink HFN of RB2);
 - 2> increment by one the downlink and uplink HFN values for RB2;
 - 2> calculate the START value according to subclause 8.5.9;

- 2> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info".
- 1> if the received reconfiguration message did not include the IE "Downlink counter synchronisation info":
 - 2> if the variable START_VALUE_TO_TRANSMIT is set:
 - 3> include and set the IE "START" to the value of that variable.
 - 2> if the variable START_VALUE_TO_TRANSMIT is not set and the IE "New U-RNTI" is included:
 - 3> calculate the START value according to subclause 8.5.9;
 - 3> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info".
 - 2> if the received reconfiguration message caused a change in the RLC size for any RB using RLC-AM:
 - 3> calculate the START value according to subclause 8.5.9;
 - 3> include the calculated START values for the CN domain associated with the corresponding RB identity in the IE "START list" in the IE "Uplink counter synchronisation info".
- 1> if the received reconfiguration message contained the IE "Ciphering mode info" or contained the IE "Integrity protection mode info":
 - 2> set the IE "Status" in the variable SECURITY_MODIFICATION for all the CN domains in the variable SECURITY MODIFICATION to "Affected".
- 1> if the received reconfiguration message contained the IE "Ciphering mode info":
 - 2> include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the received reconfiguration message did not contain the IE "Ciphering activation time for DPCH" in IE "Ciphering mode info":
 - 2> if prior to this procedure there exist no transparent mode RLC radio bearers:
 - 3> if, at the conclusion of this procedure, the UE will be in CELL_DCH state; and
 - 3> if, at the conclusion of this procedure, at least one transparent mode RLC radio bearer exists:
 - 4> include the IE "COUNT-C activation time" and specify a CFN value for this IE.
 - 2> if prior to this procedure there exists at least one transparent mode RLC radio bearer:
 - 3> if, at the conclusion of this procedure, no transparent mode RLC radio bearers exist:
 - 4> include the IE "COUNT-C activation time" and specify a CFN value for this IE.
- 1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> if the variable PDCP SN INFO is not empty:
 - 2> include the IE "RB with PDCP information list" and set it to the value of the variable PDCP_SN_INFO.
- 1> in TDD, if the procedure is used to perform a handover to a cell where timing advance is enabled, and the UE can calculate the timing advance value in the new cell (i.e. in a synchronous TDD network):

- 2> set the IE "Uplink Timing Advance" according to subclause 8.6.6.26.
- 1> if the IE "Integrity protection mode info" was present in the received reconfiguration message:
 - 2> start applying the new integrity protection configuration in the uplink for signalling radio bearer RB2 from and including the transmitted response message.

If after state transition the UE enters CELL_PCH or URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4].
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- 1> select Secondary CCPCH according to subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> set the variable INVALID_CONFIGURATION to TRUE.
- 1> if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> the procedure ends.
- 1> if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE:
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure is successfully completed:
 - 3> the procedure ends.
- 1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause 8.3.1 is fulfilled:

- 2> initiate a URA update procedure according to subclause 8.3.1 using the cause "URA reselection";
- 2> when the URA update procedure is successfully completed:
 - 3> the procedure ends.

R2-021346

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ж	25.	331	CR	1441	ж	rev	-	¥	Current versio	n: 5.0.0	¥
For <u>HELP</u> on us	For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the % symbols.									mbols.	
Proposed change a	ffect	s: #	(U)\$	SIM	ME/U	EX	Radi	io Ac	ccess Network	X Core N	etwork
Title: ₩	TDD	C-RN	TI in C	ell DCH							
Source: #	TSG-	RAN \	NG2								
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	F E C L Detail	C (fund led exp	ection) espond ition of etional i orial mo lanatio	wing cates ds to a corresponding to a correspondification odification, ns of the a	rection ir on of feat) above ca	ure)		elease	e) R96 (F R97 (F R98 (F R99 (F REL-4 (F)))
Reason for change.	Į	update	ed indi	icating ch	hange o	of cell.	Dele	etion	CH is only nece of C-RNTI re H and S-CCPC	sults in un	necessary
Summary of change				DCH the without sp					d when signalled	d P-CCPCH	indicates
Consequences if not approved: Unnecessary initiation of Cell Update procedures and overhead on common channels. Isolated impact analysis: UEs without this feature initiate Cell Update unnecessarily when there is no change in cell and reassign the same C-RNTI. Correction to a function where the specification was found erroneous and contained contradictions. Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise. Impacted Functionality: Initiation of Cell Update procedure upon return to Cell						RNTI.					
		CCPC			hen UE	select	s a c	ell of	ther then the ce	Il indicated I	oy P-
Clauses affected:	₩ 8	8.2.2.3	3								
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Other specs affected:	*	- Te	st spe	re specific cifications ecificatior	S	*			v3.10.0, CR 14 v4.4.0, CR 144		

Other comments:

8.2.2.3 Reception of RADIO BEARER SETUP or RADIO BEARER
RECONFIGURATION or RADIO BEARER RELEASE or TRANSPORT
CHANNEL RECONFIGURATION or PHYSICAL CHANNEL
RECONFIGURATION message by the UE

The UE shall be able to receive any of the following messages:

- RADIO BEARER SETUP message; or
- RADIO BEARER RECONFIGURATION message; or
- RADIO BEARER RELEASE message; or
- TRANSPORT CHANNEL RECONFIGURATION message; or
- PHYSICAL CHANNEL RECONFIGURATION message;

and perform a hard handover, even if no prior UE measurements have been performed on the target cell and/or frequency.

If the UE receives:

- a RADIO BEARER SETUP message; or
- a RADIO BEARER RECONFIGURATION message; or
- a RADIO BEARER RELEASE message; or
- a TRANSPORT CHANNEL RECONFIGURATION message; or
- a PHYSICAL CHANNEL RECONFIGURATION message:

it shall:

- 1> set the variable ORDERED RECONFIGURATION to TRUE;
- 1> perform the physical layer synchronisation procedure as specified in [29];
- 1> act upon all received information elements as specified in subclause 8.6, unless specified in the following and perform the actions below.

The UE may:

1> maintain a list of the set of cells to which the UE has Radio Links if the IE "Cell ID" is present.

The UE may first release the physical channel configuration used at reception of the reconfiguration message. The UE shall then:

- 1> in FDD, if the IE "PDSCH code mapping" is included but the IE "PDSCH with SHO DCH Info" is not included and if the DCH has only one link in its active set:
 - 2> act upon the IE "PDSCH code mapping" as specified in subclause 8.6; and
 - 2> infer that the PDSCH will be transmitted from the cell from which the downlink DPCH is transmitted.
- 1> enter a state according to subclause 8.6.3.3.

In case the UE receives a RADIO BEARER RECONFIGURATION message including the IE "RB information to reconfigure" that only includes the IE "RB identity", the UE shall:

1> handle the message as if IE "RB information to reconfigure" was absent.

NOTE: The RADIO BEARER RECONFIGURATION message always includes the IE "RB information to reconfigure". UTRAN has to include it even if it does not require the reconfiguration of any RB.

If after state transition the UE enters CELL DCH state, the UE shall, after the state transition:

- 1> in FDD, or
- 1> in the case for TDD when "Primary CCPCH Info" is included indicating a new target cell and "New C-RNTI" is not specified:
 - 2> remove any C-RNTI from MAC;
- 4 2> clear the variable C_RNTI.

In FDD, if after state transition the UE leaves CELL_DCH state, the UE shall, after the state transition: 1> remove any DSCH-RNTI from MAC;

1> clear the variable DSCH RNTI.

If the UE was in CELL_DCH state upon reception of the reconfiguration message and remains in CELL_DCH state, the UE shall:

- 1> if the IE "Uplink DPCH Info" is absent, not change its current UL Physical channel configuration;
- 1> if the IE "Downlink information for each radio link" is absent, not change its current DL Physical channel configuration;
- 1> In TDD if "Primary CCPCH Info" is included indicating a new target cell and "New C-RNTI" is not specified:
 - 2> remove any C-RNTI from MAC;
 - 2> clear the variable C_RNTI.
- 1> if "DPCH frame offset" is included for one or more RLs in the active set:
 - 2> use its value to determine the beginning of the DPCH frame in accordance with the following:
 - 3> if the received IE "DPCH frame offset" is across the value range border compared to the DPCH frame offset currently used by the UE:
 - 4> consider it to be a request to adjust the timing with 256 chips across the frame border (e.g. if the UE receives value 0 while the value currently used is 38144 consider this as a request to adjust the timing with +256 chips).
 - 3> if after taking into account value range borders, the received IE "DPCH frame offset" corresponds to a request to adjust the timing with a step exceeding 256 chips:
 - 4> set the variable INVALID_CONFIGURATION to FALSE.
 - 3> and the procedure ends.
 - 2> adjust the radio link timing accordingly.

If after state transition the UE enters CELL_FACH state, the UE shall, after the state transition:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4].
- 1> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):

- 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
- 2> when the cell update procedure completed successfully:
 - 3> if the UE is in CELL_PCH or URA_PCH state:
 - 4> initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - 4> proceed as below.
- 1> start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- 1> select PRACH according to subclause 8.5.17;
- 1> select Secondary CCPCH according to subclause 8.5.19;
- 1> use the transport format set given in system information;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> ignore that IE and stop using DRX.
- 1> remove any H-RNTI stored;
- 1> clear the variable H RNTI;
- 1> if the contents of the variable C_RNTI is empty:
 - 2> perform a cell update procedure according to subclause 8.3.1 using the cause "Cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> if the UE is in CELL_PCH or URA_PCH state:
 - 4> initiate a cell update procedure according to subclause 8.3.1 using the cause "Uplink data transmission";
 - 4> proceed as below.

If the UE was in CELL_FACH state upon reception of the reconfiguration message and remains in CELL FACH state, the UE shall:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency;
 - 2> if the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 3> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 3> when the cell update procedure completed successfully:
 - 4> proceed as below.

The UE shall transmit a response message as specified in subclause 8.2.2.4, setting the information elements as specified below. The UE shall:

- 1> if the received reconfiguration message included the IE "Downlink counter synchronisation info"; or
- 1> if the received reconfiguration message is a RADIO BEARER RECONFIGURATION and the IE "New U-RNTI" is included:

- 2> re-establish RB2;
- 2> set the new uplink and downlink HFN of RB2 to MAX(uplink HFN of RB2, downlink HFN of RB2);
- 2> increment by one the downlink and uplink HFN values for RB2;
- 2> calculate the START value according to subclause 8.5.9;
- 2> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info".
- 1> if the received reconfiguration message did not include the IE "Downlink counter synchronisation info":
 - 2> if the variable START VALUE TO TRANSMIT is set:
 - 3> include and set the IE "START" to the value of that variable.
 - 2> if the variable START_VALUE_TO_TRANSMIT is not set and the IE "New U-RNTI" is included:
 - 3> calculate the START value according to subclause 8.5.9;
 - 3> include the calculated START values for each CN domain in the IE "START list" in the IE "Uplink counter synchronisation info".
 - 2> if the received reconfiguration message caused a change in the RLC size for any RB using RLC-AM:
 - 3> calculate the START value according to subclause 8.5.9;
 - 3> include the calculated START values for the CN domain associated with the corresponding RB identity in the IE "START list" in the IE "Uplink counter synchronisation info".
- 1> if the received reconfiguration message contained the IE "Ciphering mode info" or contained the IE "Integrity protection mode info":
 - 2> set the IE "Status" in the variable SECURITY_MODIFICATION for all the CN domains in the variable SECURITY_MODIFICATION to "Affected".
- 1> if the received reconfiguration message contained the IE "Ciphering mode info":
 - 2> include and set the IE "Radio bearer uplink ciphering activation time info" to the value of the variable RB_UPLINK_CIPHERING_ACTIVATION_TIME_INFO.
- 1> if the received reconfiguration message did not contain the IE "Ciphering activation time for DPCH" in IE "Ciphering mode info":
 - 2> if prior to this procedure there exist no transparent mode RLC radio bearers:
 - 3> if, at the conclusion of this procedure, the UE will be in CELL_DCH state; and
 - 3> if, at the conclusion of this procedure, at least one transparent mode RLC radio bearer exists:
 - 4> include the IE "COUNT-C activation time" and specify a CFN value for this IE.
 - 2> if prior to this procedure there exists at least one transparent mode RLC radio bearer:
 - 3> if, at the conclusion of this procedure, no transparent mode RLC radio bearers exist:
 - 4> include the IE "COUNT-C activation time" and specify a CFN value for this IE.
- 1> set the IE "RRC transaction identifier" to the value of "RRC transaction identifier" in the entry for the received message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;

- 1> if the variable PDCP_SN_INFO is not empty:
 - 2> include the IE "RB with PDCP information list" and set it to the value of the variable PDCP_SN_INFO.
- 1> in TDD, if the procedure is used to perform a handover to a cell where timing advance is enabled, and the UE can calculate the timing advance value in the new cell (i.e. in a synchronous TDD network):
 - 2> set the IE "Uplink Timing Advance" according to subclause 8.6.6.26.
- 1> if the IE "Integrity protection mode info" was present in the received reconfiguration message:
 - 2> start applying the new integrity protection configuration in the uplink for signalling radio bearer RB2 from and including the transmitted response message.

If after state transition the UE enters CELL_PCH or URA_PCH state, the UE shall, after the state transition and transmission of the response message:

- 1> if the IE "Frequency info" is included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4] on that frequency.
- 1> if the IE "Frequency info" is not included in the received reconfiguration message:
 - 2> select a suitable UTRA cell according to [4].
- 1> prohibit periodical status transmission in RLC;
- 1> remove any C-RNTI from MAC;
- 1> clear the variable C_RNTI;
- 1> remove any H-RNTI stored;
- 1> clear the variable H_RNTI;
- 1> start timer T305 using its initial value if timer T305 is not running and if periodical update has been configured by T305 in the IE "UE Timers and constants in connected mode" set to any other value than "infinity" in system information block type 1;
- 1> select Secondary CCPCH according to subclause 8.5.19;
- 1> if the IE "UTRAN DRX cycle length coefficient" is included in the same message:
 - 2> use the value in the IE "UTRAN DRX Cycle length coefficient" for calculating Paging occasion and PICH Monitoring Occasion as specified in subclause 8.6.3.2.
- 1> if the IE "UTRAN DRX cycle length coefficient" is not included in the same message:
 - 2> set the variable INVALID_CONFIGURATION to TRUE.
- 1> if the UE enters CELL_PCH state from CELL_DCH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE or the received reconfiguration message did not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD):
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure completed successfully:
 - 3> the procedure ends.

- 1> if the UE enters CELL_PCH state from CELL_FACH state, and the received reconfiguration message included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selected another cell than indicated by this IE:
 - 2> initiate a cell update procedure according to subclause 8.3.1 using the cause "cell reselection";
 - 2> when the cell update procedure is successfully completed:
 - 3> the procedure ends.
- 1> if the UE enters URA_PCH state, and after cell selection the criteria for URA update caused by "URA reselection" according to subclause 8.3.1 is fulfilled:
 - 2> initiate a URA update procedure according to subclause 8.3.1 using the cause "URA reselection";
 - 2> when the URA update procedure is successfully completed:
 - 3> the procedure ends.

R2-021347

Gyeongju, Korea,	May 13	– May 1	7, 2002					
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 Clauses affected:
 # 10.3.6.21, 10.3.6.88, 11.3

 Other specs
 # - Other core specifications
 # 25.331 v4.4.0, CR 1443r1 25.331 v5.0.0, CR 1444r1

 affected:
 - Test specifications

	- O&M Specifications	
Other comments.		
Other comments:	ж -	

10.3.6.21 Downlink DPCH info for each RL

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE mode	MP			
>FDD				
>>Primary CPICH usage for channel estimation	MP		Primary CPICH usage for channel estimation 10.3.6.62	
>>DPCH frame offset	MP		Integer(038 144 by step of 256)	Offset (in number of chips) between the beginning of the P-CCPCH frame and the beginning of the DPCH frame This is called $\tau_{DPCH,n}$ in [26]
>>Secondary CPICH info	OP		Secondary CPICH info 10.3.6.73	
>>DL channelisation code	MP	1 to <maxdpc H-DLchan></maxdpc 		For the purpose of physical channel mapping [27] the DPCHs are numbered, starting from DPCH number 1, according to the order that they are contained in this IE.
>>>Secondary scrambling code	MD		Secondary scrambling code 10.3.6.74	Default is the same scrambling code as for the Primary CPICH
>>>Spreading factor	MP		Integer(4, 8, 16, 32, 64, 128, 256, 512)	Defined in CHOICE SF512- AndCodenumber with "code number" in ASN.1
>>>Code number	MP		Integer(0Sp reading factor - 1)	
>>>Scrambling code change	CH-SF/2		Enumerated (code change, no code change)	Indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.
>>TPC combination index	MP		TPC combination index 10.3.6.85	
>>SSDT Cell Identity	OP		SSDT Cell Identity 10.3.6.76	
>>Closed loop timing adjustment mode	CH- TxDiversity Mode		Integer(1, 2)	It is present if Tx Diversity is used in the radio link.
>TDD				
>>DL CCTrCh List	MP <u>OP</u>	1 <maxcc TrCH></maxcc 		DL physical channels to establish or reconfigure list

Information Element/Group name	Need	Multi	Type and reference	Semantics description
>>>TFCS ID	MD		Integer(18)	Identity of this CCTrCh. Default value is 1
>>>Time info	MP		Time Info 10.3.6.83	
>>>Common timeslot info	MD		Common Timeslot Info 10.3.6.10	Default is the current Common timeslot info
>>>Downlink DPCH timeslots and codes	MD		Downlink Timeslots and Codes 10.3.6.32	Default is to use the old timeslots and codes.
>>>UL CCTrCH TPC List	MD	0 <maxcc TrCH></maxcc 		UL CCTrCH identities for TPC commands associated with this DL CCTrCH. Default is previous list or all defined UL CCTrCHs
>>>>UL TPC TFCS Identity	MP		Transport Format Combination Set Identity 10.3.5.21	
>>DL CCTrCH List to Remove	<u>OP</u>	1 <maxcc TrCH></maxcc 		DL physical channels to remove list
>>>TFCS ID	MP		Integer(18)	

Condition	Explanation
SF/2	The information element is mandatory present if the UE has an active compressed mode pattern sequence, which is using compressed mode method
TxDiversity Mode	"SF/2". Otherwise the IE is not needed. This IE is mandatory present if any TX Diversity Mode
	is used on the radio link, i.e. if STTD, "closed loop mode 1" or "closed loop mode 2" is used on the radio link. Otherwise the IF is not needed.

10.3.6.88 Uplink DPCH info

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Uplink DPCH power control info	OP		Uplink DPCH power control info 10.3.6.91	
CHOICE mode	MP			
>FDD				
>>Scrambling code type	MP		Enumerated(short, long)	
>>Scrambling code number	MP		Integer(016 777215)	
>>Number of DPDCH	MD		Integer(1m axDPDCH)	Default value is 1. Number of DPDCH is 1 in HANDOVER TO UTRAN COMMAND
>>Spreading factor	MP		Integer(4, 8, 16, 32, 64, 128, 256)	Minimum allowed SF of the channelisation code for data part
>>TFCI existence	MD		Boolean	TRUE means existence. Default value is "TRUE"
>>Number of FBI bits	OP		Integer (1, 2)	In bits.
>>Puncturing Limit	MP		Real(0.401 by step of 0.04)	
>TDD				
>>Uplink Timing Advance Control	OP		Uplink Timing Advance Control 10.3.6.96	
>>UL CCTrCH List	MP <u>OP</u>	1 to <maxcctr CH></maxcctr 		UL physical channels to establish or reconfigure list
>>>TFCS ID	MD		Integer(18)	Default value is 1.
>>>UL target SIR	MP		Real (-11 20 by step of 0.5dB)	In dB
>>>Time info	MP		Time info 10.3.6.83	
>>>Common timeslot info	MD		Common timeslot info 10.3.6.10	Default is the current Common timeslot info
>>>Uplink DPCH timeslots and codes	MD		Uplink Timeslots and Codes 10.3.6.94	Default is to use the old timeslots and codes.
>>UL CCTrCH List to Remove	<u>OP</u>	1 <maxcc TrCH></maxcc 		UL physical channels to remove list
>>>TFCS ID	<u>MP</u>		Integer(18)	

11.3 Information element definitions

__ ***************************

```
PHYSICAL CHANNEL INFORMATION ELEMENTS (10.3.6)
__ *****************
DL-CCTrCh ::=
                                   SEQUENCE {
                                      TFCS-IdentityPlain
                                                                         DEFAULT 1,
   tfcs-ID
   timeInfo
                                      TimeInfo,
   commonTimeslotInfo
                                                                         OPTIONAL,
                                      CommonTimeslotInfo
   dl-CCTrCH-TimeslotsCodes
                                      DownlinkTimeslotsCodes
                                                                         OPTIONAL,
   ul-CCTrChTPCList
                                      UL-CCTrChTPCList
                                                                         OPTIONAL
                                  SEQUENCE (SIZE (1..maxCCTrCH)) OF
DL-CCTrChList ::=
                                      DL-CCTrCh
DL-CCTrChListToRemove ::=
                                  SEQUENCE (SIZE (1..maxCCTrCH)) OF
                                      TFCS-IdentityPlain
DL-DPCH-InfoPerRL ::=
                                  CHOICE {
   fdd
                                      SEQUENCE {
                                         PCPICH-UsageForChannelEst,
       pCPICH-UsageForChannelEst
       dpch-FrameOffset
                                         DPCH-FrameOffset,
       secondaryCPICH-Info
                                          SecondaryCPICH-Info
                                                                         OPTIONAL,
       dl-ChannelisationCodeList
                                         DL-ChannelisationCodeList,
                                          TPC-CombinationIndex,
       tpc-CombinationIndex
                                                                         OPTIONAL,
       ssdt-CellIdentity
                                          SSDT-CellIdentity
       closedLoopTimingAdjMode
                                         ClosedLoopTimingAdjMode
                                                                         OPTIONAL
    },
   tdd
                                      SEQUENCE {
                                       DL-CCTrChList
                                                                         OPTIONAL,
       dl-CCTrChListToEstablish
                                          DL-CCTrChListToRemove
       dl-CCTrChListToRemove
                                                                         OPTIONAL
UL-CCTrCH ::=
                                   SEQUENCE {
   tfcs-ID
                                      TFCS-IdentityPlain
   ul-TargetSIR
                                      UL-TargetSIR,
   timeInfo
                                      TimeInfo,
   commonTimeslotInfo
                                      CommonTimeslotInfo
                                                                         OPTIONAL,
   ul-CCTrCH-TimeslotsCodes
                                      UplinkTimeslotsCodes
                                                                         OPTIONAL
UL-CCTrCHList ::=
                                  SEQUENCE (SIZE (1..maxCCTrCH)) OF
                                      UL-CCTrCH
                                  SEQUENCE {SIZE (1..maxCCTrCH)) OF
UL-CCTrCHListToRemove ::=
                                      TFCS-IdentityPlain
UL-DPCH-Info ::=
                                   SEQUENCE {
                                      UL-DPCH-PowerControlInfo
   ul-DPCH-PowerControlInfo
                                                                       OPTIONAL,
                                      CHOICE {
   modeSpecificInfo
       fdd
                                          SEQUENCE {
           scramblingCodeType
                                              ScramblingCodeType,
           scramblingCode
                                              UL-ScramblingCode,
           numberOfDPDCH
                                              NumberOfDPDCH
                                                                         DEFAULT 1.
           spreadingFactor
                                              SpreadingFactor,
           tfci-Existence
                                              BOOLEAN,
           -- numberOfFBI-Bits is conditional based on history
           numberOfFBI-Bits
                                              NumberOfFBI-Bits
                                                                         OPTIONAL,
           puncturingLimit
                                              PuncturingLimit
       tdd
                                          SEQUENCE {
           ul-TimingAdvance
                                             UL-TimingAdvanceControl
                                                                         OPTIONAL,
                                                                         OPTIONAL,
           ul-CCTrCHList
                                              UL-CCTrCHList
           ul-CCTrCHListToRemove
                                              UL-CCTrCHListToRemove
                                                                         OPTIONAL
   }
}
```

R2-021472

							CR-Form-v5		
CHANGE REQUEST									
*	25.331	CR 1443	≋ rev	<mark>r1</mark> ^జ	Current version:	4.4.0	¥		
For <u>HELP</u>	For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the % symbols.								
Proposed cha	nge affects: 第	(U)SIM	ME/UE X	Radio A	ccess Network X	Core Ne	etwork		
Title:	# CCTrCH Re	elease in TDD							
Source:	₩ <mark>TSG-RAN \</mark>	NG2							
Work item cod	de: # TEI				Date:	2002			

Category: Release: # REL-4 Use one of the following releases: Use one of the following categories: (GSM Phase 2) F (correction) 2 **A** (corresponds to a correction in an earlier release) R96 (Release 1996) B (addition of feature). R97 (Release 1997) **C** (functional modification of feature) R98 (Release 1998) (Release 1999) **D** (editorial modification) R99 Detailed explanations of the above categories can REL-4 (Release 4) be found in 3GPP TR 21.900. REL-5 (Release 5)

Reason for change: # In TDD several CCTrCH may be supported. Signaling is provided for independent CCTrCH physical channel establishment, but not for the release.

Summary of change: # In Uplink DPCH Info and Downlink DPCH Info for each RL physical channels to establish are currently indicated by the UL & DL CCTrCH lists. This change adds CCTrCH physical channels to remove list to these IE's. Both the establishment and release CCTrCH lists are optional within these IE's.

DL-DPCH-InfoPerRL:

Correction modified to correctly reflect the change that is being made.

DL-DPCH-InfoPerRL-r4:

<u>Correction made to R99 version of this IE (DL-DPCH-InfoPerRL) copied into the Rel4 version.</u>

UL-DPCH-Info-r4:

<u>Correction made to R99 version of this IE (UL-DPCH-Info) copied into the Rel4 version.</u>

Consequences if not approved:

When more then one CCTrCH exists in TDD release of physical channels in the control of the cont

associated with a particular CCTrCH is not possible.

<u>Isolated impact analysis:</u> Isolated Impact exists for TDD.

Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

<u>Impacted functionality</u>: Establishment and release of dedicated physical channels when more then one CCTrCH exists.

Correction to a function where the specification was found erroneous and contained contradictions.

Clauses affected:	 10.3.6.21, 10.3.6.88, 11.3
Other specs	# - Other core specifications # 25.331 v3.10.0, CR 1442
Other specs	25.331 v5.0.0, CR 1442r1
affected:	- Test specifications - O&M Specifications
Other comments:	<u> </u>

10.3.6.21 Downlink DPCH info for each RL

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE mode	MP			
>FDD				
>>Primary CPICH usage for channel estimation	MP		Primary CPICH usage for channel estimation 10.3.6.62	
>>DPCH frame offset	MP		Integer(038 144 by step of 256)	Offset (in number of chips) between the beginning of the P-CCPCH frame and the beginning of the DPCH frame This is called TDPCH,n in [26]
>>Secondary CPICH info	OP		Secondary CPICH info 10.3.6.73	
>>DL channelisation code	MP	1 to <maxdpc H-DLchan></maxdpc 		For the purpose of physical channel mapping [27] the DPCHs are numbered, starting from DPCH number 1, according to the order that they are contained in this IE.
>>>Secondary scrambling code	MD		Secondary scrambling code 10.3.6.74	Default is the same scrambling code as for the Primary CPICH
>>>Spreading factor	MP		Integer(4, 8, 16, 32, 64, 128, 256, 512)	Defined in CHOICE SF512- AndCodenumber with "code number" in ASN.1
>>>Code number	MP		Integer(0Sp reading factor - 1)	
>>>Scrambling code change	CH-SF/2		Enumerated (code change, no code change)	Indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.
>>TPC combination index	MP		TPC combination index 10.3.6.85	
>>SSDT Cell Identity	OP		SSDT Cell Identity 10.3.6.76	
>>Closed loop timing adjustment mode	CH- TxDiversity Mode		Integer(1, 2)	It is present if Tx Diversity is used in the radio link.
>TDD				
>>DL CCTrCh List	<u>OP</u> MP	1 <maxcc TrCH></maxcc 		DL physical channels to establish or reconfigure list
>>>TFCS ID	MD		Integer(18)	Identity of this CCTrCh. Default value is 1
>>>Time info	MP		Time Info 10.3.6.83	
>>>Common timeslot info	MD		Common Timeslot Info	Default is the current Common timeslot info

Information Element/Group name	Need	Multi	Type and reference	Semantics description
			10.3.6.10	
>>>Downlink DPCH timeslots and codes	MD		Downlink Timeslots and Codes 10.3.6.32	Default is to use the old timeslots and codes.
>>>UL CCTrCH TPC List	MD	0 <maxcc TrCH></maxcc 		UL CCTrCH identities for TPC commands associated with this DL CCTrCH. Default is previous list or all defined UL CCTrCHs
>>>>UL TPC TFCS Identity	MP		Transport Format Combination Set Identity 10.3.5.21	
>>DL CCTrCH List to Remove	<u>OP</u>	1 <maxcc TrCH></maxcc 		DL physical channels to remove list
>>>TFCS ID	<u>MP</u>		Integer(18)	

Condition	Explanation
SF/2	The information element is mandatory present if the UE has an active compressed mode pattern
	sequence, which is using compressed mode method "SF/2". Otherwise the IE is not needed.
TxDiversity Mode	This IE is mandatory present if any TX Diversity Mode is used on the radio link, i.e. if STTD, "closed loop
	mode 1" or "closed loop mode 2" is used on the radio link. Otherwise the IE is not needed.

10.3.6.88 Uplink DPCH info

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Uplink DPCH power control info	OP		Uplink DPCH power control info 10.3.6.91	
CHOICE mode	MP			
>FDD				
>>Scrambling code type	MP		Enumerated(short, long)	
>>Scrambling code number	MP		Integer(016 777215)	
>>Number of DPDCH	MD		Integer(1m axDPDCH)	Default value is 1. Number of DPDCH is 1 in HANDOVER TO UTRAN COMMAND
>>Spreading factor	MP		Integer(4, 8, 16, 32, 64, 128, 256)	Minimum allowed SF of the channelisation code for data part
>>TFCI existence	MD		Boolean	TRUE means existence. Default value is "TRUE"
>>Number of FBI bits	OP		Integer (1, 2)	In bits.
>>Puncturing Limit	MP		Real(0.401 by step of 0.04)	
>TDD			,	
>>Uplink Timing Advance Control	OP		Uplink Timing Advance Control 10.3.6.96	
>>UL CCTrCH List	<u>OPMP</u>	1 to <maxcctr CH></maxcctr 		UL physical channels to establish or reconfigure list
>>>TFCS ID	MD		Integer(18)	Default value is 1.
>>>UL target SIR	MP		Real (-11 20 by step of 0.5dB)	In dB
>>>Time info	MP		Time info 10.3.6.83	
>>>Common timeslot info	MD		Common timeslot info 10.3.6.10	Default is the current Common timeslot info
>>>Uplink DPCH timeslots and codes	MD		Uplink Timeslots and Codes 10.3.6.94	Default is to use the old timeslots and codes.
>>UL CCTrCH List to Remove	<u>OP</u>	1 <maxcc TrCH></maxcc 		UL physical channels to remove list
>>>TFCS ID	MP		Integer(18)	

11.3 Information element definitions

```
PHYSICAL CHANNEL INFORMATION ELEMENTS (10.3.6)
__ *******************************
DL-CCTrCh ::=
                                  SEQUENCE {
   tfcs-ID
                                     TFCS-IdentityPlain
                                                                        DEFAULT 1,
   timeInfo
                                     TimeInfo,
   commonTimeslotInfo
                                     CommonTimeslotInfo
                                                                        OPTIONAL,
   dl-CCTrCH-TimeslotsCodes
                                     DownlinkTimeslotsCodes
                                                                        OPTIONAL.
   ul-CCTrChTPCList
                                     UL-CCTrChTPCList
                                                                        OPTIONAL
DL-CCTrCh-r4 ::=
                                  SEQUENCE {
                                     TFCS-IdentityPlain
                                                                      DEFAULT 1,
   tfcs-ID
   timeInfo
                                     TimeInfo,
   commonTimeslotInfo
                                     CommonTimeslotInfo
                                     CHOICE {
   tddOption
                                        SEQUENCE {
       tdd384
         dl-CCTrCH-TimeslotsCodes
                                         DownlinkTimeslotsCodes OPTIONAL
       tdd128
                                        SEQUENCE {
                                           DownlinkTimeslotsCodes-LCR-r4 OPTIONAL
          dl-CCTrCH-TimeslotsCodes
   ul-CCTrChTPCList
                                    UL-CCTrChTPCList
                                                          OPTIONAL
DL-CCTrChList ::=
                                 SEQUENCE (SIZE (1..maxCCTrCH)) OF
                                     DL-CCTrCh
DL-CCTrChListToRemove ::=
                                  SEQUENCE (SIZE (1..maxCCTrCH)) OF
                                     TFCS-IdentityPlain
. . . . .
                                 CHOICE {
DL-DPCH-InfoPerRL ::=
                                     SEQUENCE {
                                      PCPICH-UsageForChannelEst,
       pCPICH-UsageForChannelEst
       dpch-FrameOffset
                                         DPCH-FrameOffset,
                                         SecondaryCPICH-Info
       secondaryCPICH-Info
                                                                       OPTIONAL,
       dl-ChannelisationCodeList
                                       DL-ChannelisationCodeList,
                                         TPC-CombinationIndex,
       tpc-CombinationIndex
       ssdt-CellIdentity
                                        SSDT-CellIdentity
                                                                        OPTIONAL,
       closedLoopTimingAdjMode
                                         ClosedLoopTimingAdjMode
                                                                       OPTIONAL
   },
   tdd
                                     SEQUENCE {
                                     DL-CCTrChList
       dl-CCTrChListToEstablish
                                                                        OPTIONAL,
       dl-CCTrChListToRemove
                                         DL-CCTrChListToRemove
                                                                       OPTIONAL
DL-DPCH-InfoPerRL-r4 ::=
                                 CHOICE {
                                     SEQUENCE {
                                      PCPICH-UsageForChannelEst,
       pCPICH-UsageForChannelEst
       dpch-FrameOffset
                                        DPCH-FrameOffset,
                                      SecondaryCPICH-Info
DL-ChannelisationCodeList,
       secondaryCPICH-Info
                                                                       OPTIONAL,
       dl-ChannelisationCodeList
       tpc-CombinationIndex
                                        TPC-CombinationIndex,
       ssdt-CellIdentity
                                         SSDT-CellIdentity
                                                                       OPTIONAL,
       closedLoopTimingAdjMode
                                         ClosedLoopTimingAdjMode
                                                                       OPTIONAL
```

```
SEQUENCE {
                                                                             OPTIONAL,
        dl-CCTrChListToEstablish
                                            DL-CCTrChList-r4
        dl-CCTrChListToRemove
                                            DL-CCTrChListToRemove
                                                                             OPTIONAL
UL-CCTrCH-r4 ::=
                                    SEQUENCE {
                                        TFCS-IdentityPlain
                                                                             DEFAULT 1.
   tfcs-ID
    ul-TargetSIR
                                        UL-TargetSIR,
    timeInfo
                                        TimeInfo,
    commonTimeslotInfo
                                        CommonTimeslotInfo
                                                                             OPTIONAL,
    tddOption
                                        CHOICE {
                                            SEQUENCE {
        tdd384
            ul-CCTrCH-TimeslotsCodes
                                                UplinkTimeslotsCodes
                                                                             OPTIONAL
        tdd128
                                            SEQUENCE {
            ul-CCTrCH-TimeslotsCodes
                                                UplinkTimeslotsCodes-LCR-r4 OPTIONAL
    }
}
UL-CCTrCHList ::=
                                    SEQUENCE (SIZE (1..maxCCTrCH)) OF
                                        UL-CCTrCH
UL-CCTrCHListToRemove ::=
                                    SEQUENCE {SIZE (1..maxCCTrCH)) OF
                                        TFCS-IdentityPlain
UL-DPCH-Info ::=
                                    SEQUENCE {
    ul-DPCH-PowerControlInfo
                                        UL-DPCH-PowerControlInfo
                                                                            OPTIONAL,
    modeSpecificInfo
                                        CHOICE {
        fdd
                                            SEQUENCE {
            scramblingCodeType
                                                ScramblingCodeType,
            scramblingCode
                                                UL-ScramblingCode,
            numberOfDPDCH
                                                NumberOfDPDCH
                                                                             DEFAULT 1,
            spreadingFactor
                                                SpreadingFactor,
            tfci-Existence
                                                BOOLEAN,
            -- numberOfFBI-Bits is conditional based on history
            numberOfFBI-Bits
                                                NumberOfFBI-Bits
                                                                             OPTIONAL,
            puncturingLimit
                                                PuncturingLimit
        },
        tdd
                                            SEOUENCE {
            ul-TimingAdvance
                                                UL-TimingAdvanceControl
                                                                             OPTIONAL,
                                                                             OPTIONAL,
            ul-CCTrCHList
                                                UL-CCTrCHList
           ul-CCTrCHListToRemove
                                                UL-CCTrCHListToRemove
                                                                             OPTIONAL
    }
UL-DPCH-Info-r4 ::=
                                    SEQUENCE {
    ul-DPCH-PowerControlInfo
                                        UL-DPCH-PowerControlInfo-r4
                                                                             OPTIONAL,
    modeSpecificInfo
                                        CHOICE {
                                            SEQUENCE {
            scramblingCodeType
                                                ScramblingCodeType,
                                                UL-ScramblingCode,
            scramblingCode
                                                NumberOfDPDCH
            numberOfDPDCH
                                                                             DEFAULT 1,
            spreadingFactor
                                                SpreadingFactor,
            tfci-Existence
                                                BOOLEAN,
            -- numberOfFBI-Bits is conditional based on history
                                                                             OPTIONAL,
            numberOfFBI-Bits
                                                NumberOfFBI-Bits
            puncturingLimit
                                                PuncturingLimit
        }.
        tdd
                                            SEQUENCE {
```

```
    ul-TimingAdvance
    UL-TimingAdvanceControl-r4
    OPTIONAL,

    ul-CCTrCHList
    UL-CCTrCHList-r4
    OPTIONAL,

    ul-CCTrCHListToRemove
    UL-CCTrCHListToRemove
    OPTIONAL
```

R2-021473

CHANGE REQUEST							CR-Form-v5		
ж	25.331	CR	1444	жrev	r1	¥	Current version:	5.0.0	*
For <u>H</u>	IELP on using this fo	rm, se	e bottom of this	s page or	look	at th	e pop-up text over	r the ♯ syn	nbols.

ME/UE X Radio Access Network X Core Network (U)SIM Title: ★ CCTrCH Release in TDD **♯ TSG-RAN WG2** Source: Date: # 5/7/2002 Category: Release: # REL-4 Use one of the following categories: Use one of the following releases: F (correction) 2 (GSM Phase 2) **A** (corresponds to a correction in an earlier release) R96 (Release 1996) B (addition of feature). R97 (Release 1997) **C** (functional modification of feature) R98 (Release 1998) **D** (editorial modification) R99 (Release 1999) Detailed explanations of the above categories can REL-4 (Release 4) be found in 3GPP TR 21.900. REL-5 (Release 5)

Reason for change: # In TDD several CCTrCH may be supported. Signaling is provided for independent CCTrCH physical channel establishment, but not for the release. Summary of change: # In Uplink DPCH Info and Downlink DPCH Info for each RL physical channels to establish are currently indicated by the UL & DL CCTrCH lists. This change adds CCTrCH physical channels to remove list to these IE's. Both the establishment and release CCTrCH lists are optional within these IE's. DL-DPCH-InfoPerRL-r4: Correction made to R99 version of this IE (DL-DPCH-InfoPerRL) copied into the Rel4 version. UL-DPCH-Info-r4: Correction made to R99 version of this IE (UL-DPCH-Info) copied into the Rel4 version. Consequences if When more then one CCTrCH exists in TDD release of physical channels not approved: associated with a particular CCTrCH is not possible.

<u>Isolated impact analysis:</u> Isolated Impact exists for TDD.

Would not affect implementations behaving like indicated in the CR, would

affect implementations supporting the corrected functionality otherwise.

<u>Impacted functionality</u>: Establishment and release of dedicated physical channels when more then one CCTrCH exists.

Correction to a function where the specification was found erroneous and contained contradictions.

10.3.6.21 Downlink DPCH info for each RL

Information Element/Group name	Need	Multi	Type and reference	Semantics description
CHOICE mode	MP			
>FDD				
>>Primary CPICH usage for channel estimation	MP		Primary CPICH usage for channel estimation 10.3.6.62	
>>DPCH frame offset	MP		Integer(038 144 by step of 256)	Offset (in number of chips) between the beginning of the P-CCPCH frame and the beginning of the DPCH frame This is called TDPCH,n in [26]
>>Secondary CPICH info	OP		Secondary CPICH info 10.3.6.73	
>>DL channelisation code	MP	1 to <maxdpc H-DLchan></maxdpc 		For the purpose of physical channel mapping [27] the DPCHs are numbered, starting from DPCH number 1, according to the order that they are contained in this IE.
>>>Secondary scrambling code	MD		Secondary scrambling code 10.3.6.74	Default is the same scrambling code as for the Primary CPICH
>>>Spreading factor	MP		Integer(4, 8, 16, 32, 64, 128, 256, 512)	Defined in CHOICE SF512- AndCodenumber with "code number" in ASN.1
>>>Code number	MP		Integer(0Sp reading factor - 1)	
>>>Scrambling code change	CH-SF/2		Enumerated (code change, no code change)	Indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.
>>TPC combination index	MP		TPC combination index 10.3.6.85	
>>SSDT Cell Identity	OP		SSDT Cell Identity 10.3.6.76	
>>Closed loop timing adjustment mode	CH- TxDiversity Mode		Integer(1, 2)	It is present if Tx Diversity is used in the radio link.
>TDD	OPMS	4 00		Di abasis del de
>>DL CCTrCh List	<u>OPMP</u>	1 <maxcc TrCH></maxcc 	Interes(4, 0)	DL physical channels to establish or reconfigure list
>>>TFCS ID >>>Time info	MD MP		Integer(18) Time Info	Identity of this CCTrCh. Default value is 1
	IVII		10.3.6.83	
>>>Common timeslot info	MD		Common Timeslot Info 10.3.6.10	Default is the current Common timeslot info

Information Element/Group name	Need	Multi	Type and reference	Semantics description
>>>Downlink DPCH timeslots and codes	MD		Downlink Timeslots and Codes 10.3.6.32	Default is to use the old timeslots and codes.
>>>UL CCTrCH TPC List	MD	0 <maxcc TrCH></maxcc 		UL CCTrCH identities for TPC commands associated with this DL CCTrCH. Default is previous list or all defined UL CCTrCHs
>>>>UL TPC TFCS Identity	MP		Transport Format Combination Set Identity 10.3.5.21	
>>DL CCTrCH List to Remove	<u>OP</u>	1 <maxcc TrCH></maxcc 		DL physical channels to remove list
>>>TFCS ID	<u>MP</u>		Integer(18)	

Condition	Explanation		
SF/2	The information element is mandatory present if the		
	UE has an active compressed mode pattern		
	sequence, which is using compressed mode method		
	"SF/2". Otherwise the IE is not needed.		
TxDiversity Mode	This IE is mandatory present if any TX Diversity Mode		
	is used on the radio link, i.e. if STTD, "closed loop		
	mode 1" or "closed loop mode 2" is used on the radio		
	link. Otherwise the IE is not needed.		

10.3.6.88 Uplink DPCH info

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Uplink DPCH power control info	OP		Uplink DPCH power control info 10.3.6.91	
CHOICE mode	MP			
>FDD				
>>Scrambling code type	MP		Enumerated(short, long)	
>>Scrambling code number	MP		Integer(016 777215)	
>>Number of DPDCH	MD		Integer(1m axDPDCH)	Default value is 1. Number of DPDCH is 1 in HANDOVER TO UTRAN COMMAND
>>Spreading factor	MP		Integer(4, 8, 16, 32, 64, 128, 256)	Minimum allowed SF of the channelisation code for data part
>>TFCI existence	MD		Boolean	TRUE means existence. Default value is "TRUE"
>>Number of FBI bits	OP		Integer (1, 2)	In bits.
>>Puncturing Limit	MP		Real(0.401 by step of 0.04)	
>TDD			,	
>>Uplink Timing Advance Control	OP		Uplink Timing Advance Control 10.3.6.96	
>>UL CCTrCH List	<u>OP</u> MP	1 to <maxcctr CH></maxcctr 		UL physical channels to establish or reconfigure list
>>>TFCS ID	MD		Integer(18)	Default value is 1.
>>>UL target SIR	MP		Real (-11 20 by step of 0.5dB)	In dB
>>>Time info	MP		Time info 10.3.6.83	
>>>Common timeslot info	MD		Common timeslot info 10.3.6.10	Default is the current Common timeslot info
>>>Uplink DPCH timeslots and codes	MD		Uplink Timeslots and Codes 10.3.6.94	Default is to use the old timeslots and codes.
>>UL CCTrCH List to Remove	<u>OP</u>	1 <maxcc TrCH></maxcc 		UL physical channels to remove list
>>>TFCS ID	<u>MP</u>		Integer(18)	

11.3 Information element definitions

```
PHYSICAL CHANNEL INFORMATION ELEMENTS (10.3.6)
__ **************
DL-CCTrCh ::=
                                 SEQUENCE {
   tfcs-ID
                                     TFCS-IdentityPlain
                                                                       DEFAULT 1,
                                     TimeInfo,
   commonTimeslotInfo
                                    CommonTimeslotInfo
                                                                       OPTIONAL,
                                    DownlinkTimeslotsCodes
   dl-CCTrCH-TimeslotsCodes
                                                                       OPTIONAL.
   ul-CCTrChTPCList
                                     UL-CCTrChTPCList
                                                                       OPTIONAL
DL-CCTrCh-r4 ::=
                                 SEQUENCE {
   tfcs-ID
                                     TFCS-IdentityPlain
                                                                      DEFAULT 1,
   timeInfo
                                     TimeInfo,
   commonTimeslotInfo
                                     CommonTimeslotInfo
                                                                      OPTIONAL,
   tddOption
                                     CHOICE {
                                        SEQUENCE {
       tdd384
          dl-CCTrCH-TimeslotsCodes
                                           DownlinkTimeslotsCodes OPTIONAL
       tdd128
                                       SEQUENCE {
           dl-CCTrCH-TimeslotsCodes
                                           DownlinkTimeslotsCodes-LCR-r4 OPTIONAL
   ul-CCTrChTPCList
                                  UL-CCTrChTPCList OPTIONAL
DL-CCTrChList ::=
                                 SEQUENCE (SIZE (1..maxCCTrCH)) OF
                                    DL-CCTrCh
DL-CCTrChListToRemove ::=
                                 SEQUENCE (SIZE (1..maxCCTrCH)) OF
                                     TFCS-IdentityPlain
                                 CHOICE {
DL-DPCH-InfoPerRL ::=
                                     SEOUENCE {
                                     PCPICH-UsageForChannelEst,
       pCPICH-UsageForChannelEst
       dpch-FrameOffset
                                        DPCH-FrameOffset,
                                        SecondaryCPICH-Info
       secondaryCPICH-Info
                                                                       OPTIONAL,
                                       DL-ChannelisationCodeList,
       dl-ChannelisationCodeList
       tpc-CombinationIndex
                                        TPC-CombinationIndex,
       ssdt-CellIdentity
                                        SSDT-CellIdentity
                                                                       OPTIONAL,
       closedLoopTimingAdjMode
                                       ClosedLoopTimingAdjMode
                                                                       OPTIONAL
   },
                                     SEQUENCE {
   tdd
                                     DL-CCTrChList
       dl-CCTrChListToEstablish
                                                                       OPTIONAL,
       dl-CCTrChListToRemove
                                         DL-CCTrChListToRemove
                                                                       OPTIONAL
DL-DPCH-InfoPerRL-r4 ::=
                                 CHOICE {
                                    SEQUENCE {
   fdd
                                      PCPICH-UsageForChannelEst,
       pCPICH-UsageForChannelEst
       dpch-FrameOffset
                                        DPCH-FrameOffset,
       secondaryCPICH-Info
                                        SecondaryCPICH-Info
                                                                       OPTIONAL.
       dl-ChannelisationCodeList
                                       DL-ChannelisationCodeList,
                                        TPC-CombinationIndex,
       tpc-CombinationIndex
       ssdt-CellIdentity
                                        SSDT-CellIdentity
       closedLoopTimingAdjMode
                                       ClosedLoopTimingAdjMode
                                                                      OPTIONAL
   tdd
                                     SEQUENCE {
       dl-CCTrChListToEstablish
                                         DL-CCTrChList-r4
                                                                     OPTIONAL,
```

```
DL-CCTrChListToRemove
        dl-CCTrChListToRemove
                                                                          OPTIONAL
                                    SEQUENCE {
UL-CCTrCH ::=
                                       TFCS-IdentityPlain
                                                                           DEFAULT 1.
    t.fcs-ID
   ul-TargetSIR
                                        UL-TargetSIR,
    timeInfo
                                       TimeInfo,
   commonTimeslotInfo
                                       CommonTimeslotInfo
                                                                            OPTIONAL,
   ul-CCTrCH-TimeslotsCodes
                                       UplinkTimeslotsCodes
                                                                            OPTIONAL
UL-CCTrCH-r4 ::=
                                    SEQUENCE {
                                       TFCS-IdentityPlain
                                                                           DEFAULT 1,
   tfcs-ID
    ul-TargetSIR
                                        UL-TargetSIR,
    timeInfo
                                        TimeInfo,
    commonTimeslotInfo
                                        CommonTimeslotInfo
                                                                            OPTIONAL,
    tddOption
                                        CHOICE {
                                            SEQUENCE {
       tdd384
           ul-CCTrCH-TimeslotsCodes
                                               UplinkTimeslotsCodes
                                                                           OPTIONAL
       tdd128
                                            SEQUENCE {
           ul-CCTrCH-TimeslotsCodes
                                               UplinkTimeslotsCodes-LCR-r4 OPTIONAL
    }
UL-CCTrCHList ::=
                                    SEQUENCE (SIZE (1..maxCCTrCH)) OF
                                       UL-CCTrCH
                                    {\tt SEQUENCE\_\{SIZE\ (1..maxCCTrCH))\ OF}
UL-CCTrCHListToRemove ::=
                                       TFCS-IdentityPlain
UL-DPCH-Info ::=
                                    SEQUENCE {
   ul-DPCH-PowerControlInfo
                                        UL-DPCH-PowerControlInfo
                                                                          OPTIONAL,
                                        CHOICE {
   modeSpecificInfo
                                            SEQUENCE {
        fdd
            scramblingCodeType
                                                ScramblingCodeType,
            scramblingCode
                                                UL-ScramblingCode,
           numberOfDPDCH
                                                NumberOfDPDCH
                                                                           DEFAULT 1,
            spreadingFactor
                                                SpreadingFactor,
            tfci-Existence
                                                BOOLEAN,
            -- numberOfFBI-Bits is conditional based on history
           numberOfFBI-Bits
                                               NumberOfFBI-Bits
                                                                            OPTIONAL,
                                               PuncturingLimit
            puncturingLimit
        },
        tdd
                                            SEQUENCE {
            ul-TimingAdvance
                                               UL-TimingAdvanceControl
                                                                            OPTIONAL,
           ul-CCTrCHList
                                               UL-CCTrCHList
                                                                            OPTIONAL,
           ul-CCTrCHListToRemove
                                               UL-CCTrCHListToRemove
                                                                            OPTIONAL
    }
UL-DPCH-Info-r4 ::=
                                    SEQUENCE {
    ul-DPCH-PowerControlInfo
                                       UL-DPCH-PowerControlInfo-r4
                                                                           OPTIONAL,
    modeSpecificInfo
                                        CHOICE {
                                            SEQUENCE {
       fdd
            scramblingCodeType
                                                ScramblingCodeType,
            scramblingCode
                                                UL-ScramblingCode,
           numberOfDPDCH
                                                NumberOfDPDCH
                                                                            DEFAULT 1,
           spreadingFactor
                                                SpreadingFactor,
                                                BOOLEAN,
           tfci-Existence
            -- numberOfFBI-Bits is conditional based on history
            numberOfFBI-Bits
                                               NumberOfFBI-Bits
                                                                           OPTIONAL,
           puncturingLimit
                                                PuncturingLimit
        tdd
                                            SEQUENCE {
```

```
    ul-TimingAdvance
    UL-TimingAdvanceControl-r4
    OPTIONAL,

    ul-CCTrCHList
    UL-CCTrCHList-r4
    OPTIONAL,

    ul-CCTrCHListToRemove
    UL-CCTrCHListToRemove
    OPTIONAL
```