TSG RAN Meeting #23   **RP-040068**
Phoenix, Arizona, USA, 10 - 12 March 2004

Title   **CRs (Rel-5 and Rel-6 Category A) to TS 25.423 and TS 25.433 on Extension of the range of PCCPCH RSCP**
Source   **TSG RAN WG3**
Agenda Item   **7.4.6**

RAN3 Tdoc	CR.	Rev.	Cat	Spec.	curr. Vers.	new Vers.	REL	Work Item	Title
R3-040398	933	-	F	25.423	5.8.0	5.9.0	REL-5	TEI5	Extension of the range of PCCPCH RSCP
R3-040399	934	-	A	25.423	6.0.0	6.1.0	REL-6	TEI5	Extension of the range of PCCPCH RSCP
R3-040400	977	-	F	25.433	5.7.0	5.8.0	REL-5	TEI5	Extension of the range of PCCPCH RSCP
R3-040401	978	-	A	25.433	6.0.0	6.1.0	REL-6	TEI5	Extension of the range of PCCPCH RSCP

CR-Form-v7

CHANGE REQUEST

| ⌘ | **25.423** CR **933** | ⌘**rev** | **-** | ⌘ | Current version: | **5.8.0** | ⌘ |

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network **X** Core Network ☐

Title: ⌘	Extension of the range of PCCPCH RSCP	
Source: ⌘	RAN3	
Work item code:⌘	TEI5	***Date:*** ⌘ 16/02/2004
Category: ⌘	**F**	***Release:*** ⌘ Rel-5

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.

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)
  Rel-6 (Release 6)

Reason for change: ⌘	In RAN4#25 meeting, in order to optimize the cell design, it was requested that extend the lowest value of PCCPCH RSCP from –115dBm to –120dBm.

Summary of change:⌘	1. Introduce a new *Primary CCPCH RSCP Delta* IE, with the existed *Primary CCPCH RSCP* IE, the range of Primary CCPCH RSCP is extended from (0..91) to (-5..91). 2. Delete the additional '>' before *UL Synchronisation Parameters LCR* IE in section 9.1.11.2. 3. Corresponding changes have been made in ASN.1. Impact Analysis: Impact assessment towards the previous version of the specification (same release): The impact can be considered isolated because the change affects only the usage of PCCPCH RSCP.

Consequences if not approved: ⌘	If this CR is not approved, The range of PCCPCH RSCP will not be consistent with RAN4 specification and operators may not be able to optimize the cell design.

Clauses affected: ⌘	8.3.1.2, 8.3.2.2, 8.3.4.2, 8.3.17.2, 9.1.3.2, 9.1.6.2, 9.1.11.2, 9.1.40, 9.2.3.5, 9.3.3, 9.3.4, 9.3.6 new: 9.2.3.X

	Y	N		
Other specs ⌘	X		Other core specifications ⌘	TS25.423 Rel-6 CR934 TS25.433 Rel-5 CR977 TS25.433 Rel-6 CR978

affected:		X	Test specifications	
		X	O&M Specifications	

Other comments:	⌘	Numbering for new sections: 9.2.3.X = 9.2.3.5a

How to create CRs using this form:

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

8.3.1   Radio Link Setup

8.3.1.1   General

This procedure is used for establishing the necessary resources in the DRNS for one or more radio links.

The connection-oriented service of the signalling bearer shall be established in conjunction with this procedure.
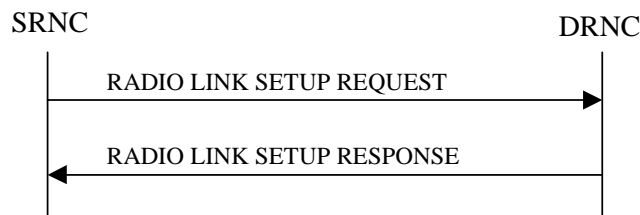
8.3.1.2   Successful Operation

Figure 5: Radio Link Setup procedure: Successful Operation

/* partly omitted */

Radio Link Handling:

> **Diversity Combination Control:**

> [FDD - The *Diversity Control Field* IE indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not.

> - If the *Diversity Control Field* IE is set to "May" (be combined with another RL), the DRNS shall decide for any of the alternatives.

> - If the *Diversity Control Field* IE is set to "Must", the DRNS shall combine the RL with one of the other RL.

> - If the *Diversity Control Field* IE is set to "Must not", the DRNS shall not combine the RL with any other existing RL.

> When an RL is to be combined, the DRNS shall choose which RL(s) to combine it with.]

> [FDD - In the RADIO LINK SETUP RESPONSE message, the DRNC shall indicate for each RL with the Diversity Indication in the *RL Information Response* IE whether the RL is combined or not.]

> - [FDD - In case of not combining with a RL previously listed in the RADIO LINK SETUP RESPONSE message or for the first RL in the RADIO LINK SETUP RESPONSE message, the DRNC shall include in the *DCH Information Response* IE in the RADIO LINK SETUP RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

> - [FDD - Otherwise in case of combining, the *RL ID* IE indicates (one of) the RL(s) previously listed in this RADIO LINK SETUP RESPONSE message with which the concerned RL is combined.]

> [TDD - The DRNC shall always include in the RADIO LINK SETUP RESPONSE message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH, DSCH and USCH of the RL.]

> In the case of a set of co-ordinated DCHs requiring a new transport bearer the *Binding ID* IE and the *Transport Layer Address* IE shall be included in the RADIO LINK SETUP RESPONSE message for only one of the DCHs in the set of co-ordinated DCHs.

> **[FDD-Transmit Diversity]:**

[FDD - If the cell in which the RL is being set up is capable to provide Close loop Tx diversity, the DRNC shall include the *Closed Loop Timing Adjustment Mode* IE in the RADIO LINK SETUP RESPONSE message indicating the configured Closed loop timing adjustment mode of the cell.]

[FDD - When the *Diversity Mode* IE is set to "STTD", "Closed loop mode1", or "Closed loop mode2", the DRNC shall activate/deactivate the Transmit Diversity for each Radio Link in accordance with the *Transmit Diversity Indicator* IE].

DL Power Control:

[FDD - If both the *Initial DL TX Power* IE and *Uplink SIR Target* IE are included in the message, the DRNS shall use the indicated DL TX Power and Uplink SIR Target as initial value. If the value of the *Initial DL TX Power* IE is outside the configured DL TX power range, the DRNS shall apply these constrains when setting the initial DL TX power. The DRNS shall also include the configured DL TX power range defined by *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IE or lower than indicated by the *Minimum DL TX Power* IE on any DL DPCH of the RL except during compressed mode, when the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[FDD - If both the *Initial DL TX Power* and the *Uplink SIR Target* IEs are not included in the RADIO LINK SETUP REQUEST message, then DRNC shall determine the initial Uplink SIR Target and include it in the *Uplink SIR Target* IE in the RADIO LINK SETUP RESPONSE message.]

[TDD - The DRNC shall use the *Uplink SIR Target CCTrCH* IEs in the RADIO LINK SETUP RESPONSE message to indicate for any UL CCTrCH an Uplink SIR Target value in case this is deviating from the value included in the *Uplink SIR Target* IE specified for the Radio Link. If in any [3.84Mcps TDD - *UL CCTrCH Information* IE] [1.28Mcps TDD - *UL CCTrCH Information LCR* IE] the *Uplink SIR Target CCTrCH* IE is not included, the value of the *Uplink SIR Target* IE shall apply to the respective UL CCTrCH.]

[FDD - If the *Primary CPICH Ec/No* IE is present, the DRNC should use the indicated value when deciding the Initial DL TX Power. If the *Enhanced Primary CPICH Ec/No* IE is present, the DRNC should use the indicated value when deciding the Initial DL Tx Power.]

[TDD - If ~~the *Primary CCPCH RSCP* IE~~ [3.84Mcps TDD ~~and/or~~ the *DL Time Slot ISCP Info* IE] [1.28Mcps TDD - ~~and/or~~ the *DL Time Slot ISCP Info LCR* IE] ~~are~~ is present, the ~~DRNC~~ DRNS should use the indicated value~~s~~ when deciding the Initial DL TX Power~~.~~ for the Radio Link. The DRNS shall use the indicated DL Timeslot ISCP when determining the initial DL power per timeslot as specified in [22], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged.]

[TDD-If the *Primary CCPCH RSCP Delta* IE is included, the DRNS should assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the DRNS should assume that the reported value is in the non-negative range as per [24], and the value is equal to the *Primary CCPCH RSCP* IE. The DRNS should use the indicated value when deciding the Initial DL TX Power for the Radio Link.]

`/* partly omitted */`

8.3.2   Radio Link Addition

8.3.2.1   General

This procedure is used for establishing the necessary resources in the DRNS for one or more additional RLs towards a UE when there is already at least one RL established to the concerned UE via this DRNS.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Radio Link Addition procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

[FDD - The Radio Link Addition procedure serves to establish one or more new Radio Links which do not contain the DSCH. If the DSCH shall be moved into a new Radio Link, the Radio Link reconfiguration procedure shall be applied.]

[TDD - The Radio Link Addition procedure serves to establish a new Radio Link with the DSCH and USCH included, if they existed before.]
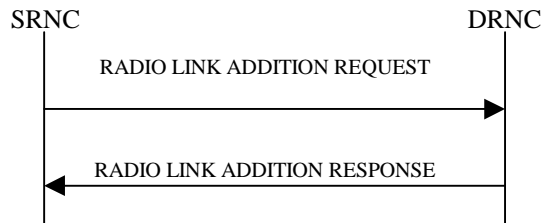
8.3.2.2   Successful Operation

Figure 7: Radio Link Addition procedure: Successful Operation

/* partly omitted */

Radio Link Handling:

Diversity Combination Control:

The *Diversity Control Field* IE indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not on the Iur.

- If the *Diversity Control Field* IE is set to "May" (be combined with another RL), the DRNS shall decide for any of the alternatives.

- If the *Diversity Control Field* IE is set to "Must", the DRNS shall combine the RL with one of the other RL. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.

- If the *Diversity Control Field* IE is set to "Must not", the DRNS shall not combine the RL with any other existing RL.

In the case of not combining a RL with a RL established with a previous Radio Link Setup or Radio Link Addition Procedure or a RL previously listed in the RADIO LINK ADDITION RESPONSE message, the DRNC shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that no combining is done. In this case the DRNC shall include in the *DCH Information Response* IE both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message.

In the case of combining with a RL established with a previous Radio Link Setup or Radio Link Addition Procedure or with a RL previously listed in this RADIO LINK ADDITION RESPONSE message, the DRNC shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that the RL is combined. In this case, the *RL ID* IE indicates (one of) the previously established RL(s) or a RL previously listed in this RADIO LINK ADDITION RESPONSE message with which the new RL is combined.

[TDD - The DRNC shall always include in the RADIO LINK ADDITION RESPONSE message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DSCH and USCH of the RL.]

In the case of a set of co-ordinated DCHs, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Binding ID* IE and the *Transport Layer Address* IE for only one of the DCHs in the set of co-ordinated DCHs.

If the DRNS needs to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) when starting to utilise a new Radio Link, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Allowed UL Rate* IE in the *DCH Information Response* IE for this Radio Link.

If the DRNS needs to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) when starting to utilise a new Radio Link, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Allowed DL Rate* IE in the *DCH Information Response* IE for this Radio Link.

[FDD-Transmit Diversity]:

The DRNS shall activate any feedback mode diversity according to the received settings.

[FDD - If the cell in which the RL is being added is capable to provide Close loop Tx diversity, the DRNC shall indicate the Closed loop timing adjustment mode of the cell by includiing the *Closed Loop Timing Adjustment Mode* IE in the RADIO LINK ADDITION RESPONSE message.]

[FDD - When the *Transmit Diversity Indicator* IE is present the DRNS shall activate/deactivate the Transmit Diversity for each new Radio Link in accordance with the *Transmit Diversity Indicator* IE using the diversity mode of the existing Radio Link(s).]

DL Power Control:

[FDD - If the *Primary CPICH Ec/No* IE or the *Primary CPICH Ec/No* IE and the *Enhanced Primary CPICH Ec/No* IE measured by the UE are included for an RL in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power for this RL. If the *Primary CPICH Ec/No* IE is not present, the DRNS shall set the Initial DL TX Power based on the power relative to the Primary CPICH power used by the existing RLs.]

[TDD - If ~~the *Primary CCPCH RSCP* IE~~ [3.84Mcps TDD - ~~and/or~~ the *DL Time Slot ISCP Info* IE] [1.28Mcps TDD - ~~and/or~~ the *DL Time Slot ISCP Info LCR* IE] ~~are~~ is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use ~~them~~ it in the calculation of the Initial DL TX Power.]

[TDD-If the *Primary CCPCH RSCP Delta* IE is included, the DRNS shall assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the DRNS shall assume that the reported value is in the non-negative range as per [24], and the value is equal to the *Primary CCPCH RSCP* IE. The DRNS shall use it in the calculation of the Initial DL TX Power.]

[TDD - If the *Primary CCPCH RSCP* IE, *Primary CCPCH RSCP Delta* IE, [3.84Mcps TDD - and the *DL Time Slot ISCP Info* IE] [1.28Mcps TDD - and the *DL Time Slot ISCP Info LCR* IE] are not present, the DRNS shall set the Initial DL TX Power based on the power relative to the Primary CCPCH power used by the existing RL.]

`/* partly omitted */`

8.3.4 Synchronised Radio Link Reconfiguration Preparation

8.3.4.1 General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of Radio Link(s) related to one UE-UTRAN connection within a DRNS.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Synchronised Radio Link Reconfiguration Preparation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.
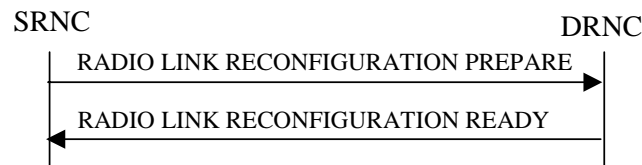
8.3.4.2   Successful Operation

Figure 10: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

<mark>/* partly omitted */</mark>
General

If the requested modifications are allowed by the DRNC and the DRNC has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message. When this procedure has been completed successfully there exists a Prepared Reconfiguration, as defined in subclause 3.1.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Layer Address* IE and *Binding ID* IE in the *DSCHs To Modify* IE, *DSCHs To Add* IE, [TDD - *USCHs To Modify* IE, *USCHs To Add* IE], *HS-DSCH Information* IE, *HS-DSCH Information To Modify* IE, *HS-DSCH MAC-d Flows To Add* IE or in the *RL Specific DCH Information* IEs, the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for any Transport Channel or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

The DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE for any Transport Channel or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iur interface, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included for only one of the DCHs in the set of co-ordinated DCHs.

In the case of a Radio Link being combined with another Radio Link within the DRNS, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included for only one of the combined Radio Links.

Any allowed rate for the uplink of a modified DCH provided for the old configuration will not be valid for the new configuration. If the DRNS needs to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Allowed UL Rate* IE in the *DCH Information Response* IE for this Radio Link.

Any allowed rate for the downlink of a modified DCH provided for the old configuration will not be valid for the new configuration. If the DRNS needs to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Allowed DL Rate* IE in the *DCH Information Response* IE for this Radio Link.

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s) and the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Maximum Uplink SIR* IE and *Minimum Uplink SIR* IE for each Radio Link when these values are changed.

[FDD - If the DL TX power upper or lower limit has been re-configured, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE respectively. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IE or lower than indicated by the *Minimum DL TX Power* IE on any DL DPCH of the RL -except during compressed mode, when the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[3.84 Mcps TDD - If the DL TX power upper or lower limit has been re-configured, the DRNC shall include the new value(s) in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK RECONFIGURATION READY message. If the maximum or minimum power needs to be different for particular DCH type CCTrCHs, the DRNC shall include the new value(s) for that CCTrCH in the *CCTrCH Maximum DL TX Power* IE and *CCTrCH Minimum DL TX Power*. The DRNS shall not transmit with a higher power than indicated by the appropriate *Maximum DL TX Power* IE/*CCTrCH Maximum DL TX Power* IE or lower than indicated by the appropriate *Minimum DL TX Power* IE/*CCTrCH Minimum DL TX Power* IE on any DL DPCH within each CCTrCH of the RL.]

[1.28 Mcps TDD - If the DL TX power upper or lower limit has been re-configured, the DRNC shall include the new value(s) in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK RECONFIGURATION READY message. If the maximum or minimum power needs to be different for particular timeslots within a DCH type CCTrCH, the DRNC shall include the new value(s) for that timeslot in the *Maximum DL TX Power* IE and *Minimum DL TX Power* within the *DL Timeslot Information LCR* IE. The DRNS shall not transmit with a higher power than indicated by the appropriate *Maximum DL TX Power* IE or lower than indicated by the appropriate *Minimum DL TX Power* IE on any DL DPCH within each timeslot of the RL.]

[TDD - If ~~the *Primary CCPCH RSCP* IE and/or~~ the [3.84Mcps TDD - *DL Time Slot ISCP Info* IE][1.28Mcps TDD - *DL Time Slot ISCP Info LCR* IE] ~~are~~ is present, the ~~DRNC~~ DRNS should use the indicated values when deciding the Initial DL TX Power.]

[TDD-If the *Primary CCPCH RSCP Delta* IE is included, the DRNS shall assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the DRNS shall assume that the reported value is in the non-negative range as per [24], and the value is equal to the *Primary CCPCH RSCP* IE. The DRNS shall use the indicated values when deciding the Initial DL TX Power.]

`/* partly omitted */`

8.3.17   Downlink Power Timeslot Control [TDD]

8.3.17.1   General

The purpose of this procedure is to provide the DRNS with updated DL Timeslot ISCP values to use when deciding the DL TX Power for each timeslot.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Downlink Power Timeslot Control procedure can be initiated by the SRNC at any time after establishing a Radio Link. If the SRNC has initiated deletion of the last Radio Link in this DRNS, the Downlink Power Timeslot Control procedure shall not be initiated.

8.3.17.2   Successful Operation

SRNC   DRNC

DL POWER TIMESLOT CONTROL REQUEST

Figure 26A: Downlink Power Timeslot Control procedure, Successful Operation

The Downlink Power Timeslot Control procedure is initiated by the SRNC sending a DL POWER TIMESLOT CONTROL REQUEST message to the DRNC.

Upon receipt of the DL POWER TIMESLOT CONTROL REQUEST message , the DRNS shall use the included [3.84Mcps TDD - *DL Timeslot ISCP Info* IE] [1.28Mcps TDD - *DL Timeslot ISCP Info LCR* IE] value when deciding the DL TX Power for each timeslot as specified in [22], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link in which the interference is low, and increase the DL TX power in those timeslots in which the interference is high, while keeping the total downlink power in the radio link unchanged.

If the *Primary CCPCH RSCP Delta* IE is included, the DRNS shall assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the DRNS shall assume that the reported value is in the non-negative range as per [24], and the value is equal to the *Primary CCPCH RSCP* IE. ~~If the Primary CCPCH RSCP IE is present, t~~The DRNS should use the indicated value for HS-DSCH scheduling and transmit power adjustment.

/* partly omitted */

9.1.3   RADIO LINK SETUP REQUEST

9.1.3.2   TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
SRNC-ID	M		RNC-ID 9.2.1.50		YES	reject
S-RNTI	M		9.2.1.53		YES	reject
D-RNTI	O		9.2.1.24		YES	reject
UL Physical Channel Information		1			YES	reject
>Maximum Number of Timeslots	M		9.2.3.3A	For the UL	–	
>Minimum Spreading Factor	M		9.2.3.4A	For the UL	–	
>Maximum Number of UL Physical Channels per Timeslot	M		9.2.3.3B		–	
>Support of 8PSK	O		9.2.3.7H	Applicable to 1.28Mcps TDD only	YES	ignore
DL Physical Channel Information		1			YES	reject
>Maximum Number of Timeslots	M		9.2.3.3A	For the DL	–	
>Minimum Spreading Factor	M		9.2.3.4A	For the DL	–	
>Maximum Number of DL Physical Channels	M		9.2.3.3C		–	
>Maximum Number of DL Physical Channels per Timeslot	O		9.2.3.3D		YES	ignore
>Support of 8PSK	O		9.2.3.7H	Applicable to 1.28Mcps TDD only	YES	ignore
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL CCTrCH Information		0..<maxnoofCCTrCHs>		For DCH and USCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the UL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
>TDD TPC Uplink Step Size	O		9.2.3.10a	Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD	YES	reject
DL CCTrCH Information		0..<maxnoofCCTrCHs>		For DCH and DSCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the DL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
>TDD TPC Downlink Step Size	M		9.2.3.10		–	
>TPC CCTrCH List		0..<maxnoCCTrCHs>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID		–	

			9.2.3.2			
DCH Information	O		DCH TDD Information 9.2.3.2A		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.3a		YES	reject
USCH Information	O		9.2.3.15		YES	reject
RL Information		*1*			YES	reject
>RL ID	M		9.2.1.49		–	
>C-ID	M		9.2.1.6		–	
>Frame Offset	M		9.2.1.30		–	
>Special Burst Scheduling	M		9.2.3.7D		–	
>Primary CCPCH RSCP	O		9.2.3.5		–	
>DL Time Slot ISCP Info	O		9.2.3.2D	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	reject
>TSTD Support Indicator	O		9.2.3.13F	Applicable to 1.28Mcps TDD only	YES	ignore
>RL Specific DCH Information	O		9.2.1.49A		YES	ignore
>Delayed Activation	O		9.2.1.19Aa		YES	reject
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.13J		–	
>>Uplink Synchronisation Frequency	M		9.2.3.13I		–	
>Primary CCPCH RSCP Delta	O		9.2.3.X		YES	ignore
Permanent NAS UE Identity	O		9.2.1.73		YES	ignore
HS-DSCH Information	O		HS-DSCH TDD Information 9.2.3.3aa		YES	reject
HS-PDSCH RL ID	C - InfoHSDSCH		RL ID 9.2.1.49		YES	reject
PDSCH-RL-ID	O		RL ID 9.2.1.49		YES	ignore

Condition	Explanation
InfoHSDSCH	This IE shall be present if *HS-DSCH Information* IE is present.

Range bound	Explanation
maxnoofCCTrCHs	Maximum number of CCTrCH for one UE.

9.1.6   RADIO LINK ADDITION REQUEST

9.1.6.2   TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
RL Information		*1*			YES	reject
>RL ID	M		9.2.1.49		–	
>C-ID	M		9.2.1.6		–	
>Frame Offset	M		9.2.1.30		–	
>Diversity Control Field	M		9.2.1.20		–	
>Primary CCPCH RSCP	O		9.2.3.5		–	
>DL Time Slot ISCP Info	O		9.2.3.2D	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	reject
>RL Specific DCH Information	O		9.2.1.49A		YES	ignore
>Delayed Activation	O		9.2.1.19Aa		YES	reject
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.13J		–	
>>Uplink Synchronisation Frequency	M		9.2.3.13I		–	
> Primary CCPCH RSCP Delta	O		9.2.3.X		YES	ignore
Permanent NAS UE Identity	O		9.2.1.73		YES	ignore
UL CCTrCH Information		*0..< maxno ofCCTr CHs >*			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TDD TPC Uplink Step Size	O		9.2.3.10a	Applicable to 1.28Mcps TDD only	–	
DL CCTrCH Information		*0..< maxno ofCCTr CHs >*			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TDD TPC Downlink Step Size	O		9.2.3.10		–	

Range bound	Explanation
maxnoofCCTrCHs	Maximum number of CCTrCH for one UE.

9.1.11 RADIO LINK RECONFIGURATION PREPARE

9.1.11.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL CCTrCH To Add		0..<maxnoofCCTrCHs>		For DCH and USCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the UL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
>UL SIR Target	O		Uplink SIR 9.2.1.69	Mandatory for 1.28Mcps TDD; not applicable to 3.84Mcps TDD	YES	reject
>TDD TPC Uplink Step Size	O		9.2.3.10a	Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD	YES	reject
UL CCTrCH To Modify		0..<maxnoofCCTrCHs>			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	O		9.2.1.63	For the UL.	–	
>TFCI Coding	O		9.2.3.11		–	
>Puncture Limit	O		9.2.1.46		–	
>UL SIR Target	O		Uplink SIR 9.2.1.69	Applicable to 1.28Mcps TDD only	YES	reject
>TDD TPC Uplink Step Size	O		9.2.3.10a	Applicable to 1.28Mcps TDD only	YES	reject
UL CCTrCH to Delete		0..<maxnoofCCTrCHs>			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
DL CCTrCH To Add		0..<maxnoofCCTrCHs>		For DCH and DSCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the DL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
>TPC CCTrCH List		0..<maxnoCCTrCHs>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.2		–	
>TDD TPC Downlink Step Size	O		9.2.3.10		YES	reject
DL CCTrCH To Modify		0..<maxnoofCCTrCHs>			EACH	notify

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	O		9.2.1.63	For the DL.	–	
>TFCI Coding	O		9.2.3.11		–	
>Puncture Limit	O		9.2.1.46		–	
>TPC CCTrCH List		0..<maxno CCTrCHs>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.2		–	
>TDD TPC Downlink Step Size	O		9.2.3.10		YES	reject
DL CCTrCH to Delete		0..<maxno ofCCTrCH s>			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
DCHs To Modify	O		TDD DCHs To Modify 9.2.3.8B		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.2A		YES	reject
DCHs to Delete		0..<maxno ofDCHs>			GLOBAL	reject
>DCH ID	M		9.2.1.16		–	
DSCHs To Modify		0..<maxno ofDSCHs>			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		–	
>CCTrCH ID	O		9.2.3.2	DL CCTrCH in which the DSCH is mapped.	–	
>TrCH Source Statistics Descriptor	O		9.2.1.65		–	
>Transport Format Set	O		9.2.1.64		–	
>Allocation/Retention Priority	O		9.2.1.1		–	
>Scheduling Priority Indicator	O		9.2.1.51A		–	
>BLER	O		9.2.1.4		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
>Traffic Class	O		9.2.1.58A		YES	ignore
>Binding ID	O		9.2.1.3	Shall be ignored if bearer establishmen t with ALCAP.	YES	ignore
>Transport Layer Address	O		9.2.1.62	Shall be ignored if bearer establishmen t with ALCAP.	YES	ignore
DSCHs To Add	O		DSCH TDD Information 9.2.3.3a		YES	reject
DSCHs to Delete		0..<maxno ofDSCHs>			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		–	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
USCHs To Modify		0..<maxno ofUSCHs>			GLOBAL	reject
>USCH ID	M		9.2.3.14		–	
>CCTrCH ID	O		9.2.3.2	UL CCTrCH in which the USCH is mapped.	–	
>TrCH Source Statistics Descriptor	O		9.2.1.65		–	
>Transport Format Set	O		9.2.1.64		–	
>Allocation/Retention Priority	O		9.2.1.1		–	
>Scheduling Priority Indicator	O		9.2.1.51A		–	
>BLER	O		9.2.1.4		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
>TNL QoS	O		9.2.1.56A		YES	ignore
>RB Info		0..<maxno ofRB>		All Radio Bearers using this USCH	–	
>>RB Identity	M		9.2.3.5B		–	
>Traffic class	O		9.2.1.58A		YES	ignore
>Binding ID	O		9.2.1.3	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>Transport Layer Address	O		9.2.1.62	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
USCHs To Add	O		USCH Information 9.2.3.15		YES	reject
USCHs to Delete		0..<maxno ofUSCHs>			GLOBAL	reject
>USCH ID	M		9.2.3.14		–	
Primary CCPCH RSCP	O		9.2.3.5		YES	ignore
DL Time Slot ISCP Info	O		9.2.3.2D	Applicable to 3.84Mcps TDD only	YES	ignore
DL Time Slot ISCP Info LCR	O		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	ignore
HS-DSCH Information	O		HS-DSCH TDD Information 9.2.3.3aa		YES	reject
HS-DSCH Information To Modify	O		9.2.1.30Q		YES	reject
HS-DSCH MAC-d Flows To Add	O		HS-DSCH MAC-d Flows Information 9.2.1.30OA		YES	reject
HS-DSCH MAC-d Flows To Delete	O		9.2.1.30OB		YES	reject
HS-PDSCH RL ID	O		RL ID		YES	reject

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
			9.2.1.49			
PDSCH-RL-ID	O		RL ID 9.2.1.49		YES	ignore
>UL Synchronisation Parameters LCR		0..1		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>Uplink Synchronisation Step Size	M		9.2.3.13J		–	
>Uplink Synchronisation Frequency	M		9.2.3.13I		–	
RL Information		0..<maxno ofRLs.			YES	ignore
>RL ID	M		9.2.1.49		–	
>RL Specific DCH Information	O		9.2.1.49A		–	
Primary CCPCH RSCP Delta	O		9.2.3.X		YES	ignore

Range bound	Explanation
maxnoofDCHs	Maximum number of DCHs for a UE.
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
maxnoofDSCHs	Maximum number of DSCHs for one UE.
maxnoofUSCHs	Maximum number of USCHs for one UE.
maxnoofRLs	Maximum number of RLs for one UE

9.1.40   DL POWER TIMESLOT CONTROL REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		–	
DL Time Slot ISCP Info	O		9.2.3.2D	Mandatory for 3.84Mcps TDD, not applicable to 1.28Mcps TDD	YES	ignore
DL Time Slot ISCP Info LCR	O		9.2.3.2F	Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD	YES	ignore
Primary CCPCH RSCP	O		9.2.3.5		YES	ignore
Primary CCPCH RSCP Delta	O		9.2.3.X		YES	ignore

9.2.3.5   Primary CCPCH RSCP

Received Signal Code Power is the received power on PCCPCH of the target cell after despreading. The reference point for the RSCP is the antenna connector at the UE, see ref. [14].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CCPCH RSCP			INTEGER(0..91)	According to mapping of the non-negative values in ref. [24].

9.2.3.X Primary CCPCH RSCP Delta

Primary CCPCH RSCP Delta is the offset used to report the negative reporting range of P-CCPCH RSCP as per [24].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CCPCH RSCP Delta			INTEGER(-5..-1,…)	If present, the actual value of Primary CCPCH RSCP = Primary CCPCH RSCP Delta

9.3.3 PDU Definitions

```
-- *************************************************************
--
-- PDU definitions for RNSAP.
--
-- *************************************************************

RNSAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *************************************************************
--
-- IE parameter types from other modules.
--
-- *************************************************************

IMPORTS
/* partly omitted */
    URA-Information,
    USCH-ID,
    USCH-Information,
    UL-Synchronisation-Parameters-LCR,
    TDD-DL-DPCH-TimeSlotFormat-LCR,
    TDD-UL-DPCH-TimeSlotFormat-LCR,
    MAChs-ResetIndicator,
    UL-TimingAdvanceCtrl-LCR,
    TDD-TPC-UplinkStepSize-LCR,
    PrimaryCCPCH-RSCP-Delta
FROM RNSAP-IEs


/* partly omitted */
    id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD,
    id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD,
    id-UL-CCTrCH-InformationItem-RL-AdditionRqstTDD,
    id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD,
    id-DL-CCTrCH-InformationItem-RL-AdditionRqstTDD,
    id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD,
    id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD,
    id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD,
    id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD,
    id-PrimaryCCPCH-RSCP-Delta

FROM RNSAP-Constants;
```

```
/* partly omitted */
-- **************************************************************
--
-- RADIO LINK SETUP REQUEST TDD
--
-- **************************************************************

/* partly omitted */

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    c-ID                        C-ID,
    frameOffset                 FrameOffset,
    specialBurstScheduling      SpecialBurstScheduling,
    primaryCCPCH-RSCP                PrimaryCCPCH-RSCP       OPTIONAL,
    dL-TimeSlot-ISCP                 DL-TimeSlot-ISCP-Info   OPTIONAL,
    --for 3.84Mcps TDD only
    iE-Extensions                   ProtocolExtensionContainer { {RL-Information-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-ISCP-LCR-Information-RL-SetupRqstTDD    CRITICALITY reject      EXTENSION    DL-TimeSlot-ISCP-LCR-Information PRESENCE
optional      }|
    { ID id-TSTD-Support-Indicator-RL-SetupRqstTDD             CRITICALITY ignore      EXTENSION    TSTD-Support-Indicator          PRESENCE
optional      }|
    --for 1.28Mcps TDD only
    { ID id-RL-Specific-DCH-Info    CRITICALITY ignore      EXTENSION    RL-Specific-DCH-Info    PRESENCE   optional }|
    { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional }|
    { ID id-UL-Synchronisation-Parameters-LCR          CRITICALITY ignore      EXTENSION    UL-Synchronisation-Parameters-LCR     PRESENCE
    optional      }| -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-PrimaryCCPCH-RSCP-Delta     CRITICALITY ignore      EXTENSION    PrimaryCCPCH-RSCP-Delta     PRESENCE    optional },
    ...
}

RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Permanent-NAS-UE-Identity               CRITICALITY ignore       EXTENSION Permanent-NAS-UE-Identity   PRESENCE optional }|
    { ID id-HSDSCH-TDD-Information                  CRITICALITY reject       EXTENSION HSDSCH-TDD-Information       PRESENCE optional }|
    { ID id-HSPDSCH-RL-ID                           CRITICALITY reject       EXTENSION RL-ID                       PRESENCE conditional }|
    -- This IE shall be present if HS-DSCH Information IE is present.
    { ID id-PDSCH-RL-ID              CRITICALITY ignore       EXTENSION RL-ID     PRESENCE optional },
    ...
}

/* partly omitted */
-- **************************************************************
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- **************************************************************

RadioLinkAdditionRequestTDD ::= SEQUENCE {
    protocolIEs                     ProtocolIE-Container        {{RadioLinkAdditionRequestTDD-IEs}},
```

```
    protocolExtensions              ProtocolExtensionContainer {{RadioLinkAdditionRequestTDD-Extensions}}              OPTIONAL,
    ...
}

RadioLinkAdditionRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstTDD   CRITICALITY reject  TYPE RL-Information-RL-AdditionRqstTDD   PRESENCE mandatory   },
    ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                         RL-ID,
    c-ID                          C-ID,
    frameOffset                   FrameOffset,
    diversityControlField         DiversityControlField,
    primaryCCPCH-RSCP             PrimaryCCPCH-RSCP        OPTIONAL,
    dL-TimeSlot-ISCP-Info         DL-TimeSlot-ISCP-Info   OPTIONAL,
    --for 3.84Mcps TDD only
    iE-Extensions                 ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD CRITICALITY reject     EXTENSION   DL-TimeSlot-ISCP-LCR-Information   PRESENCE
optional    }|
    --for 1.28Mcps TDD only
    { ID id-RL-Specific-DCH-Info        CRITICALITY ignore     EXTENSION   RL-Specific-DCH-Info PRESENCE    optional }|
    { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional }|
    { ID id-UL-Synchronisation-Parameters-LCR         CRITICALITY ignore     EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    }| -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-PrimaryCCPCH-RSCP-Delta    CRITICALITY ignore     EXTENSION   PrimaryCCPCH-RSCP-Delta    PRESENCE    optional },
    ...
}

RadioLinkAdditionRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Permanent-NAS-UE-Identity               CRITICALITY ignore      EXTENSION Permanent-NAS-UE-Identity   PRESENCE optional }|
    { ID id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD    CRITICALITY notify  EXTENSION UL-CCTrCH-InformationList-RL-AdditionRqstTDD  PRESENCE
optional    } |
    { ID id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD    CRITICALITY notify  EXTENSION DL-CCTrCH-InformationList-RL-AdditionRqstTDD  PRESENCE
optional    },
    ...
}

/* partly omitted */
-- **************************************************************
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- **************************************************************
/* partly omitted */
RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD                  CRITICALITY ignore      EXTENSION   PrimaryCCPCH-RSCP PRESENCE optional }|
    { ID id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD             CRITICALITY ignore      EXTENSION   DL-TimeSlot-ISCP-Info   PRESENCE optional }|
```

```
    { ID id-DL-Timeslot-ISCP-LCR-Information-RL-ReconfPrepTDD   CRITICALITY ignore     EXTENSION   DL-TimeSlot-ISCP-LCR-Information PRESENCE
optional    }|
    { ID id-HSDSCH-TDD-Information                              CRITICALITY reject     EXTENSION HSDSCH-TDD-Information    PRESENCE optional}|
    { ID id-HSDSCH-Information-to-Modify                        CRITICALITY reject     EXTENSION HSDSCH-Information-to-Modify    PRESENCE
optional}|
    { ID id-HSDSCH-MACdFlows-to-Add            CRITICALITY reject     EXTENSION HSDSCH-TDD-MACdFlows-Information       PRESENCE optional}|
    { ID id-HSDSCH-MACdFlows-to-Delete         CRITICALITY reject     EXTENSION HSDSCH-MACdFlows-to-Delete      PRESENCE optional}|
    { ID id-HSPDSCH-RL-ID                      CRITICALITY reject     EXTENSION RL-ID              PRESENCE optional}|
    { ID id-PDSCH-RL-ID            CRITICALITY ignore      EXTENSION RL-ID      PRESENCE optional }|
    { ID id-UL-Synchronisation-Parameters-LCR         CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR     PRESENCE
    optional    }|  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-RL-Information-RL-ReconfPrepTDD         CRITICALITY ignore      EXTENSION   RL-Information-RL-ReconfPrepTDD     PRESENCE     optional }|
    { ID id-PrimaryCCPCH-RSCP-Delta      CRITICALITY ignore      EXTENSION   PrimaryCCPCH-RSCP-Delta     PRESENCE    optional },
    ...
}


RL-Information-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF RL-InformationIE-RL-ReconfPrepTDD

RL-InformationIE-RL-ReconfPrepTDD ::= SEQUENCE {
    rL-ID                            RL-ID,
    rL-Specific-DCH-Info             RL-Specific-DCH-Info        OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { RL-InformationIE-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}


RL-InformationIE-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

/* partly omitted */
-- ************************************************************
--
-- DOWNLINK POWER TIMESLOT CONTROL REQUEST TDD
--
-- ************************************************************

DL-PowerTimeslotControlRequest ::= SEQUENCE {
    protocolIEs                 ProtocolIE-Container       {{DL-PowerTimeslotControlRequest-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{DL-PowerTimeslotControlRequest-Extensions}}          OPTIONAL,
    ...
}

DL-PowerTimeslotControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-timeSlot-ISCP   CRITICALITY ignore  TYPE DL-TimeSlot-ISCP-Info  PRESENCE optional},
    --Mandatory for 3.84Mcps TDD only
    ...
}

DL-PowerTimeslotControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD   CRITICALITY     ignore  EXTENSION    DL-TimeSlot-ISCP-LCR-Information   PRESENCE optional}|
    --Mandatory for 1.28Mcps TDD only
    { ID id-PrimCCPCH-RSCP-DL-PC-RqstTDD                   CRITICALITY ignore      EXTENSION PrimaryCCPCH-RSCP          PRESENCE optional }|
```

```
    { ID id-PrimaryCCPCH-RSCP-Delta      CRITICALITY ignore      EXTENSION    PrimaryCCPCH-RSCP-Delta      PRESENCE    optional },
    ...
}
```

/* partly omitted */

9.3.4   Information Element Definitions

```
-- ************************************************************
--
-- Information Element Definitions
--
-- ************************************************************

RNSAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN
```

/* partly omitted */

```
PrimaryCPICH-Power           ::= INTEGER (-100..500)
-- step 0.1 (Range -10.0..50.0) Unit is dBm

PrimaryCPICH-EcNo            ::= INTEGER (-30..30)

Primary-CPICH-Usage-For-Channel-Estimation ::= ENUMERATED {
    primary-CPICH-may-be-used,
    primary-CPICH-shall-not-be-used
}

PrimaryCCPCH-RSCP            ::= INTEGER (0..91)
-- Mapping of non-negative values aAccording to maping in [1424]

PrimaryCCPCH-RSCP-Delta      ::= INTEGER (-5..-1,...)
-- Mapping of negative values according to [24]
```

/* partly omitted */

9.3.6 Constant Definitions

```
-- ************************************************************
--
-- Constant definitions
--
-- ************************************************************

RNSAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN
/* partly omitted */

id-ExtendedGSMCellIndividualOffset                                   ProtocolIE-ID ::= 514
id-RL-ParameterUpdateIndicationFDD-RL-InformationList                ProtocolIE-ID ::= 518
id-Primary-CPICH-Usage-For-Channel-Estimation                       ProtocolIE-ID ::= 519
id-Secondary-CPICH-Information-Change                               ProtocolIE-ID ::= 521
id-UE-Support-Of-Dedicated-Pilots-For-Channel-Estimation            ProtocolIE-ID ::= 522
id-UE-Support-Of-Dedicated-Pilots-For-Channel-Estimation-Of-HS-DSCH ProtocolIE-ID ::= 523
id-RL-ParameterUpdateIndicationFDD-RL-Information-Item               ProtocolIE-ID ::= 524
id-Phase-Reference-Update-Indicator                                 ProtocolIE-ID ::= 525
id-Unidirectional-DCH-Indicator                                     ProtocolIE-ID ::= 526
id-RL-Information-RL-ReconfPrepTDD                                   ProtocolIE-ID ::= 527
id-Multiple-RL-InformationResponse-RL-ReconfReadyTDD                ProtocolIE-ID ::= 528
id-RL-ReconfigurationResponseTDD-RL-Information                      ProtocolIE-ID ::= 529
id-Satellite-Almanac-Information-ExtItem                             ProtocolIE-ID ::= 530
id-HSDSCH-Information-to-Modify-Unsynchronised                       ProtocolIE-ID ::= 533
id-TnlQos                                                           ProtocolIE-ID ::= 534
id-RTLoadValue                                                      ProtocolIE-ID ::= 535
id-NRTLoadInformationValue                                          ProtocolIE-ID ::= 536
id-PrimaryCCPCH-RSCP-Delta                                          ProtocolIE-ID ::= 539

END
```

CR-Form-v7

CHANGE REQUEST

| ⌘ | **25.423 CR 934** | ⌘**rev** | **-** | ⌘ | Current version: | **6.0.0** | ⌘ |

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

Proposed change affects: UICC apps⌘ ☐   ME ☐ Radio Access Network **X** Core Network ☐

Title:	⌘	Extension of the range of PCCPCH RSCP

Source:	⌘	RAN3

Work item code:⌘	TEI5		**Date:** ⌘	16/02/2004

Category:	⌘	**A**		**Release:** ⌘	Rel-6

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.

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)
Rel-6   (Release 6)

Reason for change:	⌘	In RAN4#25 meeting, in order to optimize the cell design, it was requested that extend the lowest value of PCCPCH RSCP from –115dBm to –120dBm.

Summary of change:⌘	1. Introduce a new *Primary CCPCH RSCP Delta* IE, with the existed *Primary CCPCH RSCP* IE, the range of Primary CCPCH RSCP is extended from (0..91) to (-5..91).
	2. Delete the additional '>' before *UL Synchronisation Parameters LCR* IE in section 9.1.11.2.
	3. Corresponding changes have been made in ASN.1.
	Impact Analysis:
	Impact assessment towards the previous version of the specification (same release):
	The impact can be considered isolated because the change affects only the usage of PCCPCH RSCP.

Consequences if not approved:	⌘	If this CR is not approved, The range of PCCPCH RSCP will not be consistent with RAN4 specification and operators may not be able to optimize the cell design.

Clauses affected:	⌘	8.3.1.2, 8.3.2.2, 8.3.4.2, 8.3.17.2, 9.1.3.2, 9.1.6.2, 9.1.11.2, 9.1.40, 9.2.3.5, 9.3.3, 9.3.4, 9.3.6 new: 9.2.3.X

		Y	**N**		
Other specs	⌘	**X**	☐	Other core specifications ⌘	TS25.423 Rel-5 CR933
					TS25.433 Rel-5 CR977
					TS25.433 Rel-6 CR978

affected:	X	Test specifications	
	X	O&M Specifications	

Other comments:	⌘	Numbering for new sections: 9.2.3.X = 9.2.3.5a

How to create CRs using this form:

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

8.3.1 Radio Link Setup

8.3.1.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more radio links.

The connection-oriented service of the signalling bearer shall be established in conjunction with this procedure.
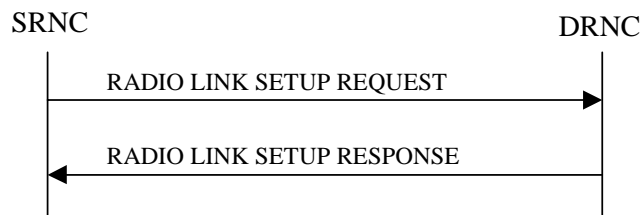
8.3.1.2 Successful Operation

Figure 5: Radio Link Setup procedure: Successful Operation

/* partly omitted */

Radio Link Handling:

Diversity Combination Control:

[FDD - The *Diversity Control Field* IE indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not.

- If the *Diversity Control Field* IE is set to "May" (be combined with another RL), the DRNS shall decide for any of the alternatives.

- If the *Diversity Control Field* IE is set to "Must", the DRNS shall combine the RL with one of the other RL.

- If the *Diversity Control Field* IE is set to "Must not", the DRNS shall not combine the RL with any other existing RL.

When an RL is to be combined, the DRNS shall choose which RL(s) to combine it with.]

[FDD - In the RADIO LINK SETUP RESPONSE message, the DRNC shall indicate for each RL with the Diversity Indication in the *RL Information Response* IE whether the RL is combined or not.]

- [FDD - In case of not combining with a RL previously listed in the RADIO LINK SETUP RESPONSE message or for the first RL in the RADIO LINK SETUP RESPONSE message, the DRNC shall include in the *DCH Information Response* IE in the RADIO LINK SETUP RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

- [FDD - Otherwise in case of combining, the *RL ID* IE indicates (one of) the RL(s) previously listed in this RADIO LINK SETUP RESPONSE message with which the concerned RL is combined.]

[TDD - The DRNC shall always include in the RADIO LINK SETUP RESPONSE message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH, DSCH and USCH of the RL.]

In the case of a set of co-ordinated DCHs requiring a new transport bearer the *Binding ID* IE and the *Transport Layer Address* IE shall be included in the RADIO LINK SETUP RESPONSE message for only one of the DCHs in the set of co-ordinated DCHs.

[FDD-Transmit Diversity]:

[FDD - If the cell in which the RL is being set up is capable to provide Close loop Tx diversity, the DRNC shall include the *Closed Loop Timing Adjustment Mode* IE in the RADIO LINK SETUP RESPONSE message indicating the configured Closed loop timing adjustment mode of the cell.]

[FDD - When the *Diversity Mode* IE is set to "STTD", "Closed loop mode1", or "Closed loop mode2", the DRNC shall activate/deactivate the Transmit Diversity for each Radio Link in accordance with the *Transmit Diversity Indicator* IE].

DL Power Control:

[FDD - If both the *Initial DL TX Power* IE and *Uplink SIR Target* IE are included in the message, the DRNS shall use the indicated DL TX Power and Uplink SIR Target as initial value. If the value of the *Initial DL TX Power* IE is outside the configured DL TX power range, the DRNS shall apply these constrains when setting the initial DL TX power. The DRNS shall also include the configured DL TX power range defined by *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK SETUP RESPONSE message. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IE or lower than indicated by the *Minimum DL TX Power* IE on any DL DPCH of the RL except during compressed mode, when the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[FDD - If both the *Initial DL TX Power* and the *Uplink SIR Target* IEs are not included in the RADIO LINK SETUP REQUEST message, then DRNC shall determine the initial Uplink SIR Target and include it in the *Uplink SIR Target* IE in the RADIO LINK SETUP RESPONSE message.]

[TDD - The DRNC shall use the *Uplink SIR Target CCTrCH* IEs in the RADIO LINK SETUP RESPONSE message to indicate for any UL CCTrCH an Uplink SIR Target value in case this is deviating from the value included in the *Uplink SIR Target* IE specified for the Radio Link. If in any [3.84Mcps TDD - *UL CCTrCH Information* IE] [1.28Mcps TDD - *UL CCTrCH Information LCR* IE] the *Uplink SIR Target CCTrCH* IE is not included, the value of the *Uplink SIR Target* IE shall apply to the respective UL CCTrCH.]

[FDD - If the *Primary CPICH Ec/No* IE is present, the DRNC should use the indicated value when deciding the Initial DL TX Power. If the *Enhanced Primary CPICH Ec/No* IE is present, the DRNC should use the indicated value when deciding the Initial DL Tx Power.]

[TDD - If ~~the *Primary CCPCH RSCP* IE~~ [3.84Mcps TDD - ~~and/or~~ the *DL Time Slot ISCP Info* IE] [1.28Mcps TDD - ~~and/or~~ the *DL Time Slot ISCP Info LCR* IE] ~~are~~ is present, the ~~DRNC~~ DRNS should use the indicated value~~s~~ when deciding the Initial DL TX Power~~.~~ for the Radio Link. The DRNS shall use the indicated DL Timeslot ISCP when determining the initial DL power per timeslot as specified in [22], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged.]

[TDD-If the *Primary CCPCH RSCP Delta* IE is included, the DRNS should assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the DRNS should assume that the reported value is in the non-negative range as per [24], and the value is equal to the *Primary CCPCH RSCP* IE. The DRNS should use the indicated value when deciding the Initial DL TX Power for the Radio Link.]

`/* partly omitted */`

8.3.2   Radio Link Addition

8.3.2.1   General

This procedure is used for establishing the necessary resources in the DRNS for one or more additional RLs towards a UE when there is already at least one RL established to the concerned UE via this DRNS.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Radio Link Addition procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

[FDD - The Radio Link Addition procedure serves to establish one or more new Radio Links which do not contain the DSCH. If the DSCH shall be moved into a new Radio Link, the Radio Link reconfiguration procedure shall be applied.]

[TDD - The Radio Link Addition procedure serves to establish a new Radio Link with the DSCH and USCH included, if they existed before.]
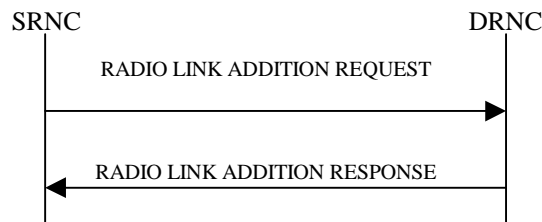
8.3.2.2   Successful Operation

SRNC   DRNC

RADIO LINK ADDITION REQUEST

RADIO LINK ADDITION RESPONSE

Figure 7: Radio Link Addition procedure: Successful Operation

/* partly omitted */

Radio Link Handling:

Diversity Combination Control:

The *Diversity Control Field* IE indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not on the Iur.

- If the *Diversity Control Field* IE is set to "May" (be combined with another RL), the DRNS shall decide for any of the alternatives.

- If the *Diversity Control Field* IE is set to "Must", the DRNS shall combine the RL with one of the other RL. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.

- If the *Diversity Control Field* IE is set to "Must not", the DRNS shall not combine the RL with any other existing RL.

In the case of not combining a RL with a RL established with a previous Radio Link Setup or Radio Link Addition Procedure or a RL previously listed in the RADIO LINK ADDITION RESPONSE message, the DRNC shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that no combining is done. In this case the DRNC shall include in the *DCH Information Response* IE both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message.

In the case of combining with a RL established with a previous Radio Link Setup or Radio Link Addition Procedure or with a RL previously listed in this RADIO LINK ADDITION RESPONSE message, the DRNC shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that the RL is combined. In this case, the *RL ID* IE indicates (one of) the previously established RL(s) or a RL previously listed in this RADIO LINK ADDITION RESPONSE message with which the new RL is combined.

[TDD - The DRNC shall always include in the RADIO LINK ADDITION RESPONSE message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DSCH and USCH of the RL.]

In the case of a set of co-ordinated DCHs, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Binding ID* IE and the *Transport Layer Address* IE for only one of the DCHs in the set of co-ordinated DCHs.

If the DRNS needs to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) when starting to utilise a new Radio Link, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Allowed UL Rate* IE in the *DCH Information Response* IE for this Radio Link.

If the DRNS needs to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) when starting to utilise a new Radio Link, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Allowed DL Rate* IE in the *DCH Information Response* IE for this Radio Link.

[FDD-Transmit Diversity]:

The DRNS shall activate any feedback mode diversity according to the received settings.

[FDD - If the cell in which the RL is being added is capable to provide Close loop Tx diversity, the DRNC shall indicate the Closed loop timing adjustment mode of the cell by includiing the *Closed Loop Timing Adjustment Mode* IE in the RADIO LINK ADDITION RESPONSE message.]

[FDD - When the *Transmit Diversity Indicator* IE is present the DRNS shall activate/deactivate the Transmit Diversity for each new Radio Link in accordance with the *Transmit Diversity Indicator* IE using the diversity mode of the existing Radio Link(s).]

DL Power Control:

[FDD - If the *Primary CPICH Ec/No* IE or the *Primary CPICH Ec/No* IE and the *Enhanced Primary CPICH Ec/No* IE measured by the UE are included for an RL in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power for this RL. If the *Primary CPICH Ec/No* IE is not present, the DRNS shall set the Initial DL TX Power based on the power relative to the Primary CPICH power used by the existing RLs.]

[TDD - If the *Primary CCPCH RSCP* IE [3.84Mcps TDD - and/or the *DL Time Slot ISCP Info* IE] [1.28Mcps TDD - and/or the *DL Time Slot ISCP Info LCR* IE] are is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use them it in the calculation of the Initial DL TX Power.]

[TDD-If the *Primary CCPCH RSCP Delta* IE is included, the DRNS shall assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the DRNS shall assume that the reported value is in the non-negative range as per [24], and the value is equal to the *Primary CCPCH RSCP* IE. The DRNS shall use it in the calculation of the Initial DL TX Power.]

[TDD - If the *Primary CCPCH RSCP* IE, *Primary CCPCH RSCP Delta* IE, [3.84Mcps TDD - and the *DL Time Slot ISCP Info* IE] [1.28Mcps TDD - and the *DL Time Slot ISCP Info LCR* IE] are not present, the DRNS shall set the Initial DL TX Power based on the power relative to the Primary CCPCH power used by the existing RL.]

/* partly omitted */

8.3.4   Synchronised Radio Link Reconfiguration Preparation

8.3.4.1   General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of Radio Link(s) related to one UE-UTRAN connection within a DRNS.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Synchronised Radio Link Reconfiguration Preparation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.
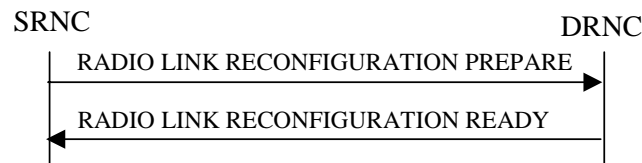
8.3.4.2 Successful Operation

SRNC   DRNC

RADIO LINK RECONFIGURATION PREPARE

RADIO LINK RECONFIGURATION READY

Figure 10: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

/* partly omitted */

General

If the requested modifications are allowed by the DRNC and the DRNC has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message. When this procedure has been completed successfully there exists a Prepared Reconfiguration, as defined in subclause 3.1.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Layer Address* IE and *Binding ID* IE in the *DSCHs To Modify* IE, *DSCHs To Add* IE, [TDD - *USCHs To Modify* IE, *USCHs To Add* IE], *HS-DSCH Information* IE, *HS-DSCH Information To Modify* IE, *HS-DSCH MAC-d Flows To Add* IE or in the *RL Specific DCH Information* IEs, the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for any Transport Channel or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

The DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE for any Transport Channel or HS-DSCH MAC-d flow being added, or any Transport Channel or HS-DSCH MAC-d flow being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iur interface, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included for only one of the DCHs in the set of co-ordinated DCHs.

In the case of a Radio Link being combined with another Radio Link within the DRNS, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included for only one of the combined Radio Links.

Any allowed rate for the uplink of a modified DCH provided for the old configuration will not be valid for the new configuration. If the DRNS needs to limit the user rate in the uplink of a DCH due to congestion caused by the UL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Allowed UL Rate* IE in the *DCH Information Response* IE for this Radio Link.

Any allowed rate for the downlink of a modified DCH provided for the old configuration will not be valid for the new configuration. If the DRNS needs to limit the user rate in the downlink of a DCH due to congestion caused by the DL UTRAN Dynamic Resources (see subclause 9.2.1.79) in the new configuration for a Radio Link, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Allowed DL Rate* IE in the *DCH Information Response* IE for this Radio Link.

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s) and the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Maximum Uplink SIR* IE and *Minimum Uplink SIR* IE for each Radio Link when these values are changed.

[FDD - If the DL TX power upper or lower limit has been re-configured, the DRNC shall include in the RADIO LINK RECONFIGURATION READY message the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE respectively. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IE or lower than indicated by the *Minimum DL TX Power* IE on any DL DPCH of the RL -except during compressed mode, when the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[3.84 Mcps TDD - If the DL TX power upper or lower limit has been re-configured, the DRNC shall include the new value(s) in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK RECONFIGURATION READY message. If the maximum or minimum power needs to be different for particular DCH type CCTrCHs, the DRNC shall include the new value(s) for that CCTrCH in the *CCTrCH Maximum DL TX Power* IE and *CCTrCH Minimum DL TX Power*. The DRNS shall not transmit with a higher power than indicated by the appropriate *Maximum DL TX Power* IE/*CCTrCH Maximum DL TX Power* IE or lower than indicated by the appropriate *Minimum DL TX Power* IE/*CCTrCH Minimum DL TX Power* IE on any DL DPCH within each CCTrCH of the RL.]

[1.28 Mcps TDD - If the DL TX power upper or lower limit has been re-configured, the DRNC shall include the new value(s) in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE in the RADIO LINK RECONFIGURATION READY message. If the maximum or minimum power needs to be different for particular timeslots within a DCH type CCTrCH, the DRNC shall include the new value(s) for that timeslot in the *Maximum DL TX Power* IE and *Minimum DL TX Power* within the *DL Timeslot Information LCR* IE. The DRNS shall not transmit with a higher power than indicated by the appropriate *Maximum DL TX Power* IE or lower than indicated by the appropriate *Minimum DL TX Power* IE on any DL DPCH within each timeslot of the RL.]

[TDD - If ~~the *Primary CCPCH RSCP* IE and/or~~ the [3.84Mcps TDD - *DL Time Slot ISCP Info* IE][1.28Mcps TDD - *DL Time Slot ISCP Info LCR* IE] ~~are~~ is present, the ~~DRNC~~ DRNS should use the indicated values when deciding the Initial DL TX Power.]

[TDD-If the *Primary CCPCH RSCP Delta* IE is included, the DRNS shall assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the DRNS shall assume that the reported value is in the non-negative range as per [24], and the value is equal to the *Primary CCPCH RSCP* IE. The DRNS shall use the indicated values when deciding the Initial DL TX Power.]

`/* partly omitted */`

8.3.17 Downlink Power Timeslot Control [TDD]

8.3.17.1 General

The purpose of this procedure is to provide the DRNS with updated DL Timeslot ISCP values to use when deciding the DL TX Power for each timeslot.

This procedure shall use the signalling bearer connection for the relevant UE Context.

The Downlink Power Timeslot Control procedure can be initiated by the SRNC at any time after establishing a Radio Link. If the SRNC has initiated deletion of the last Radio Link in this DRNS, the Downlink Power Timeslot Control procedure shall not be initiated.

8.3.17.2 Successful Operation

```
        SRNC                                              DRNC

          |                                                 |
          |        DL POWER TIMESLOT CONTROL REQUEST         |
          | ----------------------------------------------> |
          |                                                 |
```

Figure 26A: Downlink Power Timeslot Control procedure, Successful Operation

The Downlink Power Timeslot Control procedure is initiated by the SRNC sending a DL POWER TIMESLOT CONTROL REQUEST message to the DRNC.

Upon receipt of the DL POWER TIMESLOT CONTROL REQUEST message , the DRNS shall use the included [3.84Mcps TDD - *DL Timeslot ISCP Info* IE] [1.28Mcps TDD - *DL Timeslot ISCP Info LCR* IE] value when deciding the DL TX Power for each timeslot as specified in [22], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link in which the interference is low, and increase the DL TX power in those timeslots in which the interference is high, while keeping the total downlink power in the radio link unchanged.

If the *Primary CCPCH RSCP Delta* IE is included, the DRNS shall assume that the reported value for Primary CCPCH RSCP is in the negative range as per [24], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the DRNS shall assume that the reported value is in the non-negative range as per [24], and the value is equal to the *Primary CCPCH RSCP* IE. ~~If the *Primary CCPCH RSCP* IE is present, t~~The DRNS should use the indicated value for HS-DSCH scheduling and transmit power adjustment.

`/* partly omitted */`

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.2   TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
SRNC-ID	M		RNC-ID 9.2.1.50		YES	reject
S-RNTI	M		9.2.1.53		YES	reject
D-RNTI	O		9.2.1.24		YES	reject
UL Physical Channel Information		1			YES	reject
>Maximum Number of Timeslots	M		9.2.3.3A	For the UL	–	
>Minimum Spreading Factor	M		9.2.3.4A	For the UL	–	
>Maximum Number of UL Physical Channels per Timeslot	M		9.2.3.3B		–	
>Support of 8PSK	O		9.2.3.7H	Applicable to 1.28Mcps TDD only	YES	ignore
DL Physical Channel Information		1			YES	reject
>Maximum Number of Timeslots	M		9.2.3.3A	For the DL	–	
>Minimum Spreading Factor	M		9.2.3.4A	For the DL	–	
>Maximum Number of DL Physical Channels	M		9.2.3.3C		–	
>Maximum Number of DL Physical Channels per Timeslot	O		9.2.3.3D		YES	ignore
>Support of 8PSK	O		9.2.3.7H	Applicable to 1.28Mcps TDD only	YES	ignore
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL CCTrCH Information		0..<maxnoofCCTrCHs>		For DCH and USCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the UL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
>TDD TPC Uplink Step Size	O		9.2.3.10a	Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD	YES	reject
DL CCTrCH Information		0..<maxnoofCCTrCHs>		For DCH and DSCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the DL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
>TDD TPC Downlink Step Size	M		9.2.3.10		–	
>TPC CCTrCH List		0..<maxnoCCTrCHs>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID		–	

			9.2.3.2			
DCH Information	O		DCH TDD Information 9.2.3.2A		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.3a		YES	reject
USCH Information	O		9.2.3.15		YES	reject
RL Information		*1*			YES	reject
>RL ID	M		9.2.1.49		–	
>C-ID	M		9.2.1.6		–	
>Frame Offset	M		9.2.1.30		–	
>Special Burst Scheduling	M		9.2.3.7D		–	
>Primary CCPCH RSCP	O		9.2.3.5		–	
>DL Time Slot ISCP Info	O		9.2.3.2D	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	reject
>TSTD Support Indicator	O		9.2.3.13F	Applicable to 1.28Mcps TDD only	YES	ignore
>RL Specific DCH Information	O		9.2.1.49A		YES	ignore
>Delayed Activation	O		9.2.1.19Aa		YES	reject
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.13J		–	
>>Uplink Synchronisation Frequency	M		9.2.3.13I		–	
>Primary CCPCH RSCP Delta	O		9.2.3.X		YES	ignore
Permanent NAS UE Identity	O		9.2.1.73		YES	ignore
HS-DSCH Information	O		HS-DSCH TDD Information 9.2.3.3aa		YES	reject
HS-PDSCH RL ID	C - InfoHSDSCH		RL ID 9.2.1.49		YES	reject
PDSCH-RL-ID	O		RL ID 9.2.1.49		YES	ignore

Condition	Explanation
InfoHSDSCH	This IE shall be present if *HS-DSCH Information* IE is present.

Range bound	Explanation
maxnoofCCTrCHs	Maximum number of CCTrCH for one UE.

9.1.6   RADIO LINK ADDITION REQUEST

9.1.6.2   TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
RL Information		1			YES	reject
>RL ID	M		9.2.1.49		–	
>C-ID	M		9.2.1.6		–	
>Frame Offset	M		9.2.1.30		–	
>Diversity Control Field	M		9.2.1.20		–	
>Primary CCPCH RSCP	O		9.2.3.5		–	
>DL Time Slot ISCP Info	O		9.2.3.2D	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	reject
>RL Specific DCH Information	O		9.2.1.49A		YES	ignore
>Delayed Activation	O		9.2.1.19Aa		YES	reject
>UL Synchronisation Parameters LCR		0..1		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.13J		–	
>>Uplink Synchronisation Frequency	M		9.2.3.13I		–	
> Primary CCPCH RSCP Delta	O		9.2.3.X		YES	ignore
Permanent NAS UE Identity	O		9.2.1.73		YES	ignore
UL CCTrCH Information		0..< maxno ofCCTr CHs >			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TDD TPC Uplink Step Size	O		9.2.3.10a	Applicable to 1.28Mcps TDD only	–	
DL CCTrCH Information		0..< maxno ofCCTr CHs >			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TDD TPC Downlink Step Size	O		9.2.3.10		–	

Range bound	Explanation
maxnoofCCTrCHs	Maximum number of CCTrCH for one UE.

9.1.11   RADIO LINK RECONFIGURATION PREPARE

9.1.11.2   TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL CCTrCH To Add		0..<maxno ofCCTrCHs>		For DCH and USCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the UL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
>UL SIR Target	O		Uplink SIR 9.2.1.69	Mandatory for 1.28Mcps TDD; not applicable to 3.84Mcps TDD	YES	reject
>TDD TPC Uplink Step Size	O		9.2.3.10a	Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD	YES	reject
UL CCTrCH To Modify		0..<maxno ofCCTrCHs>			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	O		9.2.1.63	For the UL.	–	
>TFCI Coding	O		9.2.3.11		–	
>Puncture Limit	O		9.2.1.46		–	
>UL SIR Target	O		Uplink SIR 9.2.1.69	Applicable to 1.28Mcps TDD only	YES	reject
>TDD TPC Uplink Step Size	O		9.2.3.10a	Applicable to 1.28Mcps TDD only	YES	reject
UL CCTrCH to Delete		0..<maxno ofCCTrCHs>			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
DL CCTrCH To Add		0..<maxno ofCCTrCHs>		For DCH and DSCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the DL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
>TPC CCTrCH List		0..<maxno CCTrCHs>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.2		–	
>TDD TPC Downlink Step Size	O		9.2.3.10		YES	reject
DL CCTrCH To Modify		0..<maxno ofCCTrCHs>			EACH	notify

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	O		9.2.1.63	For the DL.	–	
>TFCI Coding	O		9.2.3.11		–	
>Puncture Limit	O		9.2.1.46		–	
>TPC CCTrCH List		0..<maxno CCTrCHs>		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.2		–	
>TDD TPC Downlink Step Size	O		9.2.3.10		YES	reject
DL CCTrCH to Delete		0..<maxno ofCCTrCH s>			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
DCHs To Modify	O		TDD DCHs To Modify 9.2.3.8B		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.2A		YES	reject
DCHs to Delete		0..<maxno ofDCHs>			GLOBAL	reject
>DCH ID	M		9.2.1.16		–	
DSCHs To Modify		0..<maxno ofDSCHs>			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		–	
>CCTrCH ID	O		9.2.3.2	DL CCTrCH in which the DSCH is mapped.	–	
>TrCH Source Statistics Descriptor	O		9.2.1.65		–	
>Transport Format Set	O		9.2.1.64		–	
>Allocation/Retention Priority	O		9.2.1.1		–	
>Scheduling Priority Indicator	O		9.2.1.51A		–	
>BLER	O		9.2.1.4		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
>Traffic Class	O		9.2.1.58A		YES	ignore
>Binding ID	O		9.2.1.3	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>Transport Layer Address	O		9.2.1.62	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
DSCHs To Add	O		DSCH TDD Information 9.2.3.3a		YES	reject
DSCHs to Delete		0..<maxno ofDSCHs>			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		–	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
USCHs To Modify		0..<maxno ofUSCHs>			GLOBAL	reject
>USCH ID	M		9.2.3.14		–	
>CCTrCH ID	O		9.2.3.2	UL CCTrCH in which the USCH is mapped.	–	
>TrCH Source Statistics Descriptor	O		9.2.1.65		–	
>Transport Format Set	O		9.2.1.64		–	
>Allocation/Retention Priority	O		9.2.1.1		–	
>Scheduling Priority Indicator	O		9.2.1.51A		–	
>BLER	O		9.2.1.4		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
>TNL QoS	O		9.2.1.56A		YES	ignore
>RB Info		0..<maxno ofRB>		All Radio Bearers using this USCH	–	
>>RB Identity	M		9.2.3.5B		–	
>Traffic class	O		9.2.1.58A		YES	ignore
>Binding ID	O		9.2.1.3	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>Transport Layer Address	O		9.2.1.62	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
USCHs To Add	O		USCH Information 9.2.3.15		YES	reject
USCHs to Delete		0..<maxno ofUSCHs>			GLOBAL	reject
>USCH ID	M		9.2.3.14		–	
Primary CCPCH RSCP	O		9.2.3.5		YES	ignore
DL Time Slot ISCP Info	O		9.2.3.2D	Applicable to 3.84Mcps TDD only	YES	ignore
DL Time Slot ISCP Info LCR	O		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	ignore
HS-DSCH Information	O		HS-DSCH TDD Information 9.2.3.3aa		YES	reject
HS-DSCH Information To Modify	O		9.2.1.30Q		YES	reject
HS-DSCH MAC-d Flows To Add	O		HS-DSCH MAC-d Flows Information 9.2.1.30OA		YES	reject
HS-DSCH MAC-d Flows To Delete	O		9.2.1.30OB		YES	reject
HS-PDSCH RL ID	O		RL ID		YES	reject

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
			9.2.1.49			
PDSCH-RL-ID	O		RL ID 9.2.1.49		YES	ignore
➤UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>Uplink Synchronisation Step Size	M		9.2.3.13J		–	
>Uplink Synchronisation Frequency	M		9.2.3.13I		–	
RL Information		*0..<maxno ofRLs.*			YES	ignore
>RL ID	M		9.2.1.49		–	
>RL Specific DCH Information	O		9.2.1.49A		–	
Primary CCPCH RSCP Delta	O		9.2.3.X		YES	ignore

Range bound	Explanation
maxnoofDCHs	Maximum number of DCHs for a UE.
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
maxnoofDSCHs	Maximum number of DSCHs for one UE.
maxnoofUSCHs	Maximum number of USCHs for one UE.
maxnoofRLs	Maximum number of RLs for one UE

9.1.40 DL POWER TIMESLOT CONTROL REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	ignore
Transaction ID	M		9.2.1.59		–	
DL Time Slot ISCP Info	O		9.2.3.2D	Mandatory for 3.84Mcps TDD, not applicable to 1.28Mcps TDD	YES	ignore
DL Time Slot ISCP Info LCR	O		9.2.3.2F	Mandatory for 1.28Mcps TDD, not applicable to 3.84Mcps TDD	YES	ignore
Primary CCPCH RSCP	O		9.2.3.5		YES	ignore
Primary CCPCH RSCP Delta	O		9.2.3.X		YES	ignore

9.2.3.5 Primary CCPCH RSCP

Received Signal Code Power is the received power on PCCPCH of the target cell after despreading. The reference point for the RSCP is the antenna connector at the UE, see ref. [14].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CCPCH RSCP			INTEGER(0..91)	According to mapping of the non-negative values in ref. [24].

9.2.3.X   Primary CCPCH RSCP Delta

Primary CCPCH RSCP Delta is the offset used to report the negative reporting range of P-CCPCH RSCP as per [24].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CCPCH RSCP Delta			INTEGER(-5..-1,…)	If present, the actual value of Primary CCPCH RSCP = Primary CCPCH RSCP Delta

9.3.3   PDU Definitions

```
-- *************************************************************
--
-- PDU definitions for RNSAP.
--
-- *************************************************************

RNSAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *************************************************************
--
-- IE parameter types from other modules.
--
-- *************************************************************

IMPORTS
/* partly omitted */
    URA-Information,
    USCH-ID,
    USCH-Information,
    UL-Synchronisation-Parameters-LCR,
    TDD-DL-DPCH-TimeSlotFormat-LCR,
    TDD-UL-DPCH-TimeSlotFormat-LCR,
    MAChs-ResetIndicator,
    UL-TimingAdvanceCtrl-LCR,
    TDD-TPC-UplinkStepSize-LCR,
    PrimaryCCPCH-RSCP-Delta
FROM RNSAP-IEs


/* partly omitted */
    id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD,
    id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD,
    id-UL-CCTrCH-InformationItem-RL-AdditionRqstTDD,
    id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD,
    id-DL-CCTrCH-InformationItem-RL-AdditionRqstTDD,
    id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD,
    id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD,
    id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD,
    id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD,
    id-PrimaryCCPCH-RSCP-Delta

FROM RNSAP-Constants;
```

```
/* partly omitted */
-- ***************************************************************
--
-- RADIO LINK SETUP REQUEST TDD
--
-- ***************************************************************

/* partly omitted */

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    c-ID                        C-ID,
    frameOffset                 FrameOffset,
    specialBurstScheduling      SpecialBurstScheduling,
    primaryCCPCH-RSCP           PrimaryCCPCH-RSCP       OPTIONAL,
    dL-TimeSlot-ISCP            DL-TimeSlot-ISCP-Info   OPTIONAL,
    --for 3.84Mcps TDD only
    iE-Extensions               ProtocolExtensionContainer { {RL-Information-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-ISCP-LCR-Information-RL-SetupRqstTDD   CRITICALITY reject      EXTENSION    DL-TimeSlot-ISCP-LCR-Information PRESENCE
optional    }|
    { ID id-TSTD-Support-Indicator-RL-SetupRqstTDD            CRITICALITY ignore      EXTENSION    TSTD-Support-Indicator         PRESENCE
optional    }|
    --for 1.28Mcps TDD only
    { ID id-RL-Specific-DCH-Info    CRITICALITY ignore      EXTENSION    RL-Specific-DCH-Info    PRESENCE    optional }|
    { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional }|
    { ID id-UL-Synchronisation-Parameters-LCR                CRITICALITY ignore      EXTENSION    UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    }| -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-PrimaryCCPCH-RSCP-Delta     CRITICALITY ignore      EXTENSION    PrimaryCCPCH-RSCP-Delta     PRESENCE    optional },
    ...
}

RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Permanent-NAS-UE-Identity               CRITICALITY ignore      EXTENSION Permanent-NAS-UE-Identity    PRESENCE optional }|
    { ID id-HSDSCH-TDD-Information                  CRITICALITY reject      EXTENSION HSDSCH-TDD-Information    PRESENCE optional }|
    { ID id-HSPDSCH-RL-ID                           CRITICALITY reject      EXTENSION RL-ID                         PRESENCE conditional }|
    -- This IE shall be present if HS-DSCH Information IE is present.
    { ID id-PDSCH-RL-ID             CRITICALITY ignore      EXTENSION RL-ID     PRESENCE optional },
    ...
}

/* partly omitted */
-- ***************************************************************
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- ***************************************************************

RadioLinkAdditionRequestTDD ::= SEQUENCE {
    protocolIEs                 ProtocolIE-Container        {{RadioLinkAdditionRequestTDD-IEs}},
```

```
    protocolExtensions              ProtocolExtensionContainer {{RadioLinkAdditionRequestTDD-Extensions}}                    OPTIONAL,
    ...
}

RadioLinkAdditionRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstTDD   CRITICALITY reject  TYPE RL-Information-RL-AdditionRqstTDD    PRESENCE mandatory   },
    ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    c-ID                       C-ID,
    frameOffset                FrameOffset,
    diversityControlField      DiversityControlField,
    primaryCCPCH-RSCP          PrimaryCCPCH-RSCP      OPTIONAL,
    dL-TimeSlot-ISCP-Info      DL-TimeSlot-ISCP-Info  OPTIONAL,
    --for 3.84Mcps TDD only
    iE-Extensions              ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD CRITICALITY reject     EXTENSION   DL-TimeSlot-ISCP-LCR-Information   PRESENCE
optional    }|
    --for 1.28Mcps TDD only
    { ID id-RL-Specific-DCH-Info        CRITICALITY ignore     EXTENSION   RL-Specific-DCH-Info PRESENCE    optional }|
    { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional }|
    { ID id-UL-Synchronisation-Parameters-LCR         CRITICALITY ignore     EXTENSION  UL-Synchronisation-Parameters-LCR     PRESENCE
    optional    }| -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-PrimaryCCPCH-RSCP-Delta    CRITICALITY ignore     EXTENSION  PrimaryCCPCH-RSCP-Delta    PRESENCE   optional },
    ...
}

RadioLinkAdditionRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Permanent-NAS-UE-Identity                 CRITICALITY ignore        EXTENSION Permanent-NAS-UE-Identity   PRESENCE optional }|
    { ID id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD   CRITICALITY notify  EXTENSION UL-CCTrCH-InformationList-RL-AdditionRqstTDD  PRESENCE
optional    } |
    { ID id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD   CRITICALITY notify  EXTENSION DL-CCTrCH-InformationList-RL-AdditionRqstTDD  PRESENCE
optional    },
    ...
}
/* partly omitted */
-- ****************************************************************
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- ****************************************************************
/* partly omitted */
RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD                    CRITICALITY ignore     EXTENSION    PrimaryCCPCH-RSCP PRESENCE optional }|
    { ID id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD               CRITICALITY ignore     EXTENSION    DL-TimeSlot-ISCP-Info  PRESENCE optional }|
```

```
        { ID id-DL-Timeslot-ISCP-LCR-Information-RL-ReconfPrepTDD    CRITICALITY ignore       EXTENSION    DL-TimeSlot-ISCP-LCR-Information PRESENCE
optional      }|
        { ID id-HSDSCH-TDD-Information                               CRITICALITY reject       EXTENSION HSDSCH-TDD-Information    PRESENCE optional}|
        { ID id-HSDSCH-Information-to-Modify                         CRITICALITY reject       EXTENSION HSDSCH-Information-to-Modify    PRESENCE
optional}|
        { ID id-HSDSCH-MACdFlows-to-Add           CRITICALITY reject       EXTENSION HSDSCH-TDD-MACdFlows-Information        PRESENCE optional}|
        { ID id-HSDSCH-MACdFlows-to-Delete        CRITICALITY reject       EXTENSION HSDSCH-MACdFlows-to-Delete       PRESENCE optional}|
        { ID id-HSPDSCH-RL-ID                     CRITICALITY reject       EXTENSION RL-ID              PRESENCE optional}|
        { ID id-PDSCH-RL-ID             CRITICALITY ignore       EXTENSION RL-ID       PRESENCE optional }|
        { ID id-UL-Synchronisation-Parameters-LCR         CRITICALITY ignore       EXTENSION    UL-Synchronisation-Parameters-LCR      PRESENCE
        optional      }|  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
        { ID id-RL-Information-RL-ReconfPrepTDD        CRITICALITY ignore       EXTENSION    RL-Information-RL-ReconfPrepTDD       PRESENCE      optional }|
        { ID id-PrimaryCCPCH-RSCP-Delta       CRITICALITY ignore       EXTENSION   PrimaryCCPCH-RSCP-Delta      PRESENCE    optional },
        ...
}


RL-Information-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF RL-InformationIE-RL-ReconfPrepTDD

RL-InformationIE-RL-ReconfPrepTDD ::= SEQUENCE {
    rL-ID                            RL-ID,
    rL-Specific-DCH-Info             RL-Specific-DCH-Info          OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { RL-InformationIE-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}


RL-InformationIE-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

/* partly omitted */
-- ************************************************************
--
-- DOWNLINK POWER TIMESLOT CONTROL REQUEST TDD
--
-- ************************************************************

DL-PowerTimeslotControlRequest ::= SEQUENCE {
    protocolIEs                  ProtocolIE-Container     {{DL-PowerTimeslotControlRequest-IEs}},
    protocolExtensions           ProtocolExtensionContainer {{DL-PowerTimeslotControlRequest-Extensions}}              OPTIONAL,
    ...
}

DL-PowerTimeslotControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-timeSlot-ISCP   CRITICALITY ignore  TYPE DL-TimeSlot-ISCP-Info  PRESENCE optional},
    --Mandatory for 3.84Mcps TDD only
    ...
}

DL-PowerTimeslotControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD   CRITICALITY     ignore  EXTENSION    DL-TimeSlot-ISCP-LCR-Information    PRESENCE optional}|
    --Mandatory for 1.28Mcps TDD only
    { ID id-PrimCCPCH-RSCP-DL-PC-RqstTDD                 CRITICALITY ignore       EXTENSION PrimaryCCPCH-RSCP          PRESENCE optional }|
```

```
    { ID id-PrimaryCCPCH-RSCP-Delta      CRITICALITY ignore      EXTENSION   PrimaryCCPCH-RSCP-Delta      PRESENCE    optional },
    ...
}
```

/* partly omitted */

9.3.4   Information Element Definitions

```
-- *************************************************************
--
-- Information Element Definitions
--
-- *************************************************************

RNSAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN
```

/* partly omitted */

```
PrimaryCPICH-Power           ::= INTEGER (-100..500)
-- step 0.1 (Range -10.0..50.0) Unit is dBm

PrimaryCPICH-EcNo            ::= INTEGER (-30..30)

Primary-CPICH-Usage-For-Channel-Estimation ::= ENUMERATED {
    primary-CPICH-may-be-used,
    primary-CPICH-shall-not-be-used
}

PrimaryCCPCH-RSCP            ::= INTEGER (0..91)
-- Mapping of non-negative values aAccording to maping in [1424]

PrimaryCCPCH-RSCP-Delta      ::= INTEGER (-5..-1,...)
-- Mapping of negative values according to [24]
```

/* partly omitted */

9.3.6   Constant Definitions

```
-- ************************************************************
--
-- Constant definitions
--
-- ************************************************************

RNSAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN
/* partly omitted */

id-ExtendedGSMCellIndividualOffset                                  ProtocolIE-ID ::= 514
id-RL-ParameterUpdateIndicationFDD-RL-InformationList               ProtocolIE-ID ::= 518
id-Primary-CPICH-Usage-For-Channel-Estimation                      ProtocolIE-ID ::= 519
id-Secondary-CPICH-Information                                      ProtocolIE-ID ::= 520
id-Secondary-CPICH-Information-Change                              ProtocolIE-ID ::= 521
id-UE-Support-Of-Dedicated-Pilots-For-Channel-Estimation           ProtocolIE-ID ::= 522
id-UE-Support-Of-Dedicated-Pilots-For-Channel-Estimation-Of-HS-DSCH  ProtocolIE-ID ::= 523
id-RL-ParameterUpdateIndicationFDD-RL-Information-Item              ProtocolIE-ID ::= 524
id-Phase-Reference-Update-Indicator                                ProtocolIE-ID ::= 525
id-Unidirectional-DCH-Indicator                                    ProtocolIE-ID ::= 526
id-RL-Information-RL-ReconfPrepTDD                                  ProtocolIE-ID ::= 527
id-Multiple-RL-InformationResponse-RL-ReconfReadyTDD               ProtocolIE-ID ::= 528
id-RL-ReconfigurationResponseTDD-RL-Information                    ProtocolIE-ID ::= 529
id-Satellite-Almanac-Information-ExtItem                            ProtocolIE-ID ::= 530
id-HSDSCH-Information-to-Modify-Unsynchronised                      ProtocolIE-ID ::= 533
id-TnlQos                                                          ProtocolIE-ID ::= 534
id-RTLoadValue                                                     ProtocolIE-ID ::= 535
id-NRTLoadInformationValue                                         ProtocolIE-ID ::= 536
id-CellPortionID                                                   ProtocolIE-ID ::= 537
id-PrimaryCCPCH-RSCP-Delta                                         ProtocolIE-ID ::= 539


END
```

CR-Form-v7

CHANGE REQUEST

⌘	**25.433** CR **977**	⌘**rev**	**-**	⌘	Current version:	**5.7.0**	⌘

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

Proposed change affects: UICC apps⌘ ☐   ME ☐ Radio Access Network **X** Core Network ☐

Title: ⌘	Extension of the range of PCCPCH RSCP	
Source: ⌘	RAN3	
Work item code:⌘	TEI5	***Date:*** ⌘ 16/02/2004
Category: ⌘ **F**		***Release:*** ⌘ Rel-5

Use <u>one</u> of the following categories: ***F** (correction)* ***A** (corresponds to a correction in an earlier release)* ***B** (addition of feature),* ***C** (functional modification of feature)* ***D** (editorial modification)* Detailed explanations of the above categories can be found in 3GPP TR 21.900.	*Use <u>one</u> of the following releases:* *2 (GSM Phase 2)* *R96 (Release 1996)* *R97 (Release 1997)* *R98 (Release 1998)* *R99 (Release 1999)* *Rel-4 (Release 4)* *Rel-5 (Release 5)* *Rel-6 (Release 6)*

Reason for change: ⌘	In RAN4#25 meeting, in order to optimize the cell design, it was requested that extend the lowest valueof PCCPCH RSCP from –115dBm to –120dBm.
Summary of change:⌘	Introduce a new *Primary CCPCH RSCP Delta* IE, with the existed *Primary CCPCH RSCP* IE, the range of Primary CCPCH RSCP is extended from (0..91) to (-5..91). Corresponding changes have been made in ASN.1. Impact Analysis: Impact assessment towards the previous version of the specification (same release): The impact can be considered isolated because the change affects only the usage of PCCPCH RSCP.
Consequences if not approved: ⌘	If this CR is not approved, The range of PCCPCH RSCP will not be consistent with RAN4 specification and operators may not be able to optimize the cell design.

Clauses affected: ⌘	8.3.15, 9.1.67, 9.2.3.11A, 9.3.3, 9.3.4, 9.3.6 new: 9.2.3.X

	Y	N		
Other specs ⌘	X		Other core specifications ⌘	TS25.423 Rel-5 CR933 TS25.423 Rel-6 CR934 TS25.433 Rel-6 CR978
affected:		X	Test specifications	
		X	O&M Specifications	

Other comments:	⌘	Numbering for new sections: 9.2.3.X = 9.2.3.11a

How to create CRs using this form:

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

8.3.15   Downlink Power Timeslot Control [TDD]

8.3.15.1   General

The purpose of this procedure is to enable the Node B to use the indicated DL Timeslot ISCP values when deciding the DL TX Power for each timeslot.

The Downlink Power Timeslot Control procedure can be initiated by the CRNC at any time when the Node B Communication Context exists, irrespective of other ongoing CRNC initiated dedicated NBAP procedures towards this Node B Communication Context. The only exception occurs when the CRNC has requested the deletion of the last RL via this Node B, in which case the Downlink Power Timeslot Control procedure shall no longer be initiated.

8.3.15.2   Successful Operation

CRNC   Node B

DL POWER TIMESLOT CONTROL
REQUEST

Figure 47A: Downlink Power Timeslot Control procedure, Successful Operation

The procedure is initiated by the CRNC sending a DL POWER TIMESLOT CONTROL REQUEST message to the Node B using the Communication Control Port assigned to the concerned Node B Communication Context.

Upon reception, the Node B shall use the indicated DL Timeslot ISCP value when deciding the DL TX Power for each timeslot as specified in ref. [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged.

If the *Primary CCPCH RSCP Delta* IE is included, the NodeB shall assume that the reported value for Primary CCPCH RSCP is in the negative range as per [23], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the Node B shall assume that the reported value is in the non-negative range as per [23], and the value is equal to the *Primary CCPCH RSCP* IE. ~~If the Primary CCPCH RSCP IE is present, t~~The Node B should use the indicated value for HS-DSCH scheduling and transmit power adjustment.

8.3.15.3   Abnormal Conditions

-

9.1.67   DL POWER TIMESLOT CONTROL REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
DL Time Slot ISCP Info	O		9.2.3.4F	Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	ignore
DL Time Slot ISCP Info LCR	O		9.2.3.4P	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
Primary CCPCH RSCP	O		9.2.3.11A		YES	ignore
Primary CCPCH RSCP Delta	O		9.2.3.X		YES	ignore

/* partly omitted */

9.2.3.11A   Primary CCPCH RSCP

Received Signal Code Power is the received power on PCCPCH of the target cell after despreading. The reference point for the RSCP is the antenna connector at the UE, see ref. [5].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CCPCH RSCP			INTEGER (0..91)	According to mapping of the non-negative values ~~in~~ in ref. [23].

9.2.3.X   Primary CCPCH RSCP Delta

Primary CCPCH RSCP Delta is the offset used to report the negative reporting range of P-CCPCH RSCP as per [23].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CCPCH RSCP Delta			INTEGER(-5..-1,…)	If present, the actual value of Primary CCPCH RSCP = Primary CCPCH RSCP Delta

9.3.3   PDU Definitions

```
-- ***************************************************************
--
-- PDU definitions for NBAP.
--
-- ***************************************************************

NBAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN
```
/* partly omitted */
```
    PrimaryCCPCH-RSCP,
    HSDSCH-FDD-Update-Information,
    HSDSCH-TDD-Update-Information,
    UL-Synchronisation-Parameters-LCR,
    TDD-DL-DPCH-TimeSlotFormat-LCR,
    TDD-UL-DPCH-TimeSlotFormat-LCR,
    TDD-TPC-UplinkStepSize-LCR,
    CellSyncBurstTimingLCR,
    TimingAdjustmentValueLCR,
    PrimaryCCPCH-RSCP-Delta
FROM NBAP-IEs
```

/* partly omitted */
```
id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD,
    id-TDD-TPC-UplinkStepSize-LCR-RL-AdditionRqstTDD,
    id-TDD-TPC-DownlinkStepSize-RL-AdditionRqstTDD,
    id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD,
    id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD,
    id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD,
    id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD,
    id-TimeslotISCP-LCR-InfoList-RL-ReconfPrepTDD,
    id-TimingAdjustmentValueLCR,
    id-PrimaryCCPCH-RSCP-Delta,


    maxNrOfCCTrCHs,
    maxNrOfCellSyncBursts,
    maxNrOfCodes,
    maxNrOfCPCHs,
    maxNrOfDCHs,
    maxNrOfDLTSs,
    maxNrOfDLTSLCRs,
```

```
        maxNrOfDPCHs,
        maxNrOfDPCHLCRs,
        maxNrOfDSCHs,
        maxNrOfFACHs,
        maxNrOfRLs,
        maxNrOfRLs-1,
        maxNrOfRLs-2,
        maxNrOfRLSets,
        maxNrOfPCPCHs,
        maxNrOfPDSCHs,
        maxNrOfPUSCHs,
        maxNrOfPRACHLCRs,
        maxNrOfPDSCHSets,
        maxNrOfPUSCHSets,
        maxNrOfReceptsPerSyncFrame,
        maxNrOfSCCPCHs,
        maxNrOfSCCPCHLCRs,
        maxNrOfULTSs,
        maxNrOfULTSLCRs,
        maxNrOfUSCHs,
        maxAPSigNum,
        maxCPCHCell,
        maxFACHCell,
        maxFPACHCell,
        maxNoofLen,
        maxRACHCell,
        maxPCPCHCell,
        maxPRACHCell,
        maxSCCPCHCell,
        maxSCPICHCell,
        maxCellinNodeB,
        maxCCPinNodeB,
        maxCommunicationContext,
        maxLocalCellinNodeB,
        maxNrOfSlotFormatsPRACH,
        maxIB,
        maxIBSEG,
        maxNrOfHSSCCHs,
        maxNrOfHSSICHs,
        maxNrOfHSPDSCHs,
        maxNrOfSyncFramesLCR,
        maxNrOfReceptionsperSyncFrameLCR,
        maxNrOfSyncDLCodesLCR,
        maxNrOfMACdFlows
FROM NBAP-Constants;
```

/* partly omitted */

```
-- **************************************************************
--
-- DL POWER TIMESLOT CONTROL REQUEST TDD
--
-- **************************************************************
```

```
DL-PowerTimeslotControlRequest ::= SEQUENCE {
    protocolIEs            ProtocolIE-Container    {{DL-PowerTimeslotControlRequest-IEs}},
    protocolExtensions     ProtocolExtensionContainer  {{DL-PowerTimeslotControlRequest-Extensions}}                OPTIONAL,
    ...
}

DL-PowerTimeslotControlRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID        CRITICALITY ignore        TYPE    NodeB-CommunicationContextID        PRESENCE mandatory
    } |
    { ID id-TimeslotISCPInfo        CRITICALITY ignore        TYPE    DL-TimeslotISCPInfo    PRESENCE optional },
    -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD


    ...
}

DL-PowerTimeslotControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD        CRITICALITY ignore        EXTENSION    DL-TimeslotISCPInfoLCR    PRESENCE optional }|
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-PrimCCPCH-RSCP-DL-PC-RqstTDD                  CRITICALITY ignore        EXTENSION PrimaryCCPCH-RSCP        PRESENCE optional }|
    { ID id-PrimaryCCPCH-RSCP-Delta                       CRITICALITY ignore        EXTENSION PrimaryCCPCH-RSCP-Delta    PRESENCE    optional },
    ...
}
```

9.3.4 Information Elements Definitions

```
-- **********************************************************************
--
-- Information Element Definitions
--
-- **********************************************************************

NBAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
```
/* partly omitted */

```
PrimaryCCPCH-RSCP ::= INTEGER (0..91)
-- Mapping of non-negative values aAccording to mapping in in ref. [23]

PrimaryCCPCH-RSCP-Delta ::= INTEGER (-5..-1,...)
-- Mapping of negative values according to [23]
```

/* partly omitted */

9.3.6 Constant Definitions

```
-- **************************************************************
--
-- Constant definitions
--
-- **************************************************************

NBAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Constants (4)}

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN
```

/* partly omitted */

```
id-TimingAdjustmentValueLCR                            ProtocolIE-ID ::= 603
id-multipleRL-dl-DPCH-InformationList                  ProtocolIE-ID ::= 604
id-multipleRL-dl-DPCH-InformationModifyList            ProtocolIE-ID ::= 605
id-multipleRL-ul-DPCH-InformationList                  ProtocolIE-ID ::= 606
id-multipleRL-ul-DPCH-InformationModifyList            ProtocolIE-ID ::= 607
id-RL-ID                                               ProtocolIE-ID ::= 608
id-SAT-Info-Almanac-ExtItem                            ProtocolIE-ID ::= 609
id-HSDPA-Capability                                    ProtocolIE-ID ::= 610
id-HSDSCH-Resources-Information-AuditRsp               ProtocolIE-ID ::= 611
id-HSDSCH-Resources-Information-ResourceStatusInd      ProtocolIE-ID ::= 612
id-HSDSCH-MACdFlows-to-Add                             ProtocolIE-ID ::= 613
id-HSDSCH-MACdFlows-to-Delete                          ProtocolIE-ID ::= 614
id-HSDSCH-Information-to-Modify-Unsynchronised         ProtocolIE-ID ::= 615
id-TnlQos                                              ProtocolIE-ID ::= 616
id-PrimaryCCPCH-RSCP-Delta                             ProtocolIE-ID ::= 623

END
```

CR-Form-v7

CHANGE REQUEST

⌘ **25.433** CR **978** ⌘**rev** **-** ⌘ Current version: **6.0.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network **X** Core Network ☐

Title: ⌘	Extension of the range of PCCPCH RSCP	
Source: ⌘	RAN3	
Work item code:⌘	TEI5	*Date:* ⌘ 16/02/2004
Category: ⌘	**A**	*Release:* ⌘ Rel-6

Use <u>one</u> of the following categories:
 F (correction)
 A (corresponds to a correction in an earlier release)
 B (addition of feature),
 C (functional modification of feature)
 D (editorial modification)
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use <u>one</u> of the following releases:
 2 (GSM Phase 2)
 R96 (Release 1996)
 R97 (Release 1997)
 R98 (Release 1998)
 R99 (Release 1999)
 Rel-4 (Release 4)
 Rel-5 (Release 5)
 Rel-6 (Release 6)

Reason for change: ⌘	In RAN4#25 meeting, in order to optimize the cell design, it was requested that extend the lowest valueof PCCPCH RSCP from –115dBm to –120dBm.
Summary of change:⌘	Introduce a new *Primary CCPCH RSCP Delta* IE, with the existed *Primary CCPCH RSCP* IE, the range of Primary CCPCH RSCP is extended from (0..91) to (-5..91). Corresponding changes have been made in ASN.1. Impact Analysis: Impact assessment towards the previous version of the specification (same release): The impact can be considered isolated because the change affects only the usage of PCCPCH RSCP.
Consequences if not approved: ⌘	If this CR is not approved, The range of PCCPCH RSCP will not be consistent with RAN4 specification and operators may not be able to optimize the cell design.

Clauses affected: ⌘	8.3.15, 9.1.67, 9.2.3.11A, 9.3.3, 9.3.4, 9.3.6 new: 9.2.3.X

		Y	N		
Other specs	⌘	X		Other core specifications ⌘	TS25.423 Rel-5 CR933 TS25.423 Rel-6 CR934 TS25.433 Rel-5 CR977
affected:			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	Numbering for new sections: 9.2.3.X = 9.2.3.11a

How to create CRs using this form:

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

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

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

8.3.15   Downlink Power Timeslot Control [TDD]

8.3.15.1   General

The purpose of this procedure is to enable the Node B to use the indicated DL Timeslot ISCP values when deciding the DL TX Power for each timeslot.

The Downlink Power Timeslot Control procedure can be initiated by the CRNC at any time when the Node B Communication Context exists, irrespective of other ongoing CRNC initiated dedicated NBAP procedures towards this Node B Communication Context. The only exception occurs when the CRNC has requested the deletion of the last RL via this Node B, in which case the Downlink Power Timeslot Control procedure shall no longer be initiated.

8.3.15.2   Successful Operation

CRNC   Node B

DL POWER TIMESLOT CONTROL
REQUEST

Figure 47A: Downlink Power Timeslot Control procedure, Successful Operation

The procedure is initiated by the CRNC sending a DL POWER TIMESLOT CONTROL REQUEST message to the Node B using the Communication Control Port assigned to the concerned Node B Communication Context.

Upon reception, the Node B shall use the indicated DL Timeslot ISCP value when deciding the DL TX Power for each timeslot as specified in ref. [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged.

If the *Primary CCPCH RSCP Delta* IE is included, the NodeB shall assume that the reported value for Primary CCPCH RSCP is in the negative range as per [23], and the value is equal to the *Primary CCPCH RSCP Delta* IE. If the *Primary CCPCH RSCP Delta* IE is not included and the *Primary CCPCH RSCP* IE is included, the Node B shall assume that the reported value is in the non-negative range as per [23], and the value is equal to the *Primary CCPCH RSCP* IE. ~~If the Primary CCPCH RSCP IE is present, t~~The Node B should use the indicated value for HS-DSCH scheduling and transmit power adjustment.

8.3.15.3   Abnormal Conditions

-

9.1.67   DL POWER TIMESLOT CONTROL REQUEST [TDD]

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	ignore
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	ignore
DL Time Slot ISCP Info	O		9.2.3.4F	Mandatory for 3.84Mcps TDD. Not Applicable to 1.28Mcps TDD.	YES	ignore
DL Time Slot ISCP Info LCR	O		9.2.3.4P	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
Primary CCPCH RSCP	O		9.2.3.11A		YES	ignore
Primary CCPCH RSCP Delta	O		9.2.3.X		YES	ignore

9.2.3.11A   Primary CCPCH RSCP

Received Signal Code Power is the received power on PCCPCH of the target cell after despreading. The reference point for the RSCP is the antenna connector at the UE, see ref. [5].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CCPCH RSCP			INTEGER (0..91)	According to mapping of the non-negative values ~~in~~ in ref. [23].

9.2.3.X   Primary CCPCH RSCP Delta

Primary CCPCH RSCP Delta is the offset used to report the negative reporting range of P-CCPCH RSCP as per [23].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Primary CCPCH RSCP Delta			INTEGER(-5..-1,…)	If present, the actual value of Primary CCPCH RSCP = Primary CCPCH RSCP Delta

9.3.3   PDU Definitions

```
-- ***************************************************************
--
-- PDU definitions for NBAP.
--
-- ***************************************************************

NBAP-PDU-Contents {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN
```
/* partly omitted */
```
    PrimaryCCPCH-RSCP,
    HSDSCH-FDD-Update-Information,
    HSDSCH-TDD-Update-Information,
    UL-Synchronisation-Parameters-LCR,
    TDD-DL-DPCH-TimeSlotFormat-LCR,
    TDD-UL-DPCH-TimeSlotFormat-LCR,
    TDD-TPC-UplinkStepSize-LCR,
    CellSyncBurstTimingLCR,
    TimingAdjustmentValueLCR,
    PrimaryCCPCH-RSCP-Delta
FROM NBAP-IEs
```

/* partly omitted */
```

id-TDD-TPC-UplinkStepSize-LCR-RL-SetupRqstTDD,
    id-TDD-TPC-UplinkStepSize-LCR-RL-AdditionRqstTDD,
    id-TDD-TPC-DownlinkStepSize-RL-AdditionRqstTDD,
    id-TDD-TPC-UplinkStepSize-InformationAdd-LCR-RL-ReconfPrepTDD,
    id-TDD-TPC-UplinkStepSize-InformationModify-LCR-RL-ReconfPrepTDD,
    id-TDD-TPC-DownlinkStepSize-InformationModify-RL-ReconfPrepTDD,
    id-TDD-TPC-DownlinkStepSize-InformationAdd-RL-ReconfPrepTDD,
    id-TimeslotISCP-LCR-InfoList-RL-ReconfPrepTDD,
    id-TimingAdjustmentValueLCR,
    id-PrimaryCCPCH-RSCP-Delta,


    maxNrOfCCTrCHs,
    maxNrOfCellSyncBursts,
    maxNrOfCodes,
    maxNrOfCPCHs,
    maxNrOfDCHs,
    maxNrOfDLTSs,
    maxNrOfDLTSLCRs,
```

```
    maxNrOfDPCHs,
    maxNrOfDPCHLCRs,
    maxNrOfDSCHs,
    maxNrOfFACHs,
    maxNrOfRLs,
    maxNrOfRLs-1,
    maxNrOfRLs-2,
    maxNrOfRLSets,
    maxNrOfPCPCHs,
    maxNrOfPDSCHs,
    maxNrOfPUSCHs,
    maxNrOfPRACHLCRs,
    maxNrOfPDSCHSets,
    maxNrOfPUSCHSets,
    maxNrOfReceptsPerSyncFrame,
    maxNrOfSCCPCHs,
    maxNrOfSCCPCHLCRs,
    maxNrOfULTSs,
    maxNrOfULTSLCRs,
    maxNrOfUSCHs,
    maxAPSigNum,
    maxCPCHCell,
    maxFACHCell,
    maxFPACHCell,
    maxNoofLen,
    maxRACHCell,
    maxPCPCHCell,
    maxPRACHCell,
    maxSCCPCHCell,
    maxSCPICHCell,
    maxCellinNodeB,
    maxCCPinNodeB,
    maxCommunicationContext,
    maxLocalCellinNodeB,
    maxNrOfSlotFormatsPRACH,
    maxIB,
    maxIBSEG,
    maxNrOfCellPortionsPerCell,
    maxNrOfHSSCCHs,
    maxNrOfHSSICHs,
    maxNrOfHSPDSCHs,
    maxNrOfSyncFramesLCR,
    maxNrOfReceptionsperSyncFrameLCR,
    maxNrOfSyncDLCodesLCR,
    maxNrOfMACdFlows
FROM NBAP-Constants;
```

/* partly omitted */

```
-- **************************************************************
--
-- DL POWER TIMESLOT CONTROL REQUEST TDD
--
```

```
-- **************************************************************

DL-PowerTimeslotControlRequest ::= SEQUENCE {
    protocolIEs             ProtocolIE-Container     {{DL-PowerTimeslotControlRequest-IEs}},
    protocolExtensions      ProtocolExtensionContainer  {{DL-PowerTimeslotControlRequest-Extensions}}                     OPTIONAL,
    ...
}

DL-PowerTimeslotControlRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY ignore       TYPE    NodeB-CommunicationContextID          PRESENCE mandatory
    } |
    { ID id-TimeslotISCPInfo        CRITICALITY ignore       TYPE    DL-TimeslotISCPInfo    PRESENCE optional },
    -- Mandatory for 3.84Mcps TDD, Not Applicable to 1.28Mcps TDD

    ...
}

DL-PowerTimeslotControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD       CRITICALITY ignore       EXTENSION    DL-TimeslotISCPInfoLCR    PRESENCE optional }|
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    { ID id-PrimCCPCH-RSCP-DL-PC-RqstTDD          CRITICALITY ignore       EXTENSION PrimaryCCPCH-RSCP        PRESENCE optional },|
    { ID id-PrimaryCCPCH-RSCP-Delta               CRITICALITY ignore       EXTENSION PrimaryCCPCH-RSCP-Delta PRESENCE optional },
    ...
}
```

/* partly omitted */

9.3.4   Information Elements Definitions

```
--*****************************************************************************
--
-- Information Element Definitions
--
--*****************************************************************************

NBAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
```
`/* partly omitted */`

```
PrimaryCCPCH-RSCP ::= INTEGER (0..91)
-- Mapping of non-negative values aAccording to mapping in in ref. [23]

PrimaryCCPCH-RSCP-Delta ::= INTEGER (-5..-1,...)
-- Mapping of negative values according to [23]
```

`/* partly omitted */`

9.3.6   Constant Definitions

```
-- *************************************************************
--
-- Constant definitions
--
-- *************************************************************

NBAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Constants (4)}

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN
```

<mark>/* partly omitted */</mark>

```
id-TimingAdjustmentValueLCR                                       ProtocolIE-ID ::= 603
id-multipleRL-dl-DPCH-InformationList                             ProtocolIE-ID ::= 604
id-multipleRL-dl-DPCH-InformationModifyList                       ProtocolIE-ID ::= 605
id-multipleRL-ul-DPCH-InformationList                             ProtocolIE-ID ::= 606
id-multipleRL-ul-DPCH-InformationModifyList                       ProtocolIE-ID ::= 607
id-RL-ID                                                          ProtocolIE-ID ::= 608
id-SAT-Info-Almanac-ExtItem                                       ProtocolIE-ID ::= 609
id-HSDPA-Capability                                               ProtocolIE-ID ::= 610
id-HSDSCH-Resources-Information-AuditRsp                          ProtocolIE-ID ::= 611
id-HSDSCH-Resources-Information-ResourceStatusInd                 ProtocolIE-ID ::= 612
id-HSDSCH-MACdFlows-to-Add                                        ProtocolIE-ID ::= 613
id-HSDSCH-MACdFlows-to-Delete                                     ProtocolIE-ID ::= 614
id-HSDSCH-Information-to-Modify-Unsynchronised                    ProtocolIE-ID ::= 615
id-TnlQos                                                         ProtocolIE-ID ::= 616
id-Received-total-wide-band-power-For-CellPortion-Value           ProtocolIE-ID ::= 617
id-Transmitted-Carrier-Power-For-CellPortion                      ProtocolIE-ID ::= 618
id-Transmitted-Carrier-Power-For-CellPortion-Value               ProtocolIE-ID ::= 619
id-TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmissionCellPortion      ProtocolIE-ID ::= 620
id-TransmittedCarrierPowerOfAllCodesNotUsedForHS-PDSCHOrHS-SCCHTransmissionCellPortionValue ProtocolIE-ID ::= 621
id-PrimaryCCPCH-RSCP-Delta                                        ProtocolIE-ID ::= 623


END
```