*CR-Form-v7*

# CHANGE REQUEST

| ⌘ | **25.423 CR 687** | ⌘**rev** **1** ⌘ | Current version: | **5.2.0** ⌘ |
|---|---|---|---|---|

*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:*** ⌘ | DSCH Initial Credits | | |
| ***Source:*** ⌘ | NEC | | |
| ***Work item code:***⌘ | TEI5 | ***Date:*** ⌘ | 13/08/2002 |
| ***Category:*** ⌘ **F** | | ***Release:*** ⌘ | Rel-5 |

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

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|---|---|
| ***Reason for change:*** ⌘ | In RAN3#30 it was decided to align HS-DSCH flow control with FACH flow control by allowing the DRNC to send some initial credits that SRNC can use for immediate transmission. This contribution proposes an alignment of DSCH flow control with HS-DSCH and FACH. |
| ***Summary of change:***⌘ | <u>Rev.1</u><br><br>ASN.1 syntax errors are corrected (highlighted in yellow).<br><br><u>Rev.0</u><br><br>A new IE ' DSCH Initial Window Size' has been added into the DSCH Flow Control Information IE.<br><br>This allows the SRNC to start the DSCH data transport without having to wait capacity allocation on the User Plane. |
| ***Consequences if not approved:*** ⌘ | If this CR is not approved, the start of DSCH data transport is possible only when new credits have been requested by the SRNC and allocated by the DRNC. This causes unnecessary delay.<br><br><u>Impact Analysis:</u><br><br>Impact assessment towards the previous version of the specification (same release):<br><br>This CR has isolated impact with the previous version of the specification. The change is limited only to the DSCH functionality.<br><br><u>Compatibility Analysis towards previous release:</u><br><br>No impact because the feature was introduced in backward compatible way. |

| Clauses affected: | ⌘ | 8.3.1; 8.3.4; 9.2.1.26B; 9.2.1.X; 9.3.4; 9.3.6 | | |
|---|---|---|---|---|

| | | **Y** | **N** | | | |
|---|---|---|---|---|---|---|
| ***Other specs*** | ⌘ | **X** | | Other core specifications | ⌘ | CR053  (25.425 V5.1.0) |
| ***affected:*** | | | **X** | Test specifications | | |
| | | | **X** | O&M Specifications | | |

| ***Other comments:*** | ⌘ | |
|---|---|---|

**How to create CRs using this form:**

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

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

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

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

## 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.
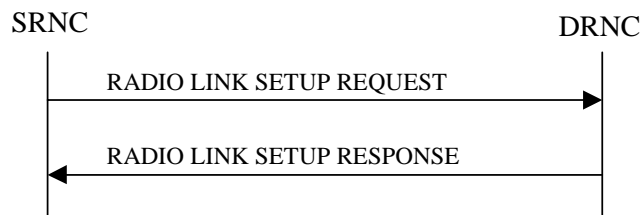
### 8.3.1.2    Successful Operation

**Figure 5: Radio Link Setup procedure: Successful Operation**

When the SRNC makes an algorithmic decision to add the first cell or set of cells from a DRNS to the active set of a specific UE-UTRAN connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request establishment of the radio link(s).

The DRNS shall prioritise resource allocation for the RL(s) to be established according to Annex A.

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request the time corresponding to the value of the *Allowed Queuing Time* IE before starting to execute the request.

If no *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message, the DRNC shall assign a new D-RNTI for this UE.

**Transport Channels Handling:**

> **DCH(s):**

> [TDD - If the *DCH Information* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the new DCHs according to the parameters given in the message.]

> If the RADIO LINK SETUP REQUEST message includes a *DCH Information* IE with multiple *DCH Specific Info* IEs, then the DRNS shall treat the DCHs in the *DCH Information* IE as a set of co-ordinated DCHs.

> [FDD - For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE, ref. [4]. If the *QE-Selector* IE is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [4].]

> For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" shall be used for the QE in the UL data frames, ref. [4]. [FDD - If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [4]. If all DCHs have *QE-Selector* IE set to "non-selected" the Physical channel BER shall be used for the QE, ref. [4].]

> The DRNS shall use the included *UL DCH FP Mode* IE for a DCH or a set of co-ordinated DCHs as the DCH FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs.

> The DRNS shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs as the Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs.

> The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs as the Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs.

The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise between different frames of the data frames of the DCHs in the downlink on the radio interface in congestion situations once the new RL(s) have been activated.

The *Traffic Class* IE should be used to determine the transport bearer characteristics to apply between DRNC and Node B for the related DCH or set of co-ordinated DCHs.

If the *DCH Specific Info* IE in the *DCH Information* IE includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:

- If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS may decide to request the SRNC to limit the user rate of the uplink of the DCH at any point in time. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed UL Rate* IE, the DRNS shall not limit the user rate of the uplink of the DCH.

- If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS may decide to request the SRNC to limit the user rate of the downlink of the DCH at any point in time. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed DL Rate* IE, the DRNS shall not limit the user rate of the downlink of the DCH.

**DSCH(s):**

If the *DSCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNC shall establish the requested DSCHs [FDD - on the RL indicated by the PDSCH RL ID IE]. If the *Transport Layer Address* IE and *Binding ID* IE are included in the *DSCH Information* IE the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the DSCH. In addition, the DRNC shall send a valid set of *DSCH Scheduling Priority* IE and *MAC-c/sh SDU Length* IE parameters to the SRNC in the RADIO LINK SETUP RESPONSE message. If the *PDSCH RL ID* IE indicates a radio link in the DRNS, then the DRNC shall allocate a DSCH-RNTI to the UE Context and include the *DSCH-RNTI* IE in the RADIO LINK SETUP RESPONSE message.

If the *DSCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNS may use the *Traffic Class* IE to determine the transport bearer characteristics to apply between DRNC and Node B for the related DSCHs.

The DRNC shall include the *DSCH Initial Window Size* IE in the RADIO LINK SETUP RESPONSE message for each DSCH, if the DRNS allows the SRNC to start transmission of MAC-c/sh SDUs before the DRNS has allocated capacity on user plane as described in [32].

**[TDD - USCH(s)]:**

[TDD – The DRNS shall use the list of RB Identities in the *RB Info* IE in the *USCH information* IE to map each *RB Identity* IE to the corresponding USCH. If the *Transport Layer Address* IE and *Binding ID* IE are included in the *USCH Information* IE the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the USCH.]

[TDD – If the *USCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNS may use the *Traffic Class* IE to determine the transport bearer characteristics to apply between DRNC and Node B for the related USCHs.]

**HS-DSCH(s):**

If the *HS-DSCH Information* IE is present, the DRNS shall establish the requested HS-DSCH resources on the RL indicated by the *HS-PDSCH RL ID* IE.

In addition, if the *HS-PDSCH RL ID* IE indicates a radio link in the DRNS, then the DRNC shall allocate an HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the RADIO LINK SETUP RESPONSE message.

The DRNS shall also include the *Binding ID* IE and *Transport Layer Address* IE for establishment of transport bearer(s) for the HS-DSCH MAC-d flows on this radio link.

If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE and *Binding ID* IE in the *HS-DSCH Information* IE for an HS-DSCH MAC-d flow, the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the concerned HS-DSCH MAC-d flow.

The DRNC shall include the *HS-DSCH Initial Capacity Allocation* IE in the RADIO LINK SETUP RESPONSE message for each MAC-d flow, if the DRNS allows the SRNC to start transmission of MAC-d PDUs before the DRNS has allocated capacity on user plane as described in [32].

[FDD – The DRNS shall set the Measurement Feedback Reporting Cycle to a default value equal to the largest of the k1 and k2 values.]

**Physical Channels Handling:**

**[FDD - Compressed Mode]:**

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the DRNS shall store the information about the Transmission Gap Pattern Sequences to be used in the Compressed Mode Configuration. This Compressed Mode Configuration shall be valid in the DRNS until the next Compressed Mode Configuration is configured in the DRNS or the last Radio Link is deleted.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the DRNS shall use the information to activate the indicated Transmission Gap Pattern Sequence(s) in the new RL. The received *CM Configuration Change CFN* IE refers to latest passed CFN with that value. The DRNS shall treat the received *TGCFN* IEs as follows:]

- [FDD - If any received *TGCFN* IE has the same value as the received *CM Configuration Change CFN* IE, the DRNS shall consider the concerned Transmission Gap Pattern Sequence as activated at that CFN.]

- [FDD - If any received *TGCFN* IE does not have the same value as the received *CM Configuration Change CFN* IE but the first CFN after the CM Configuration Change CFN with a value equal to the *TGCFN* IE has already passed, the DRNS shall consider the concerned Transmission Gap Pattern Sequence as activated at that CFN.]

- [FDD - For all other Transmission Gap Pattern Sequences included in the *Active Pattern Sequence Information* IE, the DRNS shall activate each Transmission Gap Pattern Sequence at the first CFN after the CM Configuration Change CFN with a value equal to the *TGCFN* IE for the Transmission Gap Pattern Sequence.]

[FDD- If the *Downlink Compressed Mode Method* IE in one or more Transmission Gap Pattern Sequence is set to "SF/2" in the RADIO LINK SETUP REQUEST message, the DRNS shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE in the RADIO LINK SETUP RESPONSE message indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

**[FDD - DL Code Information]:**

[FDD – When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When *p* number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to "*PhCH number 1*", the second to "*PhCH number 2*", and so on until the *p*th to "*PhCH number p*".]

**General:**

[FDD - If the *Propagation Delay* IE is included, the DRNS may use this information to speed up the detection of UL synchronisation on the Uu interface.]

[FDD – If the received *Limited Power Increase* IE is set to "Used", the DRNS shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control.]

[FDD – If the RADIO LINK SETUP REQUEST message does not include the *Length of TFCI2* IE and the *Split type* IE is present with the value "Hard", then the DRNS shall assume the length of the TFCI (field 2) is 5 bits.]

[FDD – If the RADIO LINK SETUP REQUEST message includes *Split Ty*pe IE, then the DRNS shall apply this information to the new configuration of TFCI.]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Length of TFCI2* IE, the DRNS shall apply this information to the length of TFCI(field 2).]

**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.

- In case of combining, the *RL ID* IE indicates one of the existing RLs that the concerned RL is combined with.

- In case of not combining, 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.]

 [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 only for 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 $P_{SIR}(k)$ , as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power in slot k.]

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

[FDD – The DRNS shall start any DL transmission using the indicated DL TX power level (if received) or the decided DL TX power level on each DL channelisation code of a RL until UL synchronisation is achieved on the Uu interface for the concerned RLS or Power Balancing is activated. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10] subclause 5.2.1.2) and the power control procedure (see 8.3.15).]

[TDD – The DRNS shall start any DL transmission using the decided DL TX power level on each DL channelisation code and on each Time Slot of a RL until UL synchronisation is achieved on the Uu interface for the concerned RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [22] subclause 4.2.3.3).]

[FDD – If the received *Inner Loop DL PC Status* IE is set to "Active", the DRNS shall activate the inner loop DL power control for all RLs. If *Inner Loop DL PC Status* IE is set to "Inactive", the DRNS shall deactivate the inner loop DL power control for all RLs according to ref. [10].]

[FDD - If the *DPC Mode* IE is present in the RADIO LINK SETUP REQUEST message, the DRNC shall apply the DPC mode indicated in the message, and be prepared that the DPC mode may be changed during the life time of the RL. If the *DPC Mode* IE is not present in the RADIO LINK SETUP REQUEST message, DPC mode 0 shall be applied (see ref. [10]).]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *DL Power Balancing Information* IE and the *Power Adjustment Type* IE is set to "Common" or "Individual", the DRNS shall activate the power balancing, if activation of power balancing by the RADIO LINK SETUP REQUEST message is supported, according to subclause 8.3.15, using the *DL Power Balancing Information* IE. If the DRNS starts the DL transmission and the activation of the power balancing at the same CFN, the initial power of the power balancing shall be set to the indicated DL TX power level (if received) or the decided DL TX power level on each DL channelisation code of a RL.]

[FDD – If activation of power balancing by the RADIO LINK SETUP REQUEST message is supported by the DRNS, the DRNC shall include the *DL Power Balancing Activation Indicator* IE in the *RL Information Response* IE in the RADIO LINK SETUP RESPONSE message.]

**Neighbouring Cell Handling:**

If there are UMTS neighbouring cell(s) to the cell in which a Radio Link was established then:

- The DRNC shall include the *Neighbouring FDD Cell Information* IE and/or *Neighbouring TDD Cell Information* IE in the *Neighbouring UMTS Cell Information* IE for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include the *Frame Offset* IE, *Primary CPICH Power* IE, *Cell Individual Offset* IE, *STTD Support Indicator* IE, *Closed Loop Mode1 Support Indicator* IE, *Closed Loop Mode2 Support Indicator* IE, *Coverage Indicator* IE, *Antenna Co-location Indicator* IE and *HCS Prio* IE in the *Neighbouring FDD Cell Information* IE, and the *Frame Offset* IE, *Cell Individual Offset* IE, *DPCH Constant Value* IE, the *PCCPCH Power* IE, *Coverage Indicator* IE, *Antenna Co-location Indicator* IE and *HCS Prio* IE in the *Neighbouring TDD Cell Information* IE.

- If a UMTS neighbouring cell is not controlled by the same DRNC, the DRNC shall also include the *CN PS Domain Identifier* IE and/or *CN CS Domain Identifier* IE which are the identifiers of the CN nodes connected to the RNC controlling the UMTS neighbouring cell.

- [FDD - The DRNC shall include the *DPC Mode Change Support Indicator* IE if the DRNC is aware that the neighbouring cell supports DPC mode change.]

- [FDD- The DRNC shall include the *Flexible Hard Split Support Indicator* IE if the DRNC is aware that the neighbouring cell supports *Flexible Hard Split* mode.]

- The DRNC shall include the *Cell Capability Container FDD* IE, the *Cell Capability Container TDD* IE and/or the *Cell Capability Container TDD LCR* IE if the DRNC is aware that the neighbouring cell supports any functionalities listed in 9.2.2.D, 9.2.3.1a and 9.2.3.1b.

For the UMTS neighbouring cells which are controlled by the DRNC, the DRNC shall report in the RADIO LINK SETUP RESPONSE message the restriction state of those cells, otherwise *Restriction state indicator* IE may be absent. The DRNC shall include the *Restriction state indicator* IE for the neighbouring cells which are controlled by the DRNC in the *Neighbouring FDD Cell Information* IE, the *Neighbouring TDD Cell Information* IE and the *Neighbouring TDD Cell Information LCR* IE.

If there are GSM neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include the *Neighbouring GSM Cell Information* IE in the RADIO LINK SETUP RESPONSE message for each of the GSM neighbouring cells. If available the DRNC shall include the *Cell Individual Offset* IE, *Coverage Indicator* IE, *Antenna Co-location Indicator* IE and *HCS Prio* IE in the *Neighbouring GSM Cell Information* IE.

**General:**

If the RADIO LINK SETUP REQUEST message includes the *RL Specific DCH Information* IE, the DRNC may use the transport layer address and the binding identifier received from the SRNC when establishing a transport bearer for the DCH or the set of co-ordinated DCHs.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity* IE and the *S-Field Length* IE, the DRNS shall activate SSDT, if supported, using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Qth Parameter* IE in addition to the *SSDT Cell Identity* IE, the DRNS shall use the *Qth Parameter* IE, if Qth signalling is supported, when SSDT is activated in the concerned new RL.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity for EDSCHPC* IE, the DRNS shall activate enhanced DSCH power control, if supported, using the *SSDT Cell Identity for EDSCHPC* IE and *SSDT Cell Identity Length* IE as well as *Enhanced DSCH PC* IE in accordance with ref. [10] subclause 5.2.2. If the RADIO LINK SETUP REQUEST message includes both *SSDT Cell Identity* IE and *SSDT Cell Identity for EDSCHPC* IE, then the DRNS shall ignore the *SSDT Cell Identity for EDSCHPC* IE. If the enhanced DSCH power control is activated and the *TFCI PC Support Indicator* IE is set to "TFCI PC Mode 2 Supported", the primary/secondary status determination in the enhanced DSCH power control shall be applied to the TFCI power control in DSCH hard split mode.]

[FDD - If the *DRAC Control* IE is set to "requested" in the RADIO LINK SETUP REQUEST message for at least one DCH and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info* IE for the FACH where the DRAC information is sent, for each Radio Link established in a cell where DRAC is active. If the DRNS does not support DRAC, the DRNC shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

If no *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message, the DRNC shall include the node identifications of the CN Domain nodes that the RNC is connected to (using LAC and RAC of the current cell), and the *D-RNTI* IE in the RADIO LINK SETUP RESPONSE message.

[FDD - If the *D-RNTI* IE was included the RADIO LINK SETUP REQUEST message the DRNC shall include the *Primary Scrambling Code* IE, the *UL UARFCN* IE and the *DL UARFCN* IE in the RADIO LINK SETUP RESPONSE message.]

[TDD – If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include the *UARFCN* IE, the *Cell Parameter ID* IE,[3.84Mcps TDD - the *Sync Case* IE, the *SCH Time Slot*

IE or *Time Slot* IE,] the *SCTD Indicator* IE, and the *PCCPCH Power* IE in the RADIO LINK SETUP RESPONSE message.]

[TDD - The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK SETUP RESPONSE message if at least one *DSCH Information Response* IE or *USCH Information Response* IE is included in the message and at least one DCH is configured for the radio link. The DRNC shall also include the [3.84Mcps TDD - *Secondary CCPCH Info TDD* IE] [1.28Mcps TDD – *Secondary CCPCH Info TDD LCR* IE] in the RADIO LINK SETUP RESPONSE message if at least one *DSCH Information Response* IE or *USCH Information Response* IE is included in the message and the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

For each Radio Link established in a cell where at least one URA Identity is being broadcast, the DRNC shall include a URA Identity for this cell in the *URA ID* IE, the *Multiple URAs Indicator* IE indicating whether or not multiple URA Identities are being broadcast in the cell, and the RNC Identity of all other RNCs that are having at least one cell within the URA in the cell in the *URA Information* IE in the RADIO LINK SETUP RESPONSE message.

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell, represented either by the *Cell GAI* IE or by the *Cell GA Additional Shapes* IE and the UTRAN access point position for each of the established RLs in the RADIO LINK SETUP RESPONSE message.

If the DRNS need 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) already when starting to utilise a new Radio Link, the DRNC shall include the *Allowed UL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK SETUP RESPONSE message for this Radio Link.

If the DRNS need 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) already when starting to utilise a new Radio Link, the DRNC shall include the *Allowed DL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK SETUP RESPONSE message for this Radio Link.

If the *Permanent NAS UE Identity* IE is included in the RADIO LINK SETUP REQUEST message, the DRNS shall store the information for the considered UE Context for the life-time of the UE Context.

If the RADIO LINK SETUP REQUEST message includes the *Permanent NAS UE Identity* IE and a *C-ID* IE corresponding to a cell reserved for operator use, the DRNC shall use this information to determine whether it can set up a Radio Link on this cell or not for the considered UE Context.

If the HCS priority information is available in the DRNS, it shall include the *HCS Prio* IE for each of the established RLs in the RADIO LINK SETUP RESPONSE message.

[FDD - If the accessed cell supports TFCI power control, the DRNC shall include the *TFCI PC Support Indicator* IE in the RADIO LINK SETUP RESPONSE message.]

The DRNS shall start reception on the new RL(s) after the RLs are successfully established.

 **[FDD - Radio Link Set Handling]:**

[FDD - The *First RLS Indicator* IE indicates if the concerned RL shall be considered part of the first RLS established towards this UE. The *First RLS Indicator* IE shall be used by the DRNS to determine the initial TPC pattern in the DL of the concerned RL and all RLs which are part of the same RLS, as described in [10], section 5.1.2.2.1.2.

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the DRNS shall assign the *RL Set ID* IE included in the RADIO LINK SETUP RESPONSE message a value that uniquely identifies the RL Set within the UE Context.]

[FDD – For all RLs having a common generation of the TPC commands in the DL with another RL, the DRNS shall assign the *RL Set ID* IE included in the RADIO LINK SETUP RESPONSE message the same value. This value shall uniquely identify the RL Set within the UE Context.]

[FDD –The UL oout-of-sync algorithm defined in ref. [10] shall, for each of the established RL Set(s), use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE that are configured in the cells supporting the radio links of the RL Set. The UL in-sync algorithm defined in [10] shall, for each of the established RL Set(s), use the minimum value of the parameters N_INSYNC_IND that are configured in the cells supporting the radio links of the RL Set.]

**Response Message:**

At the reception of the RADIO LINK SETUP REQUEST message, the DRNS allocates requested type of channelisation codes and other physical channel resources for each RL and assigns a binding identifier and a transport layer address for each DCH or set of co-ordinated DCHs and for each DSCH [TDD – and USCH]. This information shall be sent to the SRNC in the message RADIO LINK SETUP RESPONSE when all the RLs have been successfully established.

After sending the RADIO LINK SETUP RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation on the Uu interface and start reception on the new RL.

For each RL for which the *Delayed Activation* IE is not included in the RADIO LINK SETUP REQUEST message the DRNS shall:

- [FDD -start DL transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].]

- [TDD – start transmission on the new RL immediately as specified in ref. [4].]

For each RL for which the *Delayed Activation* IE is included in the RADIO LINK SETUP REQUEST message, the DRNS shall:

- if the *Delayed Activation* IE indicates "Separate Indication":

    - not start any DL transmission for the concerned RL on the Uu interface;

- if the *Delayed Activation* IE indicates "CFN":

    - [FDD – start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4], however never before the CFN indicated in the *Activation CFN* IE.]

    - [TDD – start transmission on the new RL at the CFN indicated in the *Activation CFN* IE as specified in ref. [4].]

## 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
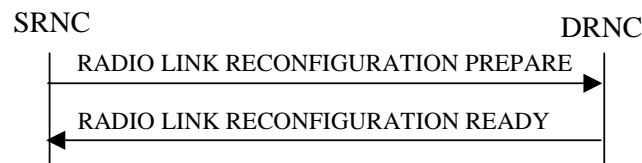


**Figure 10: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation**

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the DRNC.

Upon reception, the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allowed Queuing Time* IE the DRNS may queue the request the time corresponding to the value of the *Allowed Queuing Time* IE before starting to execute the request.

The DRNS shall prioritise resource allocation for the RL(s) to be modified according to Annex A.

**DCH Modification:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs To Modify* IEs, the DRNS shall treat them each as follows:

- If the *DCHs To Modify* IE includes multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCHs To Modify* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.

- If the *DCHs To Modify* IE includes the *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- If the *DCHs To Modify* IE includes the *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- If the *DCHs To Modify* IE includes the *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be modified, the DRNS shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- If the *DCH Specific Info* IE includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

- If the *DCH Specific Info* IE includes the *Traffic Class* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The *Traffic Class* IE should be used to determine the

transport bearer characteristics to apply between DRNC and Node B for the related DCH or set of co-ordinated DCHs.

- If the *DCH Specific Info* IE includes the *Transport Format Set* IE for the UL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

- If the *DCH Specific Info* IE includes the *Transport Format Set* IE for the DL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

- [FDD - If, in the *DCH Specific Info* IE, the *DRAC Control* IE is present and set to "requested" for at least one DCH and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE for the FACH where the DRAC information is sent, for each Radio Link established in a cell where DRAC is active. If the DRNS does not support DRAC, DRNC shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

- [TDD - If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the UL, the DRNS shall map the DCH onto the referenced UL CCTrCH.]

- [TDD - If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the DL, the DRNS shall map the DCH onto the referenced DL CCTrCH.]

- If the *DCH Specific Info* IE includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:

    - If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the uplink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate in the uplink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate.

    If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate in the downlink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the downlink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate.

**DCH Addition:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs To Add* IEs, the DRNS shall treat them each as follows:

- The DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

- If the *DCHs To Add* IE includes a *DCHs To Add* IE with multiple *DCH Specific Info* IEs, the DRNS shall treat the DCHs in the *DCHs To Add* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.

- [FDD - For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected", the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [4]. If the *QE-Selector* IE is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [4].]

- [FDD - For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" shall be used for the QE in the UL data frames, ref. [4]. [FDD - If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [4]. If all DCHs have the *QE-Selector* IE set to "non-selected" the Physical channel BER shall be used for the QE, ref. [4].]

- The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames

in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

- The DRNS should store the *Traffic Class* IE received for a DCH to be added in the new configuration. The *Traffic Class* IE should be used to determine the transport bearer characteristics to apply between DRNC and Node B for the related DCH or set of co-ordinated DCHs.

- The DRNS shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- The DRNS shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- [TDD - The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if at least one DSCH or USCH exists in the new configuration.]

- [FDD - If the *DRAC Control* IE is set to "requested" in the *DCH Specific Info* IE for at least one DCH and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE for the FACH where the DRAC information is sent, for each Radio Link supported by a cell where DRAC is active. If the DRNS does not support DRAC, the DRNC shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

- If the *DCH Specific Info* IE includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:

  - If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the uplink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate of the uplink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed UL Rate* IE, the DRNS shall not limit the user rate of the downlink of the DCH.

  - If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new Guaranteed Rate in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate of the downlink of the DCH at any point in time after activating the new configuration. The DRNS may request the SRNC to reduce the user rate of the uplink of the DCH below the guaranteed bit rate, however, whenever possible the DRNS should request the SRNC to reduce the user rate between the maximum bit rate and the guaranteed bit rate. If the *DCH Specific Info* IE in the *DCH Information* IE does not include the *Guaranteed DL Rate* IE, the DRNS shall not limit the user rate of the uplink of the DCH.

**DCH Deletion:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCH To Delete*, the DRNS shall not include the referenced DCHs in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration.

**Physical Channel Modification:**

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes an *UL DPCH Information* IE, the DRNS shall apply the parameters to the new configuration as follows:]

- [FDD - If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

- [FDD - If the *UL DPCH Information* IE includes the *Min UL Channelisation Code Length* IE, the DRNS shall apply the new Min UL Channelisation Code Length in the new configuration. The DRNS shall apply the contents of the *Max Number of UL DPDCHs* IE (if it is included) in the new configuration.]

- [FDD - If the *UL DPCH Information* IE includes the *TFCS* IE, the DRNS shall use the *TFCS* IE for the UL when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of the new configuration.]

- [FDD - If the *UL DPCH Information* IE includes the *UL DPCCH Slot Format* IE, the DRNS shall apply the new Uplink DPCCH *Slot Format* to the new configuration.]

- [FDD – If the *UL DPCH Information* IE includes the *UL SIR Target* IE, the DRNS shall set the UL inner loop power control to the UL SIR target when the new configuration is being used.]

- [FDD – If the *UL DPCH Information* IE includes the *Puncture Limit* IE, the DRNS shall apply the value in the uplink of the new configuration.]

- [FDD - If the *UL DPCH Information* IE includes the *Diversity Mode* IE, the DRNS shall apply diversity according to the given value.]

- [FDD – If the *UL DPCH Information* IE includes an *SSDT Cell Identity Length* IE and/or an *S-Field Length* IE, the DRNS shall apply the values in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes a *DL DPCH Information* IE, the DRNS shall apply the parameters to the new configuration as follows:]

- [FDD - If the *DL DPCH Information* IE includes *Number of DL Channelisation Codes* IE, the DRNS shall allocate given number of Downlink Channelisation Codes per Radio Link and apply the new Downlink Channelisation Code(s) to the new configuration. Each Downlink Channelisation Code allocated for the new configuration shall be included as a FDD DL Channelisation Code Number IE in the RADIO LINK RECONFIGURATION READY message when sent to the SRNC. If some Transmission Gap Pattern sequences using 'SF/2' method are already initialised in the DRNS, DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE in the RADIO LINK RECONFIGURATION READY message in case the DRNS selects to change the Scrambling code change method for one or more DL Channelisation Code.]

- [FDD – When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When *p* number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to "*PhCH number 1*", the second to "*PhCH number 2*", and so on until the *p*th to "*PhCH number p*".]

- [FDD - If the *DL DPCH Information* IE includes the *TFCS* IE, the DRNS shall use the *TFCS* IE for the DL when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *DL DPCH Slot Format* IE, the DRNS shall apply the new slot format used in DPCH in DL.]

- [FDD – If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE, the DRNS shall apply the new signalling mode of the TFCI.]

- [FDD – If the *DL DPCH Information* IE includes the *Multiplexing Position* IE, the DRNS shall apply the new parameter to define whether fixed or flexible positions of transport channels shall be used in the physical channel.]

- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE set to "Used", the DRNS shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IEset to "Not Used", the DRNS shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]

    - [FDD – If the RADIO LINK RECONFIGURATION PREPARE message does not include the *Length of TFCI2* IE and the *Split type* IE is present with the value "Hard", then the DRNS shall assume the length of the TFCI (field 2) is 5 bits.]

- [FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes *Split Ty*pe IE, then the DRNS shall apply this information to the new configuration of TFCI.]

- [FDD – If the *DL DPCH Information* IE includes the *Length of TFCI2* IE, the DRNS shall apply this information to the length of TFCI(field 2) in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information* IE, the DRNS shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration. This new Compressed Mode Configuration shall be valid in the DRNS until the next Compressed Mode Configuration is configured in the DRNS or last Radio Link is deleted.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information* IE and the *Downlink Compressed Mode Method* IE in one or more Transmission Gap Pattern Sequence within the *Transmission Gap Pattern Sequence Information* IE is set to 'SF/2', the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE to the RADIO LINK RECONFIGURATION READY message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not].

**[TDD - UL/DL CCTrCH Modification]**

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH To Modify* IEs or *DL CCTrCH To Modify* IEs, then the DRNS shall treat them each as follows:]

[TDD - If any of the *UL CCTrCH To Modify* IEs or *DL CCTrCH To Modify* IEs includes any of the *TFCS* IE, *TFCI coding* IE, *Puncture limit* IE, or *TPC CCTrCH ID* IEs the DRNS shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]

- [TDD – The DRNC shall include in the RADIO LINK RECONFIGURATION READY message DPCH information to be modified and the IEs modified if any of *Repetition Period* IE, *Repetition Length* IE, *TDD DPCH Offset* IE or timeslot information was modified. The DRNC shall include timeslot information and the IEs modified if any of *[3.84Mcps TDD - Midamble Shift And Burst Type* IE, *Time Slot* IE], [1.28Mcps TDD - *Midamble Shift LCR* IE, *Time Slot LCR* IE], *TFCI Presence* IE or Code information was modified. The DRNC shall include code information if [3.84Mcps TDD - *TDD Channelisation Code* IE] and/or [1.28Mcps TDD - *TDD Channelisation Code LCR* IE] was modified.]

- [1.28Mcps TDD – If the *UL CCTrCH To Modify* IE includes the *UL SIR Target* IE, the DRNS shall use the value for the UL inner loop power control according [12] and [22] when the new configuration is being used.]

**[TDD – UL/DL CCTrCH Addition]**

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH To Add* IEs or *DL CCTrCH To Add* IEs, the DRNS shall include this CCTrCH in the new configuration.]

[TDD – If the DRNS has reserved the required resources for any requested DPCHs, the DRNC shall include the DPCH information within DPCH to be added in the RADIO LINK RECONFIGURATION READY message. [3.84Mcps TDD - If no DPCH was active before the reconfiguration, and if a valid Rx Timing Deviation measurement is known in DRNC, then the DRNC shall include the *Rx Timing Deviation* IE in the RADIO LINK RECONFIGURATION READY message.]]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes a *DL CCTrCH To Add* IE, the DRNS shall set the TPC step size of that CCTrCH to the same value as the lowest numbered DL CCTrCH in the current configuration.]

[1.28Mcps TDD – The DRNS shall use the *UL SIR Target* IE in the *UL CCTrCH To Add* IE as the UL SIR value for the inner loop power control for this CCTrCH according [12] and [22] in the new configuration.]

**[TDD – UL/DL CCTrCH Deletion]**

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH To Delete* IEs *or DL CCTrCH To Delete* IEs, the DRNS shall remove this CCTrCH in the new configuration.]

**SSDT Activation/Deactivation:**

- [FDD - If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT Active in the UE", the DRNS shall activate SSDT, if supported, using the *SSDT Cell Identity* IE in *RL Information* IE, and the *SSDT Cell Identity Length* IE in *UL DPCH Information* IE, in the new configuration.]

- [FDD - If the *RL Information* IE includes the *Qth Parameter* IE and the *SSDT Indication* IE set to "SSDT Active in the UE", the DRNS shall use the *Qth Parameter* IE, if Qth signalling is supported, when SSDT is activated in the new configuration.]

- [FDD - If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

**DL Power Control:**

- [FDD - If the *RL Information* IE includes the *DL Reference Power* IEs and power balancing is active, DRNS shall update the reference power of the power balancing in the indicated RL(s), if updating of power balancing parameters by the RADIO LINK RECONFIGURATION PREPARE message is supported, at the CFN in the RADIO LINK RECONFIGURATION COMMIT message, according to subclause 8.3.15, using the *DL Reference Power* IE. If the CFN modulo the value of the *Adjustment Period* IE is not equal to 0, the power balancing continues with the old reference power until the end of the current adjustment period, and the updated reference power shall be used from the next adjustment period.

[FDD - If updating of power balancing parameters by the RADIO LINK RECONFIGURATION PREPARE message is supported by the DRNS, the DRNC shall include the *DL Power Balancing Updated Indicator* IE in the *RL Information Response* IE in the RADIO LINK RECONFIGURATION READY message.]

**DSCH Addition/Modification/Deletion:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add*, *DSCH To Modify* or *DSCH To Delete* IEs, then the DRNS shall use this information to add/modify/delete the indicated DSCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add* IE, then the DRNS shall use the *Allocation/Retention Priority* IE*, Scheduling Priority Indicator* IE and *TrCH Source Statistics Descriptor* IE to define a set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add* IE, then the DRNS may use the *Traffic Class* IE to determine the transport bearer characteristics to apply between DRNC and Node B for the related DSCHs.

[FDD - If the *DSCHs To Add* IE includes the *Enhanced DSCH PC* IE, the DRNS shall activate enhanced DSCH power control in accordance with ref. [10] subclause 5.2.2, if supported, using either:]

- [FDD - the *SSDT Cell Identity for EDSCHPC* IE in the *RL Information* IE, if the *SSDT Cell Identity* IE is not included in the *RL Information* IE or]

- [FDD - the *SSDT Cell Identity* IE in the *RL Information* IE, if both the *SSDT Cell Identity* IE and the *SSDT Cell Identity for EDSCHPC* are included in the *RL Information* IE.]

[FDD - together with the *SSDT Cell Identity Length* IE in *UL DPCH Information* IE, and *Enhanced DSCH PC* IE, in the new configuration.]

[FDD - If the enhanced DSCH power control is activated and the TFCI PC Mode 2 is supported, the primary/secondary status determination in the enhanced DSCH power control shall be applied to the TFCI power control in DSCH hard split mode.]

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Modify* IE, then the DRNS shall treat them each as follows:

- [FDD – If the *DSCH To Modify* IE includes any *DSCH Info* IEs, then the DRNS shall treat them each as follows:]

  - [FDD – If the *DSCH Info* IE includes any of the *Allocation/Retention Priority* IE*, Scheduling Priority Indicator* IE or *TrCH Source Statistics Descriptor* IE, the DRNS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]

- [FDD – If the *DSCH Info* IE includes any of the *Transport Format Set* IE or *BLER* IE, the DRNS shall apply the parameters to the new configuration.]

- [FDD – If the DSCH Info IE includes the *Traffic Class* IE, the DRNS may use this information to determine the transport bearer characteristics to apply between DRNC and Node B for the related DSCHs.]

- [FDD – If the *DSCH To Modify* IE includes the *PDSCH RL ID* IE, then the DRNS shall use it as the new DSCH RL identifier.]

- [FDD - If the indicated PDSCH RL ID is in the DRNS and there was no DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a DSCH-RNTI to the UE Context and include the *DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.]

- [FDD - If the indicated PDSCH RL ID is in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a new DSCH-RNTI to the UE Context, release the old DSCH-RNTI and include the *DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.]

- [FDD - If the indicated PDSCH RL ID is not in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall release this DSCH-RNTI.]

- [FDD – If the *DSCH To Modify* IE includes the *Transport Format Combination Set* IE, then the DRNS shall use it as the new Transport Format Combination Set associated with the DSCH.]

- [TDD – If the *DSCHs To Modify* IE includes the *CCTrCH Id* IE, then the DRNS shall map the DSCH onto the referenced DL CCTrCH.]

- [TDD – If the *DSCHs To Modify* IE includes any of the *Allocation/Retention Priority* IE*, Scheduling Priority Indicator* IE or *TrCH Source Statistics Descriptor* IE, the DNRS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]

- [TDD – If the *DSCHs To Modify* IE includes any of the *Transport Format Set* IE or *BLER* IE, the DRNS shall apply the parameters to the new configuration.]

- [TDD – If the *DSCHs To Modify* IE includes the *Traffic Class* IE, the DRNS may use this information to determine the transport bearer characteristics to apply between DRNC and Node B for the related DSCHs.]

- [TDD – The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if a DSCH is added and at least one DCH exists in the new configuration. The DRNC shall also include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

- [FDD - If the *DSCHs To Modify* IE includes the *Enhanced DSCH PC Indicator* IE set to "Enhanced DSCH PC Active in the UE ", the DRNS shall activate enhanced DSCH power control in accordance with ref. [10] subclause 5.2.2, if supported, using either:]

    - [FDD - the *SSDT Cell Identity for EDSCHPC* IE in *RL Information* IE, if the *SSDT Cell Identity* IE is not included in the *RL Information* IE or]

    - [FDD - the *SSDT Cell Identity* IE in the *RL Information* IE, if both the *SSDT Cell Identity* IE and the *SSDT Cell Identity for EDSCHPC* are included in the *RL Information* IE.]

    [FDD - together with the *SSDT Cell Identity Length* IE in *UL DPCH Information* IE, and *Enhanced DSCH PC* IE, in the new configuration.]

- [FDD - If the *DSCHs To Modify* IE includes the *Enhanced DSCH PC Indicator* IE set to "Enhanced DSCH PC not Active in the UE", the DRNS shall deactivate enhanced DSCH power control in the new configuration.]

    [FDD - If the enhanced DSCH power control is activated and the TFCI PC Mode 2 is supported, the primary/secondary status determination in the enhanced DSCH power control shall be applied to the TFCI power control in DSCH hard split mode.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes a *DSCHs To Delete* IE requesting the deletion of all DSCH resources for the UE Context, then the DRNC shall release the DSCH-RNTI allocated to the UE Context, if there was one.]

If the requested modifications are allowed by the DRNS and the DRNS 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.

The DRNC shall include the *DSCH Initial Window Size* IE in the RADIO LINK RECONFIGURATION READY message for each DSCH, if the DRNS allows the SRNC to start transmission of MAC-c/sh SDUs before the DRNS has allocated capacity on user plane as described in [32].

**[TDD] USCH Addition/Modification/Deletion**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Modify*, *USCH To Add* or *USCH To Delete* IEs, then the DRNS shall use this information to add/modify/delete the indicated USCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.

If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Add* IE, then, the DRNS shall use the *Allocation/Retention Priority* IE*, Scheduling Priority Indicator* IE and *TrCH Source Statistics Descriptor* IE to define a set of USCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.

If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Add* IE, then the DRNS may use the *Traffic Class* IE to determine the transport bearer characteristics to apply between DRNC and Node B for the related USCHs.

If the RADIO LINK RECONFIGURATION PREPARE message includes any *USCH To Modify* IE, then the DRNS shall treat them each as follows:

- If the *USCH To Modify* IE includes any of the Allocation/Retention Priority IE , Scheduling Priority Indicator IE or TrCH Source Statistics Descriptor IE, the DNRS shall use them to update the set of USCH Priority classes.

- If the *USCH To Modify* IE includes any of the CCTrCH Id IE, Transport Format Set IE, BLER IE or RB Info IE, the DRNS shall apply the parameters to the new configuration.

- If the *USCHs To Modify* IE includes the *Traffic Class* IE, the DRNS may use this information to determine the transport bearer characteristics to apply between DRNC and Node B for the related USCHs.

- [TDD - The DRNC shall include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if a USCH is added and at least one DCH exists in the new configuration. The DRNC shall also include the *Secondary CCPCH Info TDD* IE in the RADIO LINK RECONFIGURATION READY message if the SHCCH messages for this radio link will be transmitted over a different secondary CCPCH than selected by the UE from system information.]

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.

**RL Information:**

[FDD- If the *RL Information* IE includes the *DL DPCH Timing Adjustment* IE, the DRNS shall adjust the timing of the radio link accordingly in the new configuration.]

**HS-DSCH Information Addition/Modification/Deletion:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any *HS-DSCH Information To Modify*, *HS-DSCH Information To Add* or *HS-DSCH Information to Delete* IEs, then the DRNS shall use this information to add/modify/delete the indicated HS-DSCH resources to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *HS-PDSCH RL ID* IE, then:

- If the indicated HS-PDSCH RL ID is in the DRNS and there was no HS-DSCH-RNTI allocated to the UE Context, the DRNC shall allocate an HS-DSCH-RNTI to the UE Context and include the *HS-DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.

- If the indicated HS-PDSCH RL ID is in the DRNS and there was an HS-DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a new HS-DSCH-RNTI to the UE Context, release the old HS-DSCH-RNTI and include the *HS-DSCH-RNTI* IE in the RADIO LINK RECONFIGURATION READY message.

- If the indicated HS-PDSCH RL ID is not in the DRNS and there was an HS-DSCH-RNTI allocated to the UE Context, the DRNC shall release this HS-DSCH-RNTI.

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Measurement Reporting Cycle* IE in the *HS-DSCH Information To Modify* IE, then the DRNS shall use the indicated Measurement Feedback Reporting Cycle value in the new configuration.]

**General**

If the RADIO LINK RECONFIGURATION PREPARE message includes an *HS-DSCH Information to Delete* IE requesting the deletion of all HS-DSCH resources for the UE Context, then the DRNC shall release the HS-DSCH-RNTI allocated to the UE Context, if there was one.

The DRNC shall include the *HS-DSCH Initial Capacity Allocation* IE in the RADIO LINK RECONFIGURATION READY message for each MAC-d flow, if the DRNS allows the SRNC to start transmission of MAC-d PDUs before the DRNS has allocated capacity on user plane as described in [32].

**[TDD] DSCH RNTI Addition/Deletion**

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the PDSCH RL ID IE, then the DRNS shall use it as the new RL identifier for PDSCH and PUSCH..]

- [TDD - If the indicated PDSCH RL ID is in the DRNS and there was no DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a DSCH-RNTI to the UE Context and include the DSCH-RNTI IE in the RADIO LINK RECONFIGURATION READY message.]

- [TDD - If the indicated PDSCH RL ID is in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall allocate a new DSCH-RNTI to the UE Context, release the old DSCH-RNTI and include the DSCH-RNTI IE in the RADIO LINK RECONFIGURATION READY message.]

- [TDD - If the indicated PDSCH RL ID is not in the DRNS and there was a DSCH-RNTI allocated to the UE Context, the DRNC shall release this DSCH-RNTI.]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes a DSCHs to Delete IE and/or a USCHs to Delete IE which results in the deletion of all DSCH and USCH resources for the UE Context, then the DRNC shall release the DSCH-RNTI allocated to the UE Context, if there was one.]

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Layer Address* IE and *Binding ID* IE in the *DSCHs To Modify* , *DSCHs To Add*, [TDD - *USCHs To Modify* , *USCHs To Add*], *HS-DSCH To Modify*, *HS-DSCH To Add* 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 DRNS shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* 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 only for 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 only for one of the combined Radio Links.

Any allowed rate for the uplink of a 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 the *Allowed UL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK RECONFIGURATION READY message for this Radio Link.

Any allowed rate for the downlink of a 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 the *Allowed DL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK RECONFIGURATION READY message for this Radio Link.

If the requested modifications are allowed by the DRNS, and the DRNS 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.

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s) and shall return this in the *Maximum Uplink SIR* IE and *Minimum Uplink SIR* IE for each Radio Link in the RADIO LINK RECONFIGURATION READY message.

If the DL TX power upper or lower limit has been re-configured the DRNC shall return this in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE respectively in the RADIO LINK RECONFIGURATION READY 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 [FDD – except during compressed mode, when the $P_{SIR}(k)$, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power in slot k.]

[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 present, the DRNC should use the indicated values when deciding the Initial DL TX Power.]

### 9.2.1.26B DSCH Flow Control Information

The *DSCH Flow Control Information* IE provides flow control information for each scheduling priority class for the DSCH FP over Iur.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|---|---|---|---|---|---|
| **DSCH Flow Control Information** | | *1..16* | | | – | |
| >DSCH Scheduling Priority | M | | Scheduling Priority Indicator 9.2.1.51A | | – | |
| **>MAC-c/sh SDU Length** | | *1..<maxNb MAC-c/shSDUL ength>* | | | – | |
| >>MAC-c/sh SDU Length | M | | 9.2.1.34 | | – | |
| >DSCH Initial Window Size | O | | 9.2.1.x | | YES | Ignore |

| Range bound | Explanation |
|---|---|
| *maxNbMAC-c/shSDULength* | Maximum number of different MAC-c/sh SDU lengths. |

### 9.2.1.X    DSCH Initial Window Size

Indicates the initial number of MAC-c/sh SDUs that may be transmitted before new credits are received from the DRNC.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|---|---|---|---|
| DSCH Initial Window Size | | | INTEGER (1..255) | Number of MAC-c/sh SDUs: 255 = Unlimited number of MAC-c/sh SDUs. |

**3GPP TS 25.423 v5.2.0 (2002-06)**

\*\*\*\*\*\*\*\*\*\*  NEXT CHANGE  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## 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

IMPORTS
    maxCodeNumComp-1,
    maxNrOfFACHs,
    maxFACHCountPlus1,
    maxIBSEG,
    maxNoOfDSCHs,
    maxNoOfDSCHs-1,
    maxNoOfUSCHs,
    maxNoTFCIGroups,
    maxNoCodeGroups,
    maxNrOfDCHs,
    maxNrOfDL-Codes,
    maxNrOfDLTs,
    maxNrOfDLTsLCR,
    maxNrOfDPCHs,
    maxNrOfDPCHsLCR,
    maxNrOfErrors,
    maxNrOfFDDNeighboursPerRNC,
    maxNrOfMACcshSDU-Length,
    maxNrOfNeighbouringRNCs,
    maxNrOfTDDNeighboursPerRNC,
    maxNrOfLCRTDDNeighboursPerRNC,
    maxNrOfTS,
    maxNrOfULTs,
    maxNrOfULTsLCR,
    maxNrOfGSMNeighboursPerRNC,
    maxRateMatching,
    maxNrOfPoints,
    maxNoOfRB,
    maxNrOfRLs,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxCTFC,
    maxRNCinURA-1,
```

```
maxNrOfSCCPCHs,
maxTFCI1Combs,
maxTFCI2Combs,
maxTFCI2Combs-1,
maxTGPS,
maxTTI-Count,
maxNoGPSTypes,
maxNoSat,
maxNrOfHARQProc,
maxNrOfHSSCCHCodes,
maxNrOfMACdFlows,
maxNrOfMACdFlows-1,
maxNrOfPDUIndexes,
maxNrOfPDUIndexes-1,
maxNrOfPrioQueues,
maxNrOfPrioQueues-1,


id-Allowed-Rate-Information,
id-AntennaColocationIndicator,
id-BindingID,
id-Cell-Capacity-Class-Value,
id-Cell-Capacity-Class-Value-ThresholdInformation,
id-CellCapabilityContainer-FDD,
id-CellCapabilityContainer-TDD,
id-CellCapabilityContainer-TDD-LCR,
id-CoverageIndicator,
id-DPC-Mode-Change-SupportIndicator,
id-DSCH-Specific-FDD-Additional-List,
id-Guaranteed-Rate-Information,
id-HCS-Prio,
id-Load-Value,
id-Load-Value-IncrDecrThres,
id-Neighbouring-GSM-CellInformation,
id-Neighbouring-UMTS-CellInformationItem,
id-neighbouring-LCR-TDD-CellInformation,
id-NRT-Load-Information-Value,
id-NRT-Load-Information-Value-IncrDecrThres,
id-OnModification,
id-Received-Total-Wideband-Power-Value,
id-Received-Total-Wideband-Power-Value-IncrDecrThres,
id-RT-Load-Value,
id-RT-Load-Value-IncrDecrThres,
id-SFNSFNMeasurementThresholdInformation,
id-TUTRANGPSMeasurementThresholdInformation,
id-TrafficClass,
id-Transmitted-Carrier-Power-Value,
id-Transmitted-Carrier-Power-Value-IncrDecrThres,
id-UL-Timeslot-ISCP-Value,
id-UL-Timeslot-ISCP-Value-IncrDecrThres,
maxNrOfLevels,
maxNrOfMeasNCell,
maxNrOfMeasNCell-1,
id-MessageStructure,
```

```
        id-EnhancedDSCHPC,
        id-RestrictionStateIndicator,
        id-Rx-Timing-Deviation-Value-LCR,
        id-TransportLayerAddress,
        id-TypeOfError,
        id-Angle-Of-Arrival-Value-LCR,
        id-IPDL-TDD-ParametersLCR,
        id-NRT-Load-information-Value,
        id-DSCH-InitialWindowSize,

FROM RNSAP-Constants


***********       UNAFFECTED PARTS OMITTED         ***********************
-- D
DATA-ID ::= INTEGER (0..3)


DCH-FDD-Information       ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-FDD-InformationItem

DCH-FDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator        PayloadCRC-PresenceIndicator,
    ul-FP-Mode                          UL-FP-Mode,
    toAWS                               ToAWS,
    toAWE                               ToAWE,
    dCH-SpecificInformationList         DCH-Specific-FDD-InformationList,
    iE-Extensions                       ProtocolExtensionContainer { {DCH-FDD-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

DCH-FDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-Specific-FDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-FDD-Item

DCH-Specific-FDD-Item ::=   SEQUENCE {
    dCH-ID                              DCH-ID,
    trCH-SrcStatisticsDescr             TrCH-SrcStatisticsDescr,
    ul-transportFormatSet               TransportFormatSet,
    dl-transportFormatSet               TransportFormatSet,
    ul-BLER                             BLER,
    dl-BLER                             BLER,
    allocationRetentionPriority         AllocationRetentionPriority,
    frameHandlingPriority               FrameHandlingPriority,
    qE-Selector                         QE-Selector,
    dRACControl                         DRACControl,
    iE-Extensions                       ProtocolExtensionContainer { {DCH-FDD-SpecificItem-ExtIEs} } OPTIONAL,
    ...
}

DCH-FDD-SpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Guaranteed-Rate-Information    CRITICALITY ignore    EXTENSION Guaranteed-Rate-Information    PRESENCE optional }|
    { ID id-TrafficClass                   CRITICALITY ignore    EXTENSION TrafficClass    PRESENCE mandatory},
    ...
}
```

```
DCH-ID                  ::= INTEGER (0..255)

DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem

DCH-InformationResponseItem ::= SEQUENCE {
    dCH-ID              DCH-ID,
    bindingID           BindingID           OPTIONAL,
    transportLayerAddress TransportLayerAddress OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {DCH-InformationResponseItem-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationResponseItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Allowed-Rate-Information     CRITICALITY ignore     EXTENSION Allowed-Rate-Information     PRESENCE optional },
    ...
}

DCH-TDD-Information         ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-TDD-InformationItem

DCH-TDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator    PayloadCRC-PresenceIndicator,
    ul-FP-Mode                      UL-FP-Mode,
    toAWS                           ToAWS,
    toAWE                           ToAWE,
    dCH-SpecificInformationList     DCH-Specific-TDD-InformationList,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

DCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-Specific-TDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-TDD-Item

DCH-Specific-TDD-Item ::=     SEQUENCE {
    dCH-ID                      DCH-ID,
    ul-cCTrCH-ID                CCTrCH-ID, -- UL CCTrCH in which the DCH is mapped
    dl-cCTrCH-ID                CCTrCH-ID, -- DL CCTrCH in which the DCH is mapped
    trCH-SrcStatisticsDescr     TrCH-SrcStatisticsDescr,
    ul-transportFormatSet       TransportFormatSet,
    dl-transportFormatSet       TransportFormatSet,
    ul-BLER                     BLER,
    dl-BLER                     BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority       FrameHandlingPriority,
    qE-Selector                 QE-Selector         OPTIONAL,
    -- This IE shall be present if DCH is part of set of Co-ordinated DCHs
    iE-Extensions               ProtocolExtensionContainer { {DCH-Specific-TDD-Item-ExtIEs} } OPTIONAL,
    ...
}
```

```
DCH-Specific-TDD-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-Guaranteed-Rate-Information    CRITICALITY ignore    EXTENSION Guaranteed-Rate-Information    PRESENCE optional }|
{ ID id-TrafficClass                   CRITICALITY ignore    EXTENSION TrafficClass    PRESENCE mandatory },
...
}

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rSCP,
    rx-timing-deviation,
    round-trip-time,
    ...,
    rx-timing-deviation-LCR,
    angle-Of-Arrival-LCR
}

DedicatedMeasurementValue ::= CHOICE {
    sIR-Value    SIR-Value,
    sIR-ErrorValue    SIR-Error-Value,
    transmittedCodePowerValue    Transmitted-Code-Power-Value,
    rSCP                  RSCP-Value, -- TDD only
    rxTimingDeviationValue    Rx-Timing-Deviation-Value,    -- 3.84Mcps TDD only
    roundTripTime            Round-Trip-Time-Value,    -- FDD only
    ...,
    extension-DedicatedMeasurementValue    Extension-DedicatedMeasurementValue
}

Extension-DedicatedMeasurementValue ::= ProtocolIE-Single-Container {{ Extension-DedicatedMeasurementValueIE }}

Extension-DedicatedMeasurementValueIE RNSAP-PROTOCOL-IES ::= {
{ ID id-Rx-Timing-Deviation-Value-LCR    CRITICALITY reject    TYPE Rx-Timing-Deviation-Value-LCR    PRESENCE mandatory }|
{ ID id-Angle-Of-Arrival-Value-LCR    CRITICALITY reject    TYPE Angle-Of-Arrival-Value-LCR PRESENCE mandatory },
...
}

DedicatedMeasurementValueInformation ::= CHOICE {
    measurementAvailable        DedicatedMeasurementAvailable,
    measurementnotAvailable     DedicatedMeasurementnotAvailable
}

DedicatedMeasurementAvailable::= SEQUENCE {
    dedicatedmeasurementValue    DedicatedMeasurementValue,
    cFN                          CFN                    OPTIONAL,
    ie-Extensions                ProtocolExtensionContainer { { DedicatedMeasurementAvailableItem-ExtIEs} }    OPTIONAL,
    ...
}

DedicatedMeasurementAvailableItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

**3GPP TS 25.423 v5.2.0 (2002-06)**

```
DedicatedMeasurementnotAvailable ::= NULL

DelayedActivation ::= CHOICE {
    cfn                     CFN,
    separate-indication     NULL
}

DelayedActivationUpdate ::= CHOICE {
    activate        Activate-Info,
    deactivate      Deactivate-Info
}

Activate-Info ::= SEQUENCE {
    activation-type         Execution-Type,
    initial-dl-tx-power     DL-Power,
    firstRlS-Indicator      FirstRLS-Indicator          OPTIONAL,   --FDD Only
    propagation-delay       PropagationDelay            OPTIONAL,   --FDD Only
    iE-Extensions           ProtocolExtensionContainer { { Activate-Info-ExtIEs} }   OPTIONAL,
    ...
}

Activate-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Deactivate-Info ::= SEQUENCE {
    deactivation-type       Execution-Type,
    iE-Extensions           ProtocolExtensionContainer { { Deactivate-Info-ExtIEs} }   OPTIONAL,
    ...
}

Deactivate-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Execution-Type ::= CHOICE {
    synchronised        CFN,
    unsynchronised      NULL
}

DeltaSIR            ::= INTEGER (0..30)
-- Step 0.1 dB, Range 0..3 dB.

DGPSCorrections ::= SEQUENCE {
    gPSTOW                              GPSTOW,
    gPS-Status-Health                  GPS-Status-Health,
    satellite-DGPSCorrections-Information   SEQUENCE (SIZE (1..maxNoSat)) OF
        SEQUENCE {
            sAT-ID                     SAT-ID,
            iode-dgps                  BIT STRING (SIZE (8)),
```

```
        uDRE                              UDRE,
        pRC                               PRC,
        range-Correction-Rate             Range-Correction-Rate,
        iE-Extensions                     ProtocolExtensionContainer { { Satellite-DGPSCorrections-Information-ExtIEs} }   OPTIONAL,
        ...
    },

    iE-Extensions                ProtocolExtensionContainer { { DGPSCorrections-ExtIEs} }   OPTIONAL,
    ...
}

Satellite-DGPSCorrections-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DGPSCorrections-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DGPSThreshold ::= SEQUENCE {
    pRCDeviation          PRCDeviation,
    iE-Extensions         ProtocolExtensionContainer { { DGPSThreshold-ExtIEs} }   OPTIONAL,
    ...
}

DGPSThreshold-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityControlField          ::= ENUMERATED {
    may,
    must,
    must-not
}

DiversityMode              ::= ENUMERATED {
    none,
    sTTD,
    closedLoopMode1,
    closedLoopMode2,
    ...
}

DL-DPCH-SlotFormat         ::= INTEGER (0..16,...)

DL-DPCH-TimingAdjustment ::= ENUMERATED {
    timing-advance,
    timing-delay
}
```

```
DL-Power                     ::= INTEGER (-350..150)
-- Value = DL-Power / 10
-- Unit dB, Range -35dB .. +15dB, Step 0.1dB

DL-PowerBalancing-Information ::= SEQUENCE {
    powerAdjustmentType                     PowerAdjustmentType,
    dLReferencePower                        DL-Power         OPTIONAL,
        -- This IE shall be present if Power Adjustment Type IE equals to 'Common'
    dLReferencePowerList-DL-PC-Rqst         DL-ReferencePowerInformationList    OPTIONAL,
        -- This IE shall be present if Power Adjustment Type IE equals to 'Individual'
    maxAdjustmentStep                       MaxAdjustmentStep     OPTIONAL,
        -- This IE shall be present if Power Adjustment Type IE equals to 'Common' or 'Individual'
    adjustmentPeriod                        AdjustmentPeriod      OPTIONAL,
        -- This IE shall be present if Power Adjustment Type IE equals to 'Common' or 'Individual'
    adjustmentRatio                         ScaledAdjustmentRatio OPTIONAL,
        -- This IE shall be present if Power Adjustment Type IE equals to 'Common' or 'Individual'
    iE-Extensions                           ProtocolExtensionContainer { { DL-PowerBalancing-Information-ExtIEs } } OPTIONAL,
    ...
}

DL-PowerBalancing-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-ReferencePowerInformationList         ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF DL-ReferencePowerInformationItem

DL-ReferencePowerInformationItem ::= SEQUENCE {
    rL-ID                       RL-ID,
    dl-Reference-Power          DL-Power,
    iE-Extensions               ProtocolExtensionContainer { {DL-ReferencePowerInformationItem-ExtIEs} } OPTIONAL,
    ...
}

DL-ReferencePowerInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-PowerBalancing-ActivationIndicator    ::= ENUMERATED {
    dL-PowerBalancing-Activated
}

DL-PowerBalancing-UpdatedIndicator       ::= ENUMERATED {
    dL-PowerBalancing-Updated
}

DL-ReferencePowerInformation             ::= SEQUENCE {
    common-DL-ReferencePowerInformation        DL-Power        OPTIONAL,
    individual-DL-ReferencePowerInformation    DL-ReferencePowerInformationList    OPTIONAL,
    iE-Extensions                              ProtocolExtensionContainer { { DL-ReferencePowerInformation-ExtIEs } } OPTIONAL,
    ...
}

DL-ReferencePowerInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

D-RNTI                          ::= INTEGER (0..1048575)

D-RNTI-ReleaseIndication ::= ENUMERATED {
    release-D-RNTI,
    not-release-D-RNTI
}

DL-ScramblingCode               ::= INTEGER (0..15)

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}

DL-Timeslot-Information ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF DL-Timeslot-InformationItem

DL-Timeslot-InformationItem ::= SEQUENCE {
    timeSlot                    TimeSlot,
    midambleShiftAndBurstType   MidambleShiftAndBurstType,
    tFCI-Presence               TFCI-Presence,
    dL-Code-Information          TDD-DL-Code-Information,
    iE-Extensions               ProtocolExtensionContainer { {DL-Timeslot-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

DL-Timeslot-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1.. maxNrOfDLTsLCR)) OF DL-TimeslotLCR-InformationItem

DL-TimeslotLCR-InformationItem  ::= SEQUENCE {
    timeSlotLCR                 TimeSlotLCR,
    midambleShiftLCR            MidambleShiftLCR,
    tFCI-Presence               TFCI-Presence,
    dL-Code-LCR-Information      TDD-DL-Code-LCR-Information,
    iE-Extensions               ProtocolExtensionContainer { { DL-TimeslotLCR-InformationItem-ExtIEs} }    OPTIONAL,
    ...
}

DL-TimeslotLCR-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfDLTs)) OF DL-TimeSlot-ISCP-InfoItem

DL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot                    TimeSlot,
    dL-TimeslotISCP            DL-TimeslotISCP,
```

```
    iE-Extensions              ProtocolExtensionContainer { { DL-TimeSlot-ISCP-InfoItem-ExtIEs} } OPTIONAL,
    ...
}

DL-TimeSlot-ISCP-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-TimeSlot-ISCP-LCR-Information ::= SEQUENCE (SIZE (1..maxNrOfDLTsLCR)) OF DL-TimeSlot-ISCP-LCR-InfoItem

DL-TimeSlot-ISCP-LCR-InfoItem ::= SEQUENCE {
    timeSlotLCR                TimeSlotLCR,
    dL-TimeslotISCP            DL-TimeslotISCP,
    iE-Extensions             ProtocolExtensionContainer { { DL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs} }   OPTIONAL,
    ...
}

DL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-TimeslotISCP              ::= INTEGER (0..91)
-- According to mapping in [24]

Downlink-Compressed-Mode-Method        ::= ENUMERATED {
    puncturing,
    sFdiv2,
    higher-layer-scheduling,
    ...
}

DPC-Mode ::= ENUMERATED {
    mode0,
    mode1,
    ...
}

DPC-Mode-Change-SupportIndicator ::= ENUMERATED {
    dPC-ModeChangeSupported
}

DPCH-ID              ::= INTEGER (0..239)

DPCHConstantValue ::= INTEGER  (-10..10)
-- Unit dB, Step 1dB

DRACControl     ::= ENUMERATED {
    requested,
    not-requested
}

DRXCycleLengthCoefficient              ::= INTEGER (3..9)
-- See in [16]
```

```
DSCH-FDD-Information::= SEQUENCE {
  dSCH-Specific-Information             DSCH-Specific-FDD-Item,
-- This DSCH-Specific-FDD-Item is the first DSCH-Specific-FDD-Item in DSCH-FDD-Information. If more than one DSCH-Specific-FDD-Item;s should be
defined in a DSCH-FDD-Information, from 2nd DSCH-FDD-Information, they will be included in the DSCH-Specific-FDD-Additional-List in the DSCH-FDD-
Information-ExtIEs.
  pdSCH-RL-ID                          RL-ID,
  tFCS                                 TFCS,
  iE-Extensions                        ProtocolExtensionContainer { {DSCH-FDD-Information-ExtIEs} } OPTIONAL,
  ...
}

DSCH-FDD-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-DSCH-Specific-FDD-Additional-List   CRITICALITY reject   EXTENSION DSCH-Specific-FDD-Additional-List      PRESENCE optional }|
{ ID id-EnhancedDSCHPC                       CRITICALITY ignore  EXTENSION EnhancedDSCHPC              PRESENCE optional },
  ...
}

DSCH-RNTI ::= INTEGER (0..65535)

DSCH-Specific-FDD-Item ::= SEQUENCE {
  dSCH-ID                              DSCH-ID,
  trChSourceStatisticsDescriptor       TrCH-SrcStatisticsDescr,
  transportFormatSet                   TransportFormatSet,
  allocationRetentionPriority          AllocationRetentionPriority,
  schedulingPriorityIndicator          SchedulingPriorityIndicator,
  bLER                                 BLER,
  iE-Extensions                        ProtocolExtensionContainer { {DSCH-Specific-FDD-Item-ExtIEs} } OPTIONAL,
  ...
}

DSCH-Specific-FDD-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-TrafficClass                   CRITICALITY ignore  EXTENSION TrafficClass          PRESENCE mandatory}|
{ ID id-BindingID                      CRITICALITY ignore  EXTENSION BindingID             PRESENCE           optional }|
-- Shall be ignored if bearer establishment with ALCAP.
{ ID id-TransportLayerAddress          CRITICALITY ignore  EXTENSION TransportLayerAddress  PRESENCE        optional },
-- Shall be ignored if bearer establishment with ALCAP.
  ...
}

DSCH-Specific-FDD-Additional-List ::= SEQUENCE (SIZE(1..maxNoOfDSCHs-1)) OF DSCH-Specific-FDD-Item

DSCH-FDD-InformationResponse ::= SEQUENCE {
  dsch-Specific-InformationResponse    DSCH-Specific-FDD-InformationResponse,
  pdSCHCodeMapping                     PDSCHCodeMapping,
  iE-Extensions                        ProtocolExtensionContainer { { DSCH-FDD-InformationResponse-ExtIEs} } OPTIONAL,
  ...
}

DSCH-FDD-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
DSCH-Specific-FDD-InformationResponse ::= SEQUENCE (SIZE(1..maxNoOfDSCHs)) OF DSCH-Specific-FDD-Response-Item

DSCH-Specific-FDD-Response-Item ::= SEQUENCE {
    dsch-ID                         DSCH-ID,
    dSCH-FlowControlInformation     DSCH-FlowControlInformation,
    bindingID                       BindingID                   OPTIONAL,
    transportLayerAddress           TransportLayerAddress       OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DSCH-Specific-FDD-Response-Item-ExtIEs} } OPTIONAL,
    ...
}

DSCH-Specific-FDD-Response-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-FlowControlInformation ::= SEQUENCE (SIZE(1..16)) OF DSCH-FlowControlItem

DSCH-FlowControlItem ::= SEQUENCE {
    dSCH-SchedulingPriority         SchedulingPriorityIndicator,
    mAC-c-sh-SDU-Lengths            MAC-c-sh-SDU-LengthList,
    iE-Extensions                   ProtocolExtensionContainer { {DSCH-FlowControlItem-ExtIEs} } OPTIONAL,
    ...
}

DSCH-FlowControlItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DSCH-InitialWindowSize  CRITICALITY ignore  EXTENSION  DSCH-InitialWindowSize   PRESENCE optional },
    ...
}

DSCH-ID                         ::= INTEGER (0..255)

DSCH-InitialWindowSize          ::= INTEGER (1..255)
-- Number of MAC-c/sh SDUs.
-- 255 = Unlimited number of MAC-c/sh SDUs

DSCH-TDD-Information ::= SEQUENCE (SIZE (1..maxNoOfDSCHs)) OF DSCH-TDD-InformationItem

DSCH-TDD-InformationItem ::= SEQUENCE {
    dSCH-ID                         DSCH-ID,
    dl-ccTrCHID                     CCTrCH-ID, -- DL CCTrCH in which the DSCH is mapped
    trChSourceStatisticsDescriptor  TrCH-SrcStatisticsDescr,
    transportFormatSet              TransportFormatSet,
    allocationRetentionPriority     AllocationRetentionPriority,
    schedulingPriorityIndicator     SchedulingPriorityIndicator,
    bLER                            BLER,
    iE-Extensions                   ProtocolExtensionContainer { {DSCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

DSCH-TDD-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TrafficClass            CRITICALITY ignore  EXTENSION TrafficClass   PRESENCE mandatory}|
    { ID id-BindingID               CRITICALITY ignore  EXTENSION BindingID      PRESENCE optional }|
    -- Shall be ignored if bearer establishment with ALCAP.
```

```
{ ID id-TransportLayerAddress          CRITICALITY ignore     EXTENSION TransportLayerAddress     PRESENCE    optional },
    -- Shall be ignored if bearer establishment with ALCAP.
    ...
}

***********      UNAFFECTED PARTS 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

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes;

-- **************************************************************
--
-- Elementary Procedures
--
-- **************************************************************

id-commonTransportChannelResourcesInitialisation     ProcedureCode ::= 0
id-commonTransportChannelResourcesRelease             ProcedureCode ::= 1
id-compressedModeCommand                              ProcedureCode ::= 2
id-downlinkPowerControl                               ProcedureCode ::= 3
id-downlinkPowerTimeslotControl                       ProcedureCode ::= 4
id-downlinkSignallingTransfer                         ProcedureCode ::= 5
id-errorIndication                                    ProcedureCode ::= 6
id-dedicatedMeasurementFailure                        ProcedureCode ::= 7
id-dedicatedMeasurementInitiation                     ProcedureCode ::= 8
id-dedicatedMeasurementReporting                      ProcedureCode ::= 9
id-dedicatedMeasurementTermination                    ProcedureCode ::= 10
id-paging                                             ProcedureCode ::= 11
id-physicalChannelReconfiguration                     ProcedureCode ::= 12
id-privateMessage                                     ProcedureCode ::= 13
id-radioLinkAddition                                  ProcedureCode ::= 14
id-radioLinkCongestion                                ProcedureCode ::= 34
id-radioLinkDeletion                                  ProcedureCode ::= 15
```

```
id-radioLinkFailure                                     ProcedureCode ::= 16
id-radioLinkPreemption                                  ProcedureCode ::= 17
id-radioLinkRestoration                                 ProcedureCode ::= 18
id-radioLinkSetup                                       ProcedureCode ::= 19
id-relocationCommit                                     ProcedureCode ::= 20
id-synchronisedRadioLinkReconfigurationCancellation     ProcedureCode ::= 21
id-synchronisedRadioLinkReconfigurationCommit           ProcedureCode ::= 22
id-synchronisedRadioLinkReconfigurationPreparation      ProcedureCode ::= 23
id-unSynchronisedRadioLinkReconfiguration               ProcedureCode ::= 24
id-uplinkSignallingTransfer                             ProcedureCode ::= 25
id-commonMeasurementFailure                             ProcedureCode ::= 26
id-commonMeasurementInitiation                          ProcedureCode ::= 27
id-commonMeasurementReporting                           ProcedureCode ::= 28
id-commonMeasurementTermination                         ProcedureCode ::= 29
id-informationExchangeFailure                           ProcedureCode ::= 30
id-informationExchangeInitiation                        ProcedureCode ::= 31
id-informationReporting                                 ProcedureCode ::= 32
id-informationExchangeTermination                       ProcedureCode ::= 33
id-reset                                                ProcedureCode ::= 35
id-radioLinkActivation                                  ProcedureCode ::= 36
id-gERANuplinkSignallingTransfer                        ProcedureCode ::= 37


-- **********************************************************
--
-- Lists
--
-- **********************************************************

maxCodeNumComp-1                INTEGER ::= 255
maxRateMatching                 INTEGER ::= 256
maxNoCodeGroups                 INTEGER ::= 256
maxNoOfDSCHs                    INTEGER ::= 10
maxNoOfDSCHsLCR                 INTEGER ::= 10
maxNoOfRB                       INTEGER ::= 32
maxNoOfUSCHs                    INTEGER ::= 10
maxNoOfUSCHsLCR                 INTEGER ::= 10
maxNoTFCIGroups                 INTEGER ::= 256
maxNrOfTFCs                     INTEGER ::= 1024
maxNrOfTFs                      INTEGER ::= 32
maxNrOfCCTrCHs                  INTEGER ::= 16
maxNrOfCCTrCHsLCR               INTEGER ::= 16
maxNrOfDCHs                     INTEGER ::= 128
maxNrOfDL-Codes                 INTEGER ::= 8
maxNrOfDPCHs                    INTEGER ::= 240
maxNrOfDPCHsLCR                 INTEGER ::= 240
maxNrOfErrors                   INTEGER ::= 256
maxNrOfMACcshSDU-Length         INTEGER ::= 16
maxNrOfPoints                   INTEGER ::= 15
maxNrOfRLs                      INTEGER ::= 16
maxNrOfRLSets                   INTEGER ::= maxNrOfRLs
maxNrOfRLs-1                    INTEGER ::= 15  -- maxNrOfRLs - 1
maxNrOfRLs-2                    INTEGER ::= 14  -- maxNrOfRLs - 2
maxNrOfULTs                     INTEGER ::= 15
```

```
maxNrOfULTsLCR                          INTEGER ::= 6
maxNrOfDLTs                             INTEGER ::= 15
maxNrOfDLTsLCR                          INTEGER ::= 6
maxRNCinURA-1                           INTEGER ::= 15
maxTTI-Count                            INTEGER ::= 4
maxCTFC                                 INTEGER ::= 16777215
maxNrOfNeighbouringRNCs                 INTEGER ::= 10
maxNrOfFDDNeighboursPerRNC              INTEGER ::= 256
maxNrOfGSMNeighboursPerRNC              INTEGER ::= 256
maxNrOfTDDNeighboursPerRNC              INTEGER ::= 256
maxNrOfFACHs                            INTEGER ::= 8
maxNrOfLCRTDDNeighboursPerRNC           INTEGER ::= 256
maxFACHCountPlus1                       INTEGER ::= 10
maxIBSEG                                INTEGER ::= 16
maxNrOfSCCPCHs                          INTEGER ::= 8
maxTFCI1Combs                           INTEGER ::= 512
maxTFCI2Combs                           INTEGER ::= 1024
maxTFCI2Combs-1                         INTEGER ::= 1023
maxTGPS                                 INTEGER ::= 6
maxNrOfTS                               INTEGER ::= 15
maxNrOfLevels                           INTEGER ::= 256
maxNoOfDSCHs-1                          INTEGER ::= 9
maxNrOfTsLCR                            INTEGER ::= 6
maxNoSat                                INTEGER ::= 16
maxNoGPSTypes                           INTEGER ::= 8
maxNrOfMeasNCell                        INTEGER ::= 96
maxNrOfMeasNCell-1                      INTEGER ::= 95      -- maxNrOfMeasNCell  - 1
maxResetContext                         INTEGER ::= 250
maxNrOfHARQProc                         INTEGER ::= 8
maxNrOfHSSCCHCodes                      INTEGER ::= 128
maxNrOfMACdFlows                        INTEGER ::= 8
maxNrOfMACdFlows-1                      INTEGER ::= 7       -- maxNrOfMACdFlows  - 1
maxNrOfPDUIndexes                       INTEGER ::= 8
maxNrOfPDUIndexes-1                     INTEGER ::= 7       -- maxNrOfPDUIndexes - 1
maxNrOfPrioQueues                       INTEGER ::= 8
maxNrOfPrioQueues-1                     INTEGER ::= 7       -- maxNrOfPrioQueues - 1


-- **************************************************************
--
-- IEs
--
-- **************************************************************

id-AllowedQueuingTime                                           ProtocolIE-ID ::= 4
id-Allowed-Rate-Information                                      ProtocolIE-ID ::= 42
id-AntennaColocationIndicator                                   ProtocolIE-ID ::= 309
id-BindingID                                                    ProtocolIE-ID ::= 5
id-C-ID                                                         ProtocolIE-ID ::= 6
id-C-RNTI                                                       ProtocolIE-ID ::= 7
id-Cell-Capacity-Class-Value                                    ProtocolIE-ID ::= 303
id-Cell-Capacity-Class-Value-ThresholdInformation              ProtocolIE-ID ::= 304
id-CFN                                                          ProtocolIE-ID ::= 8
id-CN-CS-DomainIdentifier                                       ProtocolIE-ID ::= 9
```

```
id-CN-PS-DomainIdentifier                                       ProtocolIE-ID ::= 10
id-Cause                                                        ProtocolIE-ID ::= 11
id-CoverageIndicator                                           ProtocolIE-ID ::= 310
id-CriticalityDiagnostics                                      ProtocolIE-ID ::= 20
id-ContextInfoItem-Reset                                       ProtocolIE-ID ::= 211
id-D-RNTI                                                      ProtocolIE-ID ::= 21
id-D-RNTI-ReleaseIndication                                   ProtocolIE-ID ::= 22
id-DCHs-to-Add-FDD                                             ProtocolIE-ID ::= 26
id-DCHs-to-Add-TDD                                             ProtocolIE-ID ::= 27
id-DCH-DeleteList-RL-ReconfPrepFDD                            ProtocolIE-ID ::= 30
id-DCH-DeleteList-RL-ReconfPrepTDD                            ProtocolIE-ID ::= 31
id-DCH-DeleteList-RL-ReconfRqstFDD                            ProtocolIE-ID ::= 32
id-DCH-DeleteList-RL-ReconfRqstTDD                            ProtocolIE-ID ::= 33
id-DCH-FDD-Information                                         ProtocolIE-ID ::= 34
id-DCH-TDD-Information                                         ProtocolIE-ID ::= 35
id-FDD-DCHs-to-Modify                                          ProtocolIE-ID ::= 39
id-TDD-DCHs-to-Modify                                          ProtocolIE-ID ::= 40
id-DCH-InformationResponse                                     ProtocolIE-ID ::= 43
id-DCH-Rate-InformationItem-RL-CongestInd                     ProtocolIE-ID ::= 38
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD              ProtocolIE-ID ::= 44
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD             ProtocolIE-ID ::= 45
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD          ProtocolIE-ID ::= 46
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD                 ProtocolIE-ID ::= 47
id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD            ProtocolIE-ID ::= 48
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD            ProtocolIE-ID ::= 49
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD               ProtocolIE-ID ::= 50
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD           ProtocolIE-ID ::= 51
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD       ProtocolIE-ID ::= 52
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD              ProtocolIE-ID ::= 53
id-FDD-DL-CodeInformation                                     ProtocolIE-ID ::= 54
id-DL-DPCH-Information-RL-ReconfPrepFDD                       ProtocolIE-ID ::= 59
id-DL-DPCH-Information-RL-SetupRqstFDD                        ProtocolIE-ID ::= 60
id-DL-DPCH-Information-RL-ReconfRqstFDD                       ProtocolIE-ID ::= 61
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD               ProtocolIE-ID ::= 62
id-DL-DPCH-InformationItem-RL-AdditionRspTDD                ProtocolIE-ID ::= 63
id-DL-DPCH-InformationItem-RL-SetupRspTDD                   ProtocolIE-ID ::= 64
id-DL-DPCH-TimingAdjustment                                   ProtocolIE-ID ::= 278
id-DLReferencePower                                           ProtocolIE-ID ::= 67
id-DLReferencePowerList-DL-PC-Rqst                           ProtocolIE-ID ::= 68
id-DL-ReferencePowerInformation-DL-PC-Rqst                  ProtocolIE-ID ::= 69
id-DPC-Mode                                                   ProtocolIE-ID ::= 12
id-DRXCycleLengthCoefficient                                 ProtocolIE-ID ::= 70
id-DedicatedMeasurementObjectType-DM-Rprt                   ProtocolIE-ID ::= 71
id-DedicatedMeasurementObjectType-DM-Rqst                   ProtocolIE-ID ::= 72
id-DedicatedMeasurementObjectType-DM-Rsp                    ProtocolIE-ID ::= 73
id-DedicatedMeasurementType                                  ProtocolIE-ID ::= 74
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD       ProtocolIE-ID ::= 82
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD       ProtocolIE-ID ::= 83
id-Guaranteed-Rate-Information                              ProtocolIE-ID ::= 41
id-IMSI                                                      ProtocolIE-ID ::= 84
id-HCS-Prio                                                  ProtocolIE-ID ::= 311
id-L3-Information                                            ProtocolIE-ID ::= 85
id-AdjustmentPeriod                                          ProtocolIE-ID ::= 90
```

| | | |
|---|---|---|
| id-MaxAdjustmentStep | ProtocolIE-ID ::= | 91 |
| id-MeasurementFilterCoefficient | ProtocolIE-ID ::= | 92 |
| id-MessageStructure | ProtocolIE-ID ::= | 57 |
| id-MeasurementID | ProtocolIE-ID ::= | 93 |
| id-Neighbouring-GSM-CellInformation | ProtocolIE-ID ::= | 13 |
| id-Neighbouring-UMTS-CellInformationItem | ProtocolIE-ID ::= | 95 |
| id-NRT-Load-Information-Value | ProtocolIE-ID ::= | 305 |
| id-NRT-Load-Information-Value-IncrDecrThres | ProtocolIE-ID ::= | 306 |
| id-PagingArea-PagingRqst | ProtocolIE-ID ::= | 102 |
| id-FACH-FlowControlInformation | ProtocolIE-ID ::= | 103 |
| id-Permanent-NAS-UE-Identity | ProtocolIE-ID ::= | 17 |
| id-PowerAdjustmentType | ProtocolIE-ID ::= | 107 |
| id-RANAP-RelocationInformation | ProtocolIE-ID ::= | 109 |
| id-RL-Information-PhyChReconfRqstFDD | ProtocolIE-ID ::= | 110 |
| id-RL-Information-PhyChReconfRqstTDD | ProtocolIE-ID ::= | 111 |
| id-RL-Information-RL-AdditionRqstFDD | ProtocolIE-ID ::= | 112 |
| id-RL-Information-RL-AdditionRqstTDD | ProtocolIE-ID ::= | 113 |
| id-RL-Information-RL-DeletionRqst | ProtocolIE-ID ::= | 114 |
| id-RL-Information-RL-FailureInd | ProtocolIE-ID ::= | 115 |
| id-RL-Information-RL-ReconfPrepFDD | ProtocolIE-ID ::= | 116 |
| id-RL-Information-RL-RestoreInd | ProtocolIE-ID ::= | 117 |
| id-RL-Information-RL-SetupRqstFDD | ProtocolIE-ID ::= | 118 |
| id-RL-Information-RL-SetupRqstTDD | ProtocolIE-ID ::= | 119 |
| id-RL-InformationItem-RL-CongestInd | ProtocolIE-ID ::= | 55 |
| id-RL-InformationItem-DM-Rprt | ProtocolIE-ID ::= | 120 |
| id-RL-InformationItem-DM-Rqst | ProtocolIE-ID ::= | 121 |
| id-RL-InformationItem-DM-Rsp | ProtocolIE-ID ::= | 122 |
| id-RL-InformationItem-RL-PreemptRequiredInd | ProtocolIE-ID ::= | 2 |
| id-RL-InformationItem-RL-SetupRqstFDD | ProtocolIE-ID ::= | 123 |
| id-RL-InformationList-RL-CongestInd | ProtocolIE-ID ::= | 56 |
| id-RL-InformationList-RL-AdditionRqstFDD | ProtocolIE-ID ::= | 124 |
| id-RL-InformationList-RL-DeletionRqst | ProtocolIE-ID ::= | 125 |
| id-RL-InformationList-RL-PreemptRequiredInd | ProtocolIE-ID ::= | 1 |
| id-RL-InformationList-RL-ReconfPrepFDD | ProtocolIE-ID ::= | 126 |
| id-RL-InformationResponse-RL-AdditionRspTDD | ProtocolIE-ID ::= | 127 |
| id-RL-InformationResponse-RL-ReconfReadyTDD | ProtocolIE-ID ::= | 128 |
| id-RL-InformationResponse-RL-SetupRspTDD | ProtocolIE-ID ::= | 129 |
| id-RL-InformationResponseItem-RL-AdditionRspFDD | ProtocolIE-ID ::= | 130 |
| id-RL-InformationResponseItem-RL-ReconfReadyFDD | ProtocolIE-ID ::= | 131 |
| id-RL-InformationResponseItem-RL-ReconfRspFDD | ProtocolIE-ID ::= | 132 |
| id-RL-InformationResponseItem-RL-SetupRspFDD | ProtocolIE-ID ::= | 133 |
| id-RL-InformationResponseList-RL-AdditionRspFDD | ProtocolIE-ID ::= | 134 |
| id-RL-InformationResponseList-RL-ReconfReadyFDD | ProtocolIE-ID ::= | 135 |
| id-RL-InformationResponseList-RL-ReconfRspFDD | ProtocolIE-ID ::= | 136 |
| id-RL-InformationResponse-RL-ReconfRspTDD | ProtocolIE-ID ::= | 28 |
| id-RL-InformationResponseList-RL-SetupRspFDD | ProtocolIE-ID ::= | 137 |
| id-RL-ReconfigurationFailure-RL-ReconfFail | ProtocolIE-ID ::= | 141 |
| id-RL-Set-InformationItem-DM-Rprt | ProtocolIE-ID ::= | 143 |
| id-RL-Set-InformationItem-DM-Rqst | ProtocolIE-ID ::= | 144 |
| id-RL-Set-InformationItem-DM-Rsp | ProtocolIE-ID ::= | 145 |
| id-RL-Set-Information-RL-FailureInd | ProtocolIE-ID ::= | 146 |
| id-RL-Set-Information-RL-RestoreInd | ProtocolIE-ID ::= | 147 |
| id-ReportCharacteristics | ProtocolIE-ID ::= | 152 |

| | | |
|---|---|---|
| id-Reporting-Object-RL-FailureInd | ProtocolIE-ID | ::= 153 |
| id-Reporing-Object-RL-RestoreInd | ProtocolIE-ID | ::= 154 |
| id-RT-Load-Value | ProtocolIE-ID | ::= 307 |
| id-RT-Load-Value-IncrDecrThres | ProtocolIE-ID | ::= 308 |
| id-S-RNTI | ProtocolIE-ID | ::= 155 |
| id-ResetIndicator | ProtocolIE-ID | ::= 244 |
| id-RNC-ID | ProtocolIE-ID | ::= 245 |
| id-SAI | ProtocolIE-ID | ::= 156 |
| id-SRNC-ID | ProtocolIE-ID | ::= 157 |
| id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD | ProtocolIE-ID | ::= 159 |
| id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD | ProtocolIE-ID | ::= 160 |
| id-TransportBearerID | ProtocolIE-ID | ::= 163 |
| id-TransportBearerRequestIndicator | ProtocolIE-ID | ::= 164 |
| id-TransportLayerAddress | ProtocolIE-ID | ::= 165 |
| id-TypeOfError | ProtocolIE-ID | ::= 140 |
| id-UC-ID | ProtocolIE-ID | ::= 166 |
| id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD | ProtocolIE-ID | ::= 167 |
| id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD | ProtocolIE-ID | ::= 169 |
| id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD | ProtocolIE-ID | ::= 171 |
| id-UL-CCTrCH-InformationList-RL-SetupRqstTDD | ProtocolIE-ID | ::= 172 |
| id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD | ProtocolIE-ID | ::= 173 |
| id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD | ProtocolIE-ID | ::= 174 |
| id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD | ProtocolIE-ID | ::= 175 |
| id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD | ProtocolIE-ID | ::= 176 |
| id-UL-DPCH-Information-RL-ReconfPrepFDD | ProtocolIE-ID | ::= 177 |
| id-UL-DPCH-Information-RL-ReconfRqstFDD | ProtocolIE-ID | ::= 178 |
| id-UL-DPCH-Information-RL-SetupRqstFDD | ProtocolIE-ID | ::= 179 |
| id-UL-DPCH-InformationItem-PhyChReconfRqstTDD | ProtocolIE-ID | ::= 180 |
| id-UL-DPCH-InformationItem-RL-AdditionRspTDD | ProtocolIE-ID | ::= 181 |
| id-UL-DPCH-InformationItem-RL-SetupRspTDD | ProtocolIE-ID | ::= 182 |
| id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD | ProtocolIE-ID | ::= 183 |
| id-UL-SIRTarget | ProtocolIE-ID | ::= 184 |
| id-URA-Information | ProtocolIE-ID | ::= 185 |
| id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD | ProtocolIE-ID | ::= 188 |
| id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD | ProtocolIE-ID | ::= 189 |
| id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD | ProtocolIE-ID | ::= 190 |
| id-Active-Pattern-Sequence-Information | ProtocolIE-ID | ::= 193 |
| id-AdjustmentRatio | ProtocolIE-ID | ::= 194 |
| id-CauseLevel-RL-AdditionFailureFDD | ProtocolIE-ID | ::= 197 |
| id-CauseLevel-RL-AdditionFailureTDD | ProtocolIE-ID | ::= 198 |
| id-CauseLevel-RL-ReconfFailure | ProtocolIE-ID | ::= 199 |
| id-CauseLevel-RL-SetupFailureFDD | ProtocolIE-ID | ::= 200 |
| id-CauseLevel-RL-SetupFailureTDD | ProtocolIE-ID | ::= 201 |
| id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD | ProtocolIE-ID | ::= 205 |
| id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD | ProtocolIE-ID | ::= 206 |
| id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD | ProtocolIE-ID | ::= 207 |
| id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD | ProtocolIE-ID | ::= 208 |
| id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD | ProtocolIE-ID | ::= 209 |
| id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD | ProtocolIE-ID | ::= 210 |
| id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD | ProtocolIE-ID | ::= 212 |
| id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD | ProtocolIE-ID | ::= 213 |
| id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD | ProtocolIE-ID | ::= 214 |
| id-DSCHs-to-Add-TDD | ProtocolIE-ID | ::= 215 |

| | | |
|---|---|---|
| id-DSCHs-to-Add-FDD | ProtocolIE-ID ::= | 216 |
| id-DSCH-DeleteList-RL-ReconfPrepTDD | ProtocolIE-ID ::= | 217 |
| id-DSCH-Delete-RL-ReconfPrepFDD | ProtocolIE-ID ::= | 218 |
| id-DSCH-FDD-Information | ProtocolIE-ID ::= | 219 |
| id-DSCH-InformationListIE-RL-AdditionRspTDD | ProtocolIE-ID ::= | 220 |
| id-DSCH-InformationListIEs-RL-SetupRspTDD | ProtocolIE-ID ::= | 221 |
| id-DSCH-TDD-Information | ProtocolIE-ID ::= | 222 |
| id-DSCH-FDD-InformationResponse | ProtocolIE-ID ::= | 223 |
| id-DSCH-Information-RL-SetupRqstFDD | ProtocolIE-ID ::= | 226 |
| id-DSCH-ModifyList-RL-ReconfPrepTDD | ProtocolIE-ID ::= | 227 |
| id-DSCH-Modify-RL-ReconfPrepFDD | ProtocolIE-ID ::= | 228 |
| id-DSCH-Specific-FDD-Additional-List | ProtocolIE-ID ::= | 324 |
| id-DSCHsToBeAddedOrModified-FDD | ProtocolIE-ID ::= | 229 |
| id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD | ProtocolIE-ID ::= | 230 |
| id-EnhancedDSCHPC | ProtocolIE-ID ::= | 29 |
| id-EnhancedDSCHPCIndicator | ProtocolIE-ID ::= | 225 |
| id-GA-Cell | ProtocolIE-ID ::= | 232 |
| id-GA-CellAdditionalShapes | ProtocolIE-ID ::= | 3 |
| id-SSDT-CellIDforEDSCHPC | ProtocolIE-ID ::= | 246 |
| id-Transmission-Gap-Pattern-Sequence-Information | ProtocolIE-ID ::= | 255 |
| id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD | ProtocolIE-ID ::= | 256 |
| id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD | ProtocolIE-ID ::= | 257 |
| id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD | ProtocolIE-ID ::= | 258 |
| id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD | ProtocolIE-ID ::= | 259 |
| id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD | ProtocolIE-ID ::= | 260 |
| id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD | ProtocolIE-ID ::= | 261 |
| id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD | ProtocolIE-ID ::= | 262 |
| id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD | ProtocolIE-ID ::= | 263 |
| id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD | ProtocolIE-ID ::= | 264 |
| id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD | ProtocolIE-ID ::= | 265 |
| id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD | ProtocolIE-ID ::= | 266 |
| id-USCHs-to-Add | ProtocolIE-ID ::= | 267 |
| id-USCH-DeleteList-RL-ReconfPrepTDD | ProtocolIE-ID ::= | 268 |
| id-USCH-InformationListIE-RL-AdditionRspTDD | ProtocolIE-ID ::= | 269 |
| id-USCH-InformationListIEs-RL-SetupRspTDD | ProtocolIE-ID ::= | 270 |
| id-USCH-Information | ProtocolIE-ID ::= | 271 |
| id-USCH-ModifyList-RL-ReconfPrepTDD | ProtocolIE-ID ::= | 272 |
| id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD | ProtocolIE-ID ::= | 273 |
| id-DL-Physical-Channel-Information-RL-SetupRqstTDD | ProtocolIE-ID ::= | 274 |
| id-UL-Physical-Channel-Information-RL-SetupRqstTDD | ProtocolIE-ID ::= | 275 |
| id-ClosedLoopMode1-SupportIndicator | ProtocolIE-ID ::= | 276 |
| id-ClosedLoopMode2-SupportIndicator | ProtocolIE-ID ::= | 277 |
| id-STTD-SupportIndicator | ProtocolIE-ID ::= | 279 |
| id-CFNReportingIndicator | ProtocolIE-ID ::= | 14 |
| id-CNOriginatedPage-PagingRqst | ProtocolIE-ID ::= | 23 |
| id-InnerLoopDLPCStatus | ProtocolIE-ID ::= | 24 |
| id-PropagationDelay | ProtocolIE-ID ::= | 25 |
| id-RxTimingDeviationForTA | ProtocolIE-ID ::= | 36 |
| id-timeSlot-ISCP | ProtocolIE-ID ::= | 37 |
| id-CCTrCH-InformationItem-RL-FailureInd | ProtocolIE-ID ::= | 15 |
| id-CCTrCH-InformationItem-RL-RestoreInd | ProtocolIE-ID ::= | 16 |
| id-CommonMeasurementAccuracy | ProtocolIE-ID ::= | 280 |
| id-CommonMeasurementObjectType-CM-Rprt | ProtocolIE-ID ::= | 281 |

```
id-CommonMeasurementObjectType-CM-Rqst                                   ProtocolIE-ID ::= 282
id-CommonMeasurementObjectType-CM-Rsp                                    ProtocolIE-ID ::= 283
id-CommonMeasurementType                                                 ProtocolIE-ID ::= 284
id-CongestionCause                                                       ProtocolIE-ID ::= 18
id-SFN                                                                   ProtocolIE-ID ::= 285
id-SFNReportingIndicator                                                 ProtocolIE-ID ::= 286
id-InformationExchangeID                                                 ProtocolIE-ID ::= 287
id-InformationExchangeObjectType-InfEx-Rprt                              ProtocolIE-ID ::= 288
id-InformationExchangeObjectType-InfEx-Rqst                              ProtocolIE-ID ::= 289
id-InformationExchangeObjectType-InfEx-Rsp                               ProtocolIE-ID ::= 290
id-InformationReportCharacteristics                                      ProtocolIE-ID ::= 291
id-InformationType                                                       ProtocolIE-ID ::= 292
id-neighbouring-LCR-TDD-CellInformation                                  ProtocolIE-ID ::= 58
id-DL-Timeslot-ISCP-LCR-Information-RL-SetupRqstTDD                      ProtocolIE-ID ::= 65
id-RL-LCR-InformationResponse-RL-SetupRspTDD                             ProtocolIE-ID ::= 66
id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD                        ProtocolIE-ID ::= 75
id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD                            ProtocolIE-ID ::= 76
id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD                        ProtocolIE-ID ::= 77
id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD                            ProtocolIE-ID ::= 78
id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD                            ProtocolIE-ID ::= 79
id-USCH-LCR-InformationListIEs-RL-SetupRspTDD                            ProtocolIE-ID ::= 80
id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD                   ProtocolIE-ID ::= 81
id-RL-LCR-InformationResponse-RL-AdditionRspTDD                          ProtocolIE-ID ::= 86
id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD                     ProtocolIE-ID ::= 87
id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD                         ProtocolIE-ID ::= 88
id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD                     ProtocolIE-ID ::= 89
id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD                         ProtocolIE-ID ::= 94
id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD                         ProtocolIE-ID ::= 96
id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD                         ProtocolIE-ID ::= 97
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD                    ProtocolIE-ID ::= 98
id-UL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD               ProtocolIE-ID ::= 100
id-DL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD               ProtocolIE-ID ::= 101
id-DL-Timeslot-LCR-InformationAddListIE-RL-ReconfReadyTDD                ProtocolIE-ID ::= 104
id-UL-Timeslot-LCR-InformationList-RL-ReconfReadyTDD                     ProtocolIE-ID ::= 105
id-DL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD                    ProtocolIE-ID ::= 106
id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD                    ProtocolIE-ID ::= 138
id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD                                 ProtocolIE-ID ::= 139
id-TSTD-Support-Indicator-RL-SetupRqstTDD                                ProtocolIE-ID ::= 142
id-RestrictionStateIndicator                                            ProtocolIE-ID ::= 233
id-Load-Value                                                           ProtocolIE-ID ::= 234
id-Load-Value-IncrDecrThres                                            ProtocolIE-ID ::= 235
id-OnModification                                                       ProtocolIE-ID ::= 236
id-Received-Total-Wideband-Power-Value                                  ProtocolIE-ID ::= 237
id-Received-Total-Wideband-Power-Value-IncrDecrThres                    ProtocolIE-ID ::= 238
id-SFNSFNMeasurementThresholdInformation                                ProtocolIE-ID ::= 239
id-Transmitted-Carrier-Power-Value                                      ProtocolIE-ID ::= 240
id-Transmitted-Carrier-Power-Value-IncrDecrThres                        ProtocolIE-ID ::= 241
id-TUTRANGPSMeasurementThresholdInformation                             ProtocolIE-ID ::= 242
id-UL-Timeslot-ISCP-Value                                               ProtocolIE-ID ::= 243
id-UL-Timeslot-ISCP-Value-IncrDecrThres                                 ProtocolIE-ID ::= 293
id-Rx-Timing-Deviation-Value-LCR                                        ProtocolIE-ID ::= 19
id-DPC-Mode-Change-SupportIndicator                                     ProtocolIE-ID ::= 247
id-SplitType                                                            ProtocolIE-ID ::= 295
id-LengthOfTFCI2                                                        ProtocolIE-ID ::=
```

```
id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD                           ProtocolIE-ID ::= 202
id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD                       ProtocolIE-ID ::= 203
id-DL-TimeSlot-ISCP-LCR-Information-RL-ReconfPrepTDD            ProtocolIE-ID ::= 204
id-DSCH-RNTI                                                    ProtocolIE-ID ::= 249
id-DL-PowerBalancing-Information                                ProtocolIE-ID ::= 296
id-DL-PowerBalancing-ActivationIndicator                       ProtocolIE-ID ::= 297
id-DL-PowerBalancing-UpdatedIndicator                          ProtocolIE-ID ::= 298
id-DL-ReferencePowerInformation                                ProtocolIE-ID ::= 299
id-Enhanced-PrimaryCPICH-EcNo                                   ProtocolIE-ID ::= 224
id-IPDL-TDD-ParametersLCR                                       ProtocolIE-ID ::= 252
id-CellCapabilityContainer-FDD                                  ProtocolIE-ID ::= 300
id-CellCapabilityContainer-TDD                                  ProtocolIE-ID ::= 301
id-CellCapabilityContainer-TDD-LCR                             ProtocolIE-ID ::= 302
id-RL-Specific-DCH-Info                                         ProtocolIE-ID ::= 317
id-RL-ReconfigurationRequestFDD-RL-InformationList             ProtocolIE-ID ::= 318
id-RL-ReconfigurationRequestFDD-RL-Information-IEs             ProtocolIE-ID ::= 319
id-RL-ReconfigurationReadyTDD-RL-Information                    ProtocolIE-ID ::= 320
id-RL-ReconfigurationRequestTDD-RL-Information                  ProtocolIE-ID ::= 321
id-CommonTransportChannelResourcesInitialisationNotRequired    ProtocolIE-ID ::= 250
id-DelayedActivation                                            ProtocolIE-ID ::= 312
id-DelayedActivationList-RL-ActivationCmdFDD                    ProtocolIE-ID ::= 313
id-DelayedActivationInformation-RL-ActivationCmdFDD            ProtocolIE-ID ::= 314
id-DelayedActivationList-RL-ActivationCmdTDD                    ProtocolIE-ID ::= 315
id-DelayedActivationInformation-RL-ActivationCmdTDD           ProtocolIE-ID ::= 316
id-neighbouringTDDCellMeasurementInformationLCR               ProtocolIE-ID ::= 251
id-UL-SIR-Target-CCTrCH-InformationItem-RL-SetupRspTDD        ProtocolIE-ID ::= 150
id-UL-SIR-Target-CCTrCH-LCR-InformationItem-RL-SetupRspTDD    ProtocolIE-ID ::= 151
id-PrimCCPCH-RSCP-DL-PC-RqstTDD                                ProtocolIE-ID ::= 451
id-HSDSCH-FDD-Information                                       ProtocolIE-ID ::= 452
id-HSDSCH-FDD-Information-Response                              ProtocolIE-ID ::= 453
id-HSDSCH-FDD-Information-to-Add                                ProtocolIE-ID ::= 454
id-HSDSCH-FDD-Information-to-Delete                             ProtocolIE-ID ::= 455
id-HSDSCH-Information-to-Modify                                 ProtocolIE-ID ::= 456
id-HSDSCH-RNTI                                                  ProtocolIE-ID ::= 457
id-HSDSCH-TDD-Information                                       ProtocolIE-ID ::= 458
id-HSDSCH-TDD-Information-Response                              ProtocolIE-ID ::= 459
id-HSDSCH-TDD-Information-Response-LCR                          ProtocolIE-ID ::= 460
id-HSDSCH-TDD-Information-to-Add                                ProtocolIE-ID ::= 461
id-HSDSCH-TDD-Information-to-Delete                             ProtocolIE-ID ::= 462
id-HSPDSCH-RL-ID                                                ProtocolIE-ID ::= 463
id-Angle-Of-Arrival-Value-LCR                                  ProtocolIE-ID ::= 148
id-TrafficClass                                                ProtocolIE-ID ::= 158
id-TFCI-PC-SupportIndicator                                    ProtocolIE-ID ::= 248
id-Qth-Parameter                                               ProtocolIE-ID ::= 253
id-NRT-Load-information-Value                                   ProtocolIE-ID ::= 322
id-PDSCH-RL-ID                                                 ProtocolIE-ID ::= 323
id-TimeSlot-RL-SetupRspTDD                                     ProtocolIE-ID ::= 325
id-DSCH-InitialWindowSize                                      ProtocolIE-ID ::= 480
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END