TSG RAN Meeting #17 **RP-020613**
Biarritz, France, 3 - 6 September, 2002

Title **CRs (Rel-5 only) for Uplink Synchronisation in 1.28Mcps TDD**
Source **TSG RAN WG3**
Agenda Item **7.3.5**

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-022157	25.423	4.5.0	4.6.0	REL-4	706	2	F	Uplink Synchronisation in 1.28Mcps TDD	LCRTDD-Iublur
R3-022159	25.433	4.5.0	4.6.0	REL-4	728	2	F	Uplink Synchronisation in 1.28Mcps TDD	LCRTDD-Iublur
R3-022158	25.423	5.2.0	5.3.0	REL-5	707	2	A	Uplink Synchronisation in 1.28Mcps TDD	LCRTDD-Iublur
R3-022160	25.433	5.1.0	5.2.0	REL-5	729	2	A	Uplink Synchronisation in 1.28Mcps TDD	LCRTDD-Iublur

3GPP TSG-RAN WG3 Meeting #31
Stockholm, Sweden, 19th – 23rd August 2002

Tdoc ⌘ R3-022157

CR-Form-v7

CHANGE REQUEST

⌘ **25.423** **CR** **706** ⌘ **rev** **2** ⌘ Current version: **4.5.0** ⌘

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

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

Title:	⌘	Uplink Synchronisation in 1.28Mcps TDD
Source:	⌘	RAN WG3
Work item code:	⌘	LCRTDD-IublIur
Date:	⌘	23/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-4

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

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

Reason for change: ⌘

In TR 25.402 v4.5.0 section 8.3.5, the establishment of UL synchronisation and maintenance of the UL synchronisation in 1.28Mpcs is described. In 1.28Mcps TDD Uplink Synchronisation is performed at Layer 1 for uplink DPCH.

After establishing the UL synchronisation, the Node B will continuously measure the timing of the UE and send the necessary synchronisation shift commands in each sub-frame. On receipt of these synchronisation shift commands the UE shall adjust the timing of its transmissions accordingly, in steps of ±k/8 chips or do nothing, each M sub-frames.

The values of the Uplink Synchronisation Step Size (k) and the Uplink Synchronisation Frequency (M) are determined in the SRNC, and have to be conveyed to the Node B and to the CRNC, if CRNC and SRNC are not co-incident.

Summary of change: ⌘

Introduction of Uplink Synchronisation Parameters for 1.28Mcps TDD: *Uplink Synchronisation Step Size* IE and *Uplink Synchronisation Frequency* IE. Modification of several UL messages to now include the Uplink Synchronisation Parameters for 1.28Mcps TDD.

Revision1:
- After some offline-discussions it was decided that it is the SRNC that determines the values of the Uplink Synchronisation Step Size (k) and the Uplink Synchronisation Frequency (M), since these Uplink Synchronisation Parameters for 1.28Mcps TDD are UE specific parameters. Therefore the *Uplink Synchronisation Step Size* IE and *Uplink Synchronisation Frequency* IE are now included in the corresponding DL messages.

		- Cover sheet was updated according to the changes. - Units and steps were added to the semantic descriptions of the IEs. Revision2: - Semantic Description has been added - Criticality for the new IEs has been changed from “reject” to “ignore”. - PHYSCIAL CHANNEL RECONFIGURATION COMMAND message has been deleted from the CR Impact Analysis: Impact Assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because because the Uplink Synchronisation Parameters for 1.28Mcps TDD are missing. The impact can be considered isolated because the change affects only the function of Uplink Synchronisation in 1.28Mcps TDD.
Consequences if not approved:	⌘	If this CR is not approved,.the concerned RAN-WG3 specifications are not aligned with RAN-WG1 and RAN-WG2 specifications which already contain the Uplink Synchronisation Parameters.

Clauses affected:	⌘	8.3.1, 8.3.2, 8.3.4, 8.3.7, 9.1.3.2, 9.1.6.2, 9.1.11.2, 9.1.16.2, 9.2.3.x, 9.2.3.y, 9.3.3, 9.3.4, 9.3.6			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ 25.423 v5.2.0 CR 707r2 25.433 v4.5.0 CR 728r2 25.433 v5.1.0 CR 729r2
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

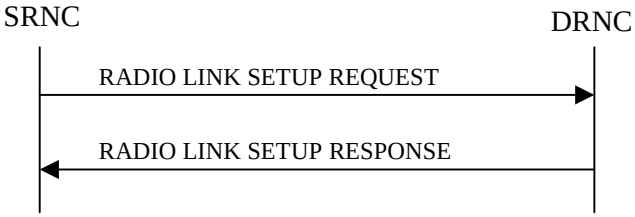

Figure 5: Radio Link Setup procedure: Successful Operation

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.

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]. 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.

[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.]

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.]

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. When an RL is to be combined, the DRNS shall choose which RL(s) to combine it with.
- If the *Diversity Control Field* IE is set to "Must not", the DRNS shall not combine the RL with any other existing RL.]

[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.]

[FDD - If the *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 the 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 8.3.7).]

[TDD – The DRNS shall start the 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]).]

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 and *Closed Loop Mode2 Support Indicator* IE in the *Neighbouring FDD Cell Information* IE, and the *Frame Offset* IE, *Cell Individual Offset* IE, *DPCH Constant Value* IE and the *PCCPCH Power* 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.]

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 in the *Neighbouring GSM Cell Information* IE.

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

General:

[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 *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.]

[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.

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 out-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. [FDD - The DRNS shall start DL transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

8.3.1.3 Unsuccessful Operation

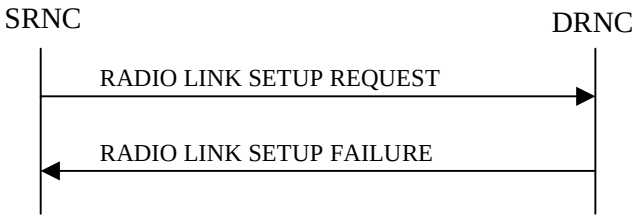

Figure 6: Radio Link Setup procedure: Unsuccessful Operation

In unsuccessful case (i.e. one or more RLs can not be established) the RADIO LINK SETUP FAILURE message shall be sent to the SRNC, indicating the reason for failure. If some radio links were established successfully, the DRNC shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.

If the RADIO LINK SETUP REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the *Permanent NAS UE Identity* IE is not present, the DRNC shall consider the procedure as failed and send the RADIO LINK SETUP FAILURE message.

Typical cause values are:

Radio Network Layer Causes:

- [FDD - UL Scrambling Code Already in Use];
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- [FDD - Combining Resources not available];
- Combining not Supported
- Requested Configuration not Supported;
- Cell not Available;
- [FDD - Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- Number of DL codes not supported;
- Number of UL codes not supported;
- Dedicated Transport Channel Type not Supported;
- DL Shared Channel Type not Supported;
- [TDD - UL Shared Channel Type not Supported];
- [FDD - UL Spreading Factor not Supported];
- [FDD - DL Spreading Factor not Supported];
- CM not Supported;
- [FDD – DPC mode change not Supported];
- Cell reserved for operator use.

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

- Control Processing Overload;
- HW Failure;
- Not enough User Plane Processing Resources.

8.3.1.4 Abnormal Conditions

If the DRNC receives either an S-RNTI or a D-RNTI which already has RL(s) established the DRNC shall send the RADIO LINK SETUP FAILURE message to the SRNC, indicating the reason for failure.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Active Pattern Sequence Information* IE, but the *Transmission Gap Pattern Sequence Information* IE is not present, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message includes both the *Initial DL TX Power* IE and the *Primary CPICH Ec/No* IE or does not include either of these IEs, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected" [TDD – or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected"], the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with a RADIO LINK SETUP FAILURE message.

[FDD - If only the *Initial DL TX Power* IE or the *Uplink SIR Target* IE is included in the RADIO LINK SETUP REQUEST message, then DRNC shall regard the Radio Link Setup procedure as failed and shall respond with the RADIO LINK SETUP FAILURE message.]

If the RADIO LINK SETUP REQUEST message includes a *DCH Information* IE with multiple *DCH Specific Info* IEs, and if the DCHs in the *DCH Information* IE do not have the same *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.

8.3.2 Radio Link Addition

8.3.2.1 General

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

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

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

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

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

8.3.2.2 Successful Operation

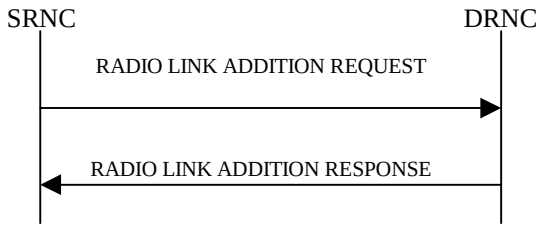

Figure 7: Radio Link Addition procedure: Successful Operation

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the SRNC to the DRNC.

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

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

Transport Channel Handling:

DSCH:

[TDD - If the radio link to be added includes a DSCH, the DRNC shall send a set of valid *DSCH Scheduling Priority* IE and *MAC-c/sh SDU Length* IE parameters to the SRNC in the message RADIO LINK ADDITION RESPONSE message.]

Physical Channels Handling:

[FDD-Compressed Mode]:

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE, the DRNS shall use the information to activate the indicated (all ongoing) Transmission Gap Pattern Sequence(s) in the new RL. The received *CM Configuration Change CFN* IE refers to the 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 *Active Pattern Sequence Information* IE is not included, the DRNS shall not activate the ongoing compressed mode pattern in the new RLs, but the ongoing pattern in the existing RL shall be maintained.]

[FDD - If some Transmission Gap Pattern sequences using SF/2 method are initialised in the DRNS, DRNS shall include the *Transmission Gap Pattern Sequence Scrambling Code Information IE* in the RADIO LINK ADDITION RESPONSE message to indicate the Scrambling code change method that it selects for each channelisation code.]

[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 - The DRNS shall use the provided Uplink SIR Target value as the current target for the inner-loop power control.]

Radio Link Handling:

Diversity Combination Control:

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

- 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 a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.

In the case of combining an RL with existing RL(s), the DRNC shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that the RL is combined. In this case, the *RL ID* IE indicates one of the existing RLs with which the new RL is combined.

In the case of not combining an RL with existing RL(s), the DRNC shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that no combining is done. In this case, the DRNC shall include in the *DCH Information Response* IE both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH, [TDD – and DSCH, USCH] of the RL in the RADIO LINK ADDITION RESPONSE message.

In the case of a set of co-ordinated DCHs, the *Binding ID* IE and the *Transport Layer Address* IE shall be included for only one of the DCHs in a set of co-ordinated DCHs.

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

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

[FDD-Transmit Diversity]:

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

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

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

DL Power Control:

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

[TDD - If the *Primary CCPCH RSCP* IE 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 included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use them in the calculation of the Initial DL TX Power. If the *Primary CCPCH RSCP* IE and [3.84Mcps TDD - *DL Time Slot ISCP Info* IE] and [1.28Mcps TDD - *DL Time Slot ISCP Info LCR* IE] are not present, the DRNS shall set the Initial DL TX Power based on the power relative to the Primary CCPCH power used by the existing RL.]

[FDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that 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 8.3.7)].

[TDD – The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that 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 *DPC Mode* IE is present in the RADIO LINK ADDITION 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 lifetime of the RL. If the *DPC Mode* IE is not present in the RADIO LINK ADDITION REQUEST message, DPC mode 0 shall be applied (see ref. [10]).]

The DRNC shall also provide the configured UL Maximum SIR and UL Minimum SIR for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration

by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

The DRNC shall provide the configured *Maximum DL TX Power* IE and *Minimum DL TX Power* IE for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IEor lower than indicated by the *Minimum DL TX Power* IEon 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].

DL Code Information:

The DRNC shall also provide the selected scrambling and channelisation codes of the new RLs in order to enable the SRNC to inform the UE about the selected codes.

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 and *Closed Loop Mode2 Support Indicator* IE in the *Neighbouring FDD Cell Information* IE, and the *Frame Offset* IE, *Cell Individual Offset* IE, *DPCH Constant Value* IE and the *PCCPCH Power* 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.]

- For the UMTS neighbouring cells which are controlled by the DRNC, the DRNC shall report in the RADIO LINK ADDITION 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 ADDITION RESPONSE message for each of the GSM neighbouring cells. If available the DRNC shall include the *Cell Individual Offset* IE in the *Neighbouring GSM Cell Information* IE.

[FDD - The DRNS shall use the provided Uplink SIR Target value as the current target for the inner-loop power control.]

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

General:

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, SSDT shall, if supported, be activated for the concerned new RL, with the indicated SSDT Cell Identity used for that RL.]

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 added RLs in the RADIO LINK ADDITION RESPONSE message.

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 ADDITION RESPONSE message.

[FDD - If the UE has been allocated one or several DCH controlled by DRAC and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK ADDITION 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 ADDITION RESPONSE message.]

[TDD - The DRNC shall include the [3.84Mcps TDD - *Secondary CCPCH Info TDD* IE] [1.28Mcps TDD – *Secondary CCPCH Info TDD LCR* IE] in the RADIO LINK ADDITION 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 ADDITION RESPONSE message if at least one [3.84Mcps TDD - *DSCH Information Response* IE] [1.28Mcps TDD – *DSCH Information Response LCR* IE or *USCH Information Response LCR* 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.]

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

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

[FDD-Radio Link Set Handling]:

[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 ADDITION 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 new or existing RL, the DRNS shall assign the *RL Set ID* IE included in the RADIO LINK ADDITION RESPONSE message the same value. This value shall uniquely identify the RL Set within the UE Context.]

[FDD – After addition of the new RL(s), the UL out-of-sync algorithm algorithm defined in ref. [10] shall, for each of the previously existing and newly 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 suppporting the radio links of the RL Set.]

Response message:

If all requested RLs are successfully added, the DRNC shall respond with a RADIO LINK ADDITION RESPONSE message.

After sending the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation on the Uu interface. [FDD - The DRNS shall start DL transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

/* partly omitted */

8.3.4 Synchronised Radio Link Reconfiguration Preparation

8.3.4.1 General

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

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

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

8.3.4.2 Successful Operation

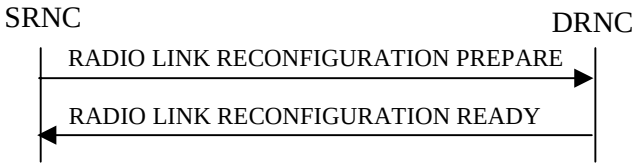

Figure 10: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

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 then the DRNS shall treat them each as follows:

- If the *DCHs To Modify* IE includes multiple *DCH Specific Info* IEs, 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* IEincludes 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 *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* IE, 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 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* IEs, 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* IE set 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 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 *SSDT Indication* IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

DSCH Addition/Modification/Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Addy*, *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.

[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.]

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 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 – 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 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.

[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 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.

- [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.]

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

General

If the requested modifications are allowed by the DRNC and the DRNC has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message.

[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.]

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 being added, or any Transport Channel 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 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 [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.]

/* partly omitted */

8.3.7 Unsynchronised Radio Link Reconfiguration

8.3.7.1 General

The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a DRNS.

The procedure is used when there is no need to synchronise the time of the switching from the old to the new radio link configuration in the cells used by the UE-UTRAN connection within the DRNS.

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

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

8.3.7.2 Successful Operation

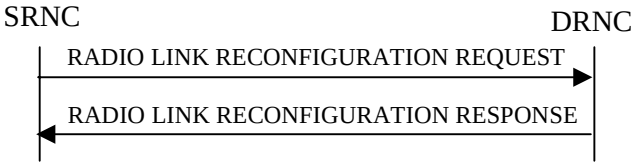

Figure 14: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION REQUEST message to the DRNC.

Upon reception, the DRNS shall modify the 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 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.

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

DCH Modification:

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

- If the *DCHs To Modify* IE includes multiple *DCH Specific Info* IEs, then the DRNS shall treat the DCHs 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 on 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 on 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.

- If the *DCH Specific Info* IE includes the *Frame Handling Priority* IE, 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.

- [FDD - If the *DRAC Control* IE is present and set to "requested" in *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 RESPONSE 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 RESPONSE 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 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 REQUEST message includes any *DCHs To Add* IEs, then 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 multiple DCH Specific Info IEs then 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 all of them can be 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].]

- 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 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.

- [FDD - If the *DRAC Control* IE is set to "requested" in *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 RESPONSE

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 RESPONSE 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 uplink 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 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 uplink of the DCH.

DCH Deletion:

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

If all of the DCHs belonging to a set of coordinated 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 REQUEST message includes an *UL DPCH Information* IE, then the DRNS shall apply the parameters to the new configuration as follows:]

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

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

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

- [FDD - If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE for the DL, the DRNS shall apply the new TFCI Signalling Mode in the Downlink of the new configuration.]

- [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* IE set 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 REQUEST 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 REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, and if the *Downlink Compressed Mode Method* 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 *DL Code Information* IE in the RADIO LINK RECONFIGURATION RESPONSE message, without changing any of the

DL Channelisation Codes or DL Scrambling Codes, indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

[TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH Information to modify* IEs or */DL CCTrCH Information to modify* IEs and it includes *TFCS* IE, the DRNS shall apply the included *TFCS* IE as the new value to the referenced CCTrCH.]

[TDD – UL/DL CCTrCH Deletion]

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

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

General:

If the requested modifications are allowed by the DRNS, and if the DRNS has successfully allocated the required resources and changed to the new configuration, the DRNC shall respond to the SRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

The DRNS shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. The detailed frame protocol handling during transport bearer replacement is described in [4], subclause 5.10.1.

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 DRNC shall return the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message 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 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) 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 RESPONSE 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 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) 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 RESPONSE message for this Radio Link.

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s), and the DRNC shall return this in the IEs *Maximum Uplink SIR* and *Minimum Uplink SIR* for each Radio Link in the RADIO LINK RECONFIGURATION RESPONSE 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].

/* partly omitted */

9.1.3 RADIO LINK SETUP REQUEST

/* partly omitted */

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
SRNC-Id	M		RNC-Id 9.2.1.50		YES	reject
S-RNTI	M		9.2.1.53		YES	reject
D-RNTI	O		9.2.1.24		YES	reject
UL Physical Channel Information		*1*			YES	reject
>Maximum Number of Timeslots per Frame	M		9.2.3.3A	For the UL	–	
>Minimum Spreading Factor	M		9.2.3.4A	For the UL	–	
>Maximum Number of UL Physical Channels per Timeslot	M		9.2.3.3B		–	
DL Physical Channel Information		*1*			YES	reject
>Maximum Number of Timeslots per Frame	M		9.2.3.3A	For the DL	–	
>Minimum Spreading Factor	M		9.2.3.4A	For the DL	–	
>Maximum Number of DL Physical Channels per Frame	M		9.2.3.3C		–	
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL CCTrCH Information		*0..<maxnoofCCTrCHs>*		For DCH and USCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the UL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
DL CCTrCH Information		*0..<maxnoofCCTrCHs>*		For DCH and DSCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the DL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
>TDD TPC Downlink Step Size	M		9.2.3.10		–	
>TPC CCTrCH List		*0..<maxnoCCTrCHs>*		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.2		–	
DCH Information	O		DCH TDD Information 9.2.3.2A		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.3a		YES	reject
USCH Information	O		9.2.3.15		YES	reject
RL Information		*1*			YES	reject
>RL ID	M		9.2.1.49		–	
>C-Id	M		9.2.1.6		–	
>Frame Offset	M		9.2.1.30		–	

>Special Burst Scheduling	M		9.2.3.7D		–	
>Primary CCPCH RSCP	O		9.2.3.5		–	
>DL Time Slot ISCP Info	O		9.2.3.2D	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	reject
>TSTD Support Indicator	O		9.2.3.13F	Applicable to 1.28Mcps TDD only	YES	ignore
>UL Synchronisation Parameters LCR		*0..1*			YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.x		-	
>>Uplink Synchronisation Frequency	M		9.2.3.y		-	
Permanent NAS UE Identity	O		9.2.1.73		YES	ignore
PDSCH-RL-ID	O		RL ID 9.2.1.49		YES	ignore

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

/* partly omitted */

9.1.6 RADIO LINK ADDITION REQUEST

/* partly omitted */

9.1.6.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
RL Information		*1*			YES	reject
>RL ID	M		9.2.1.49		–	
>C-Id	M		9.2.1.6		–	
>Frame Offset	M		9.2.1.30		–	
>Diversity Control Field	M		9.2.1.20		–	
>Primary CCPCH RSCP	O		9.2.3.5		–	
>DL Time Slot ISCP Info	O		9.2.3.2D	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	reject
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Sstep Size	M		9.2.3.x		-	
>>Uplink Synchronisation Frequency	M		9.2.3.y		-	
Permanent NAS UE Identity	O		9.2.1.73		YES	ignore

/* partly omitted */

9.1.11 RADIO LINK RECONFIGURATION PREPARE

9.1.11.2 TDD Message

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
DCHs To Modify	O		TDD DCHs To Modify 9.2.3.8B		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.2A		YES	reject
DCHs To Delete		*0..<maxnoofDCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.16		–	
DSCHs To Modify		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		–	
>CCTrCH Id	O		9.2.3.2	DL CCTrCH in which the DSCH is mapped.	–	
>TrCh Source Statistics Descriptor	O		9.2.1.65		–	
>Transport Format Set	O		9.2.1.64		–	
>Allocation/Retention Priority	O		9.2.1.1		–	
>Scheduling Priority Indicator	O		9.2.1.51A		–	
>BLER	O		9.2.1.4		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
DSCHs To Add	O		DSCH TDD Information 9.2.3.3a		YES	reject
DSCHs To Delete		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		–	
USCHs To Modify		*0..<maxnoofUSCHs>*			GLOBAL	reject
>USCH ID	M		9.2.3.14		–	
>CCTrCH Id	O		9.2.3.2	UL CCTrCH in which the USCH is mapped.	–	
>TrCh Source Statistics Descriptor	O		9.2.1.65		–	
>Transport Format Set	O		9.2.1.64		–	
>Allocation/Retention Priority	O		9.2.1.1		–	
>Scheduling Priority Indicator	O		9.2.1.51A		–	
>BLER	O		9.2.1.4		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
>RB Info		*0..<maxnoofRB>*		All Radio Bearers using this USCH	–	
>>RB Identity	M		9.2.3.5B		–	
USCHs To Add	O		USCH Information 9.2.3.15		YES	reject
USCHs To Delete		*0..<maxno*			GLOBAL	reject

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
		ofUSCHs>				
>USCH ID	M		9.2.3.14		–	
Primary CCPCH RSCP	O		9.2.3.5		YES	ignore
DL Time Slot ISCP Info	O		9.2.3.2D	Applicable to 3.84Mcps TDD only	YES	ignore
DL Time Slot ISCP Info LCR	O		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	ignore
PDSCH-RL-ID	O		RL ID 9.2.1.49		YES	ignore
UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>Uplink Synchronisation Step Size	M		9.2.3.x		-	
>>Uplink Synchronisation Frequency	M		9.2.3.y		-	

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

/* partly omitted */

9.1.16 RADIO LINK RECONFIGURATION REQUEST

/* partly omitted */

9.1.16.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL CCTrCH Information To Modify		*0..<maxnoof CCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	O		9.2.1.63		–	
UL CCTrCH Information To Delete		*0..<maxnoof CCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
DL CCTrCH Information To Modify		*0..<maxnoof CCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	O		9.2.1.63		–	
DL CCTrCH Information To Delete		*0..<maxnoof CCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
DCHs To Modify	O		TDD DCHs To Modify 9.2.3.8B		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.2A		YES	reject
DCHs To Delete		*0..<maxnoof DCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.16		–	
UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>Uplink Synchronisation Step Size	M		9.2.3.x		-	
>Uplink Synchronisation Frequency	M		9.2.3.y		-	

Range Bound	Explanation
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
maxnoofDCHs	Maximum number of DCHs for one UE.

/* partly omitted */

/* partly omitted */

9.2.3.x Uplink Synchronisation Step Size

The *UL Synchronisation Step Size* IE specifies the step size to be used for the adjustment of the uplink transmission timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink synchronisation step size			INTEGER (1..8)	Unit: 1/8 chip, step: 1.

9.2.3.y Uplink Synchronisation Frequency

The *UL Synchronisation Frequency* IE specifies the frequency of the adjustment of the uplink transmission timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink synchronisation frequency			INTEGER (1..8)	Unit: subframe, granularity: 1

9.3.3 PDU Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    Active-Pattern-Sequence-Information,
    AllocationRetentionPriority,
    AllowedQueuingTime,
    Allowed-Rate-Information,
    AlphaValue,
    BLER,
    SCTD-Indicator,
    BindingID,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    ClosedLoopMode1-SupportIndicator,
    ClosedLoopMode2-SupportIndicator,
    Closedlooptimingadjustmentmode,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CNDomainType,
    Cause,
    CellParameterID,
    ChipOffset,
    CommonMeasurementAccuracy,
    CommonMeasurementType,
    CommonMeasurementValue,
    CommonMeasurementValueInformation,
    CongestionCause,
    CriticalityDiagnostics,
    D-RNTI,
```

```
    D-RNTI-ReleaseIndication,
    DCH-FDD-Information,
    DCH-ID,
    DCH-InformationResponse,
    DCH-TDD-Information,
    DL-DPCH-SlotFormat,
    DL-TimeslotISCP,
    DL-Power,
    DL-ScramblingCode,
    DL-Timeslot-Information,
    DL-TimeslotLCR-Information,
    DL-TimeSlot-ISCP-Info,
    DL-TimeSlot-ISCP-LCR-Information,
    DPC-Mode,
    DPC-Mode-Change-SupportIndicator,
    DPCH-ID,
    DRACControl,
    DRXCycleLengthCoefficient,
    DedicatedMeasurementType,
    DedicatedMeasurementValue,
    DedicatedMeasurementValueInformation,
    DiversityControlField,
    DiversityMode,
    DSCH-FDD-Information,
    DSCH-FDD-InformationResponse,
    DSCH-FlowControlInformation,
    DSCH-FlowControlItem,
    DSCH-TDD-Information,
    DSCH-ID,
    DSCH-RNTI,
    SchedulingPriorityIndicator,
    EnhancedDSCHPC,
    EnhancedDSCHPCCounter,
    EnhancedDSCHPCIndicator,
    EnhancedDSCHPCWnd,
    EnhancedDSCHPowerOffset,
    FACH-FlowControlInformation,
    FDD-DCHs-to-Modify,
    FDD-DL-ChannelisationCodeNumber,
    FDD-DL-CodeInformation,
    FDD-S-CCPCH-Offset,
    FDD-TPC-DownlinkStepSize,
    FirstRLS-Indicator,
    FNReportingIndicator,
    FrameHandlingPriority,
    FrameOffset,
    GA-AccessPointPosition,
    GA-Cell,
    GA-CellAdditionalShapes,
    IMSI,
    InformationExchangeID,
    InformationReportCharacteristics,
```

```
    InformationType,
    InnerLoopDLPCStatus,
    L3-Information,
    SplitType,
    LengthOfTFCI2,
    LimitedPowerIncrease,
    MaximumAllowedULTxPower,
    MaxNrDLPhysicalchannels,
    MaxNrOfUL-DPCHs,
    MaxNrTimeslots,
    MaxNrULPhysicalchannels,
    MeasurementFilterCoefficient,
    MeasurementID,
    MidambleAllocationMode,
    MidambleShiftAndBurstType,
    MidambleShiftLCR,
    MinimumSpreadingFactor,
    MinUL-ChannelisationCodeLength,
    MultiplexingPosition,
    NeighbouringFDDCellMeasurementInformation,
    NeighbouringTDDCellMeasurementInformation,
    Neighbouring-GSM-CellInformation,
    Neighbouring-UMTS-CellInformation,
    NrOfDLchannelisationcodes,
    PagingCause,
    PagingRecordType,
    PDSCHCodeMapping,
    PayloadCRC-PresenceIndicator,
    PCCPCH-Power,
    PC-Preamble,
    Permanent-NAS-UE-Identity,
    PowerAdjustmentType,
    PowerOffset,
    PrimaryCCPCH-RSCP,
    PrimaryCPICH-EcNo,
    PrimaryCPICH-Power,
    PrimaryScramblingCode,
    PropagationDelay,
    PunctureLimit,
    QE-Selector,
    RANAP-RelocationInformation,
    RB-Info,
    RL-ID,
    RL-Set-ID,
    RNC-ID,
    RepetitionLength,
    RepetitionPeriod,
    ReportCharacteristics,
    Received-total-wide-band-power,
    RequestedDataValue,
    RequestedDataValueInformation,
    RxTimingDeviationForTA,
    S-FieldLength,
```

```
    S-RNTI,
    SCH-TimeSlot,
    SAI,
    SFN,
    Secondary-CCPCH-Info,
    Secondary-CCPCH-Info-TDD,
    Secondary-LCR-CCPCH-Info-TDD,
    SpecialBurstScheduling,
    SSDT-CellID,
    SSDT-CellID-Length,
    SSDT-Indication,
    SSDT-SupportIndicator,
    STTD-Indicator,
    STTD-SupportIndicator,
    AdjustmentPeriod,
    ScaledAdjustmentRatio,
    MaxAdjustmentStep,
    SecondaryCCPCH-SlotFormat,
    SRB-Delay,
    SyncCase,
    SynchronisationConfiguration,
    TDD-ChannelisationCode,
    TDD-DCHs-to-Modify,
    TDD-DL-Code-Information,
    TDD-DPCHOffset,
    TDD-PhysicalChannelOffset,
    TDD-TPC-DownlinkStepSize,
    TDD-ChannelisationCodeLCR,
    TDD-DL-Code-LCR-Information,
    TDD-UL-Code-Information,
    TDD-UL-Code-LCR-Information,
    TFCI-Coding,
    TFCI-Presence,
    TFCI-SignallingMode,
    TimeSlot,
    TimeSlotLCR,
    TimingAdvanceApplied,
    ToAWE,
    ToAWS,
    TransmitDiversityIndicator,
    TransportBearerID,
    TransportBearerRequestIndicator,
    TFCS,
    Transmission-Gap-Pattern-Sequence-Information,
    TransportFormatManagement,
    TransportFormatSet,
    TransportLayerAddress,
    TrCH-SrcStatisticsDescr,
    TSTD-Indicator,
    TSTD-Support-Indicator,
    UARFCN,
    UC-ID,
    UL-DPCCH-SlotFormat,
```

```
    UL-SIR,
    UL-FP-Mode,
    UL-PhysCH-SF-Variation,
    UL-ScramblingCode,
    UL-Timeslot-Information,
    UL-TimeslotLCR-Information,
    UL-TimeSlot-ISCP-Info,
    UL-TimeSlot-ISCP-LCR-Info,
    URA-ID,
    URA-Information,
    USCH-ID,
    USCH-Information,
    UL-Synchronisation-Parameters-LCR
FROM RNSAP-IEs
```

/* partly omitted */

```
    id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD,
    id-USCH-LCR-InformationListIEs-RL-SetupRspTDD,
    id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD,
    id-RL-LCR-InformationResponse-RL-AdditionRspTDD,
    id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD,
    id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD,
    id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD,
    id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD,
    id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD,
    id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD,
    id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,
    id-UL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD,
    id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,
    id-DL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD,
    id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD,
    id-DL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD,
    id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD,
    id-TSTD-Support-Indicator-RL-SetupRqstTDD,
    id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD,
    id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD,
    id-DL-Timeslot-ISCP-LCR-Information-RL-ReconfPrepTDD
    id-UL-Synchronisation-Parameters-LCR

FROM RNSAP-Constants;
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK SETUP REQUEST TDD
--
-- **************************************************************
```

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

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SRNC-ID                                     CRITICALITY reject  TYPE RNC-ID                                     PRESENCE mandatory} |
    { ID id-S-RNTI                                      CRITICALITY reject  TYPE S-RNTI                                     PRESENCE mandatory} |
    { ID id-D-RNTI                                      CRITICALITY reject  TYPE D-RNTI                                     PRESENCE optional } |
    { ID id-UL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject  TYPE UL-Physical-Channel-Information-RL-SetupRqstTDD    PRESENCE
mandatory   } |
    { ID id-DL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject  TYPE DL-Physical-Channel-Information-RL-SetupRqstTDD    PRESENCE
mandatory   } |
    { ID id-AllowedQueuingTime                          CRITICALITY reject  TYPE AllowedQueuingTime                         PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationList-RL-SetupRqstTDD   CRITICALITY notify  TYPE UL-CCTrCH-InformationList-RL-SetupRqstTDD  PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationList-RL-SetupRqstTDD   CRITICALITY notify  TYPE DL-CCTrCH-InformationList-RL-SetupRqstTDD  PRESENCE optional } |
    { ID id-DCH-TDD-Information         CRITICALITY reject  TYPE DCH-TDD-Information            PRESENCE optional  } |
    { ID id-DSCH-TDD-Information        CRITICALITY reject  TYPE DSCH-TDD-Information           PRESENCE optional  } |
    { ID id-USCH-Information        CRITICALITY reject  TYPE USCH-Information          PRESENCE optional } |
    { ID id-RL-Information-RL-SetupRqstTDD              CRITICALITY reject  TYPE RL-Information-RL-SetupRqstTDD             PRESENCE mandatory},
    ...
}

UL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
    maxNrTimeslots-UL               MaxNrTimeslots,
    minimumSpreadingFactor-UL       MinimumSpreadingFactor,
    maxNrULPhysicalchannels         MaxNrULPhysicalchannels,
    iE-Extensions                   ProtocolExtensionContainer { {UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
    maxNrTimeslots-DL               MaxNrTimeslots,
    minimumSpreadingFactor-DL       MinimumSpreadingFactor,
    maxNrDLPhysicalchannels         MaxNrDLPhysicalchannels,
    iE-Extensions                   ProtocolExtensionContainer { {DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-SetupRqstTDD           ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
InformationItemIEs-RL-SetupRqstTDD} }

UL-CCTrCH-InformationItemIEs-RL-SetupRqstTDD RNSAP-PROTOCOL-IES ::= {
```

```
    { ID id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD   CRITICALITY notify  TYPE UL-CCTrCH-InformationItem-RL-SetupRqstTDD  PRESENCE mandatory   }
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    ul-TFCS                     TFCS,
    tFCI-Coding                 TFCI-Coding,
    ul-PunctureLimit                PunctureLimit,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-SetupRqstTDD           ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationItemIEs-RL-SetupRqstTDD} }

DL-CCTrCH-InformationItemIEs-RL-SetupRqstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD   CRITICALITY notify  TYPE DL-CCTrCH-InformationItem-RL-SetupRqstTDD  PRESENCE mandatory    }
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    dl-TFCS                     TFCS,
    tFCI-Coding                 TFCI-Coding,
    dl-PunctureLimit                PunctureLimit,
    tdd-TPC-DownlinkStepSize        TDD-TPC-DownlinkStepSize,
    cCTrCH-TPCList                  CCTrCH-TPCList-RL-SetupRqstTDD  OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCItem-RL-SetupRqstTDD

CCTrCH-TPCItem-RL-SetupRqstTDD   ::= SEQUENCE {
    cCTrCH-ID                       CCTrCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    c-ID                        C-ID,
```

```
    frameOffset                 FrameOffset,
    specialBurstScheduling      SpecialBurstScheduling,
    primaryCCPCH-RSCP               PrimaryCCPCH-RSCP       OPTIONAL,
    dL-TimeSlot-ISCP                DL-TimeSlot-ISCP-Info   OPTIONAL,
    --for 3.84Mcps TDD only
    iE-Extensions                   ProtocolExtensionContainer { {RL-Information-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Permanent-NAS-UE-Identity               CRITICALITY ignore          EXTENSION Permanent-NAS-UE-Identity   PRESENCE optional }|
    { ID id-PDSCH-RL-ID             CRITICALITY ignore          EXTENSION RL-ID     PRESENCE optional },
    ...
}
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- **************************************************************

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

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

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                           RL-ID,
    c-ID                            C-ID,
    frameOffset                     FrameOffset,
    diversityControlField           DiversityControlField,
```

```
    primaryCCPCH-RSCP               PrimaryCCPCH-RSCP       OPTIONAL,
    dL-TimeSlot-ISCP-Info           DL-TimeSlot-ISCP-Info   OPTIONAL,
    --for 3.84Mcps TDD only
    iE-Extensions                   ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

RadioLinkAdditionRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Permanent-NAS-UE-Identity               CRITICALITY ignore          EXTENSION Permanent-NAS-UE-Identity    PRESENCE optional },
    ...
}
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- **************************************************************

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

RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY reject  TYPE AllowedQueuingTime             PRESENCE optional  } |
    { ID id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD   CRITICALITY notify  TYPE UL-CCTrCH-InformationAddList-RL-ReconfPrepTDDPRESENCE optional
    } |
    { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD    CRITICALITY notify  TYPE UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD  PRESENCE
optional    } |
    { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD    CRITICALITY notify  TYPE UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD  PRESENCE
optional    } |
    { ID id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD   CRITICALITY notify  TYPE DL-CCTrCH-InformationAddList-RL-ReconfPrepTDDPRESENCE optional
    } |
    { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD  PRESENCE
optional    } |
    { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD  PRESENCE
optional    } |
    { ID id-TDD-DCHs-to-Modify      CRITICALITY reject  TYPE TDD-DCHs-to-Modify     PRESENCE optional  } |
```

```
    { ID id-DCHs-to-Add-TDD     CRITICALITY reject  TYPE DCH-TDD-Information        PRESENCE optional  } |
    { ID id-DCH-DeleteList-RL-ReconfPrepTDD     CRITICALITY reject  TYPE DCH-DeleteList-RL-ReconfPrepTDD     PRESENCE optional }|
    { ID id-DSCH-ModifyList-RL-ReconfPrepTDD    CRITICALITY reject  TYPE DSCH-ModifyList-RL-ReconfPrepTDD    PRESENCE optional } |
    { ID id-DSCHs-to-Add-TDD        CRITICALITY reject  TYPE DSCH-TDD-Information           PRESENCE optional } |
    { ID id-DSCH-DeleteList-RL-ReconfPrepTDD    CRITICALITY reject  TYPE DSCH-DeleteList-RL-ReconfPrepTDD    PRESENCE optional } |
    { ID id-USCH-ModifyList-RL-ReconfPrepTDD    CRITICALITY reject  TYPE USCH-ModifyList-RL-ReconfPrepTDD    PRESENCE optional } |
    { ID id-USCHs-to-Add        CRITICALITY reject  TYPE USCH-Information           PRESENCE optional  } |
    { ID id-USCH-DeleteList-RL-ReconfPrepTDD    CRITICALITY reject  TYPE USCH-DeleteList-RL-ReconfPrepTDD    PRESENCE optional },
    ...
}

UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD       ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
AddInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD   CRITICALITY notify  TYPE UL-CCTrCH-AddInformation-RL-ReconfPrepTDD  PRESENCE mandatory   }
}

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TFCS,
    tFCI-Coding                 TFCI-Coding,
    punctureLimit                   PunctureLimit,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-SIRTarget        CRITICALITY reject      EXTENSION       UL-SIR      PRESENCE optional},
    -- This IE shall be mandatory for 1.28Mcps TDD, not applicable for 3.84Mcps TDD.
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
ModifyInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD    CRITICALITY notify  TYPE UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD PRESENCE mandatory
    }
}

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TFCS        OPTIONAL,
    tFCI-Coding                 TFCI-Coding             OPTIONAL,
    punctureLimit                   PunctureLimit               OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-SIRTarget        CRITICALITY reject      EXTENSION       UL-SIR      PRESENCE optional},
    -- This IE shall be applicable for 1.28Mcps TDD only.
```

```
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
DeleteInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD    CRITICALITY notify  TYPE UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD PRESENCE mandatory
    }
}

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD       ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
AddInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD   CRITICALITY notify  TYPE DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDDPRESENCE mandatory
    }
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TFCS,
    tFCI-Coding                 TFCI-Coding,
    punctureLimit                   PunctureLimit,
    cCTrCH-TPCList                  CCTrCH-TPCAddList-RL-ReconfPrepTDD  OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD

CCTrCH-TPCAddItem-RL-ReconfPrepTDD   ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    iE-Extensions               ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
ModifyInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD  PRESENCE
mandatory   }
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TFCS        OPTIONAL,
    tFCI-Coding                 TFCI-Coding             OPTIONAL,
    punctureLimit                   PunctureLimit               OPTIONAL,
    cCTrCH-TPCList                  CCTrCH-TPCModifyList-RL-ReconfPrepTDD       OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-TPCModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCModifyItem-RL-ReconfPrepTDD

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    cCTrCH-ID                       CCTrCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { { CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
DeleteInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD  PRESENCE
mandatory   }
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
DCH-DeleteList-RL-ReconfPrepTDD            ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepTDD

DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    iE-Extensions               ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DSCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-ModifyItem-RL-ReconfPrepTDD

DSCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                           DSCH-ID,
    dl-ccTrCHID                       CCTrCH-ID                       OPTIONAL,
    trChSourceStatisticsDescriptor    TrCH-SrcStatisticsDescr OPTIONAL,
    transportFormatSet                TransportFormatSet              OPTIONAL,
    allocationRetentionPriority       AllocationRetentionPriority     OPTIONAL,
    schedulingPriorityIndicator       SchedulingPriorityIndicator     OPTIONAL,
    bLER                              BLER                            OPTIONAL,
    transportBearerRequestIndicator   TransportBearerRequestIndicator,
    iE-Extensions                  ProtocolExtensionContainer { {DSCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DSCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-DeleteItem-RL-ReconfPrepTDD

DSCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                           DSCH-ID,
    iE-Extensions                  ProtocolExtensionContainer { {DSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

USCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-ModifyItem-RL-ReconfPrepTDD

USCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                           USCH-ID,
    ul-ccTrCHID                       CCTrCH-ID                       OPTIONAL,
    trChSourceStatisticsDescriptor    TrCH-SrcStatisticsDescr OPTIONAL,
    transportFormatSet                TransportFormatSet              OPTIONAL,
    allocationRetentionPriority       AllocationRetentionPriority     OPTIONAL,
    schedulingPriorityIndicator       SchedulingPriorityIndicator     OPTIONAL,
```

```
    bLER                                BLER                            OPTIONAL,
    transportBearerRequestIndicator     TransportBearerRequestIndicator,
    rb-Info                             RB-Info                         OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { {USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

USCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-DeleteItem-RL-ReconfPrepTDD

USCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                             USCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {USCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD  CRITICALITY ignore      EXTENSION   PrimaryCCPCH-RSCP   PRESENCE optional }|
    { ID id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD  CRITICALITY ignore      EXTENSION   DL-TimeSlot-ISCP-Info PRESENCE optional }|
    { ID id-DL-Timeslot-ISCP-LCR-Information-RL-ReconfPrepTDD   CRITICALITY ignore      EXTENSION    DL-TimeSlot-ISCP-LCR-Information PRESENCE
optional    }|
    { ID id-PDSCH-RL-ID             CRITICALITY ignore          EXTENSION RL-ID     PRESENCE optional }|
    { ID    id-UL-Synchronisation-Parameters-LCR            CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- **************************************************************

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

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY reject  TYPE AllowedQueuingTime             PRESENCE optional  } |
```

```
    { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD    CRITICALITY notify  TYPE UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD  PRESENCE
optional    } |
    { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD    CRITICALITY notify  TYPE UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD  PRESENCE
optional    } |
    { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD  PRESENCE
optional    } |
    { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD  PRESENCE
optional    } |
    { ID id-TDD-DCHs-to-Modify      CRITICALITY reject  TYPE TDD-DCHs-to-Modify     PRESENCE optional  } |
    { ID id-DCHs-to-Add-TDD     CRITICALITY reject  TYPE DCH-TDD-Information        PRESENCE optional  } |
    { ID id-DCH-DeleteList-RL-ReconfRqstTDD     CRITICALITY reject  TYPE DCH-DeleteList-RL-ReconfRqstTDD     PRESENCE optional },
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
InformationModifyList-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD    CRITICALITY notify  TYPE UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD  PRESENCE
mandatory   }
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TFCS        OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD    CRITICALITY notify  TYPE UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD  PRESENCE
mandatory   }
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationModifyList-RL-ReconfRqstTDD-IEs} }
```

```
DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD  PRESENCE
mandatory   }
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TFCS        OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD  PRESENCE
mandatory   }
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstTDD             ::= SEQUENCE (SIZE(0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID    id-UL-Synchronisation-Parameters-LCR           CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}
```

/*Partly omitted*/

9.3.4 Information Element Definitions

/* partly omitted */

```
-- U

UARFCN                  ::= INTEGER (0..16383,...)
-- Corresponds to: 0.0Hz..3276.6Mhz. See 25.101, 25.105

UDRE ::= ENUMERATED {
    lessThan1,
    between1-and-4,
    between4-and-8,
    over8,
    ...
}

UL-DL-mode ::= ENUMERATED {
    ul-only,
    dl-only,
    both-ul-and-dl
}

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

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

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

UL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1..maxNrOfULTsLCR)) OF UL-TimeslotLCR-InformationItem

UL-TimeslotLCR-InformationItem ::= SEQUENCE {
    timeSlotLCR                         TimeSlotLCR,
```

```
    midambleShiftLCR                        MidambleShiftLCR,
    tFCI-Presence                           TFCI-Presence,
    uL-Code-LCR-InformationList         TDD-UL-Code-LCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-TimeslotLCR-InformationItem-ExtIEs} }   OPTIONAL,
    ...
}

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

UL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfULTs)) OF UL-TimeSlot-ISCP-InfoItem

UL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot                    TimeSlot,
    uL-TimeslotISCP             UL-TimeslotISCP,
    iE-Extensions               ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-ExtIEs} } OPTIONAL,
    ...
}

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

UL-TimeSlot-ISCP-LCR-Info ::= SEQUENCE (SIZE (1..maxNrOfULTsLCR)) OF    UL-TimeSlot-ISCP-LCR-InfoItem

UL-TimeSlot-ISCP-LCR-InfoItem ::= SEQUENCE {
    timeSlotLCR                     TimeSlotLCR,
    iSCP                            UL-Timeslot-ISCP-Value,
    iE-Extensions                   ProtocolExtensionContainer { { UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs} }   OPTIONAL,
    ...
 }

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

UL-Timeslot-ISCP-Value ::= UL-TimeslotISCP

UL-Timeslot-ISCP-Value-IncrDecrThres ::= INTEGER(0..126)
-- Unit dB. Step 0.5dB
-- e.g. Value 100 means 50dB

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

UL-SIR                  ::= INTEGER (-82..173)
-- The UL-SIR gives the UL-SIR in number of 0.1 dB steps.
-- E.g. Value 173 means 17.3 dB
-- Unit dB. Step 0.1 dB.
```

```
UC-ID ::= SEQUENCE {
    rNC-ID              RNC-ID,
    c-ID                C-ID,
    iE-Extensions           ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
    ...
}

UC-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCCH-SlotFormat         ::= INTEGER (0..5,...)

UL-FP-Mode ::= ENUMERATED {
    normal,
    silent,
    ...
}

UL-PhysCH-SF-Variation ::= ENUMERATED {
    sf-variation-supported,
    sf-variation-not-supported
}

UL-ScramblingCode ::= SEQUENCE {
    ul-ScramblingCodeNumber     UL-ScramblingCodeNumber,
    ul-ScramblingCodeLength     UL-ScramblingCodeLength,
    iE-Extensions           ProtocolExtensionContainer { {UL-ScramblingCode-ExtIEs} } OPTIONAL
}

UL-ScramblingCode-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

UL-ScramblingCodeNumber         ::= INTEGER (0..16777215)

UL-TimeslotISCP         ::= INTEGER (0..127)
-- According to mapping in [14]

URA-ID                  ::= INTEGER (0..65535)

URA-Information ::= SEQUENCE {
    uRA-ID                              URA-ID,
    multipleURAsIndicator               MultipleURAsIndicator,
    rNCsWithCellsInTheAccessedURA-List  RNCsWithCellsInTheAccessedURA-List  OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { {URA-Information-ExtIEs} } OPTIONAL,
    ...
```

```
}

URA-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RNCsWithCellsInTheAccessedURA-List ::= SEQUENCE (SIZE (1..maxRNCinURA-1)) OF RNCsWithCellsInTheAccessedURA-Item

RNCsWithCellsInTheAccessedURA-Item ::= SEQUENCE {
    rNC-ID                          RNC-ID,
    iE-Extensions                   ProtocolExtensionContainer { {RNCsWithCellsInTheAccessedURA-Item-ExtIEs} } OPTIONAL,
    ...
}

RNCsWithCellsInTheAccessedURA-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

USCH-Information ::=  SEQUENCE (SIZE (1..maxNoOfUSCHs)) OF USCH-InformationItem

USCH-InformationItem ::= SEQUENCE {
    uSCH-ID                             USCH-ID,
    ul-CCTrCH-ID                        CCTrCH-ID,
    trChSourceStatisticsDescriptor      TrCH-SrcStatisticsDescr,
    transportFormatSet                  TransportFormatSet,
    allocationRetentionPriority         AllocationRetentionPriority,
    schedulingPriorityIndicator         SchedulingPriorityIndicator,
    rb-Info                             RB-Info,
    iE-Extensions                       ProtocolExtensionContainer { {USCH-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

USCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Synchronisation-Parameters-LCR ::= SEQUENCE {
    uL-Synchronisation-StepSize         UL-Synchronisation-StepSize,
    uL-Synchronisation-Frequency        UL-Synchronisation-Frequency,
    iE-Extensions                   ProtocolExtensionContainer { { UL-Synchronisation-Parameters-LCR-ExtIEs } }       OPTIONAL,
    ...
}

UL-Synchronisation-Parameters-LCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Synchronisation-StepSize ::= INTEGER (1..8)

UL-Synchronisation-Frequency ::= INTEGER (1..8)
```

/* partly omitted */

9.3.6 Constant Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN


/*Partly omitted*/

id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD                    ProtocolIE-ID ::= 105
id-DL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD                    ProtocolIE-ID ::= 106
id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD                                 ProtocolIE-ID ::= 138
id-TSTD-Support-Indicator-RL-SetupRqstTDD                                ProtocolIE-ID ::= 139
id-RestrictionStateIndicator                                             ProtocolIE-ID ::= 142
id-Load-Value                                                            ProtocolIE-ID ::= 233
id-Load-Value-IncrDecrThres                                              ProtocolIE-ID ::= 234
id-OnModification                                                        ProtocolIE-ID ::= 235
id-Received-Total-Wideband-Power-Value                                   ProtocolIE-ID ::= 236
id-Received-Total-Wideband-Power-Value-IncrDecrThres                     ProtocolIE-ID ::= 237
id-SFNSFNMeasurementThresholdInformation                                 ProtocolIE-ID ::= 238
id-Transmitted-Carrier-Power-Value                                       ProtocolIE-ID ::= 239
id-Transmitted-Carrier-Power-Value-IncrDecrThres                         ProtocolIE-ID ::= 240
id-TUTRANGPSMeasurementThresholdInformation                              ProtocolIE-ID ::= 241
id-UL-Timeslot-ISCP-Value                                                ProtocolIE-ID ::= 242
id-UL-Timeslot-ISCP-Value-IncrDecrThres                                  ProtocolIE-ID ::= 243
id-Rx-Timing-Deviation-Value-LCR                                         ProtocolIE-ID ::= 293
id-DPC-Mode—Change-SupportIndicator                                      ProtocolIE-ID ::= 19
id-SplitType                                                             ProtocolIE-ID ::= 247
id-LengthOfTFCI2                                                         ProtocolIE-ID ::= 295
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-PDSCH-RL-ID                                                           ProtocolIE-ID ::= 323
id-TimeSlot-RL-SetupRspTDD                                               ProtocolIE-ID ::= 325
id-UL-Synchronisation-Parameters-LCR                                      ProtocolIE-ID ::= 464
```

```
END
```

/*Partly omitted*/

3GPP TSG-RAN WG3 Meeting #31
Stockholm, Sweden, 19th – 23rd August 2002

Tdoc ⌘ R3-02158

CR-Form-v7

CHANGE REQUEST

⌘ **25.423** **CR** **707** ⌘ **rev** **2** ⌘ 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 ☒ Core Network ☐

Title:	⌘	Uplink Synchronisation in 1.28Mcps TDD
Source:	⌘	RAN WG3
Work item code:	⌘	LCRTDD-IublIur
Date:	⌘	23/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

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

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

Reason for change: ⌘

In TR 25.402 v4.5.0 section 8.3.5, the establishment of UL synchronisation and maintenance of the UL synchronisation in 1.28Mpcs is described. In 1.28Mcps TDD Uplink Synchronisation is performed at Layer 1 for uplink DPCH.

After establishing the UL synchronisation, the Node B will continuously measure the timing of the UE and send the necessary synchronisation shift commands in each sub-frame. On receipt of these synchronisation shift commands the UE shall adjust the timing of its transmissions accordingly, in steps of ±k/8 chips or do nothing, each M sub-frames.

The values of the Uplink Synchronisation Step Size (k) and the Uplink Synchronisation Frequency (M) are determined in the CRNC, and have to be conveyed to the Node B and to the SRNC, if CRNC and SRNC are not co-incident.

Summary of change: ⌘

Introduction of Uplink Synchronisation Parameters for 1.28Mcps TDD: *Uplink Synchronisation Step Size* IE and *Uplink Synchronisation Frequency* IE. Modification of several DL messages to now include the Uplink Synchronisation Parameters for 1.28Mcps TDD.

Revision1:
- Cover sheet was updated.
- After some offline-discussions it was decided that it is the SRNC that determines the values of the Uplink Synchronisation Step Size (k) and the Uplink Synchronisation Frequency (M), since these Uplink Synchronisation Parameters for 1.28Mcps TDD are UE specific parameters. Therefore the *Uplink Synchronisation Step Size* IE and *Uplink Synchronisation Frequency*

		IE are now included in the corresponding DL messages. - Units and steps were added to the semantic descriptions of the IEs. Revision2: - Semantic Description has been added - Criticality for the new IEs has been changed from “reject” to “ignore”. - PHYSCIAL CHANNEL RECONFIGURATION COMMAND message has been deleted from the CR Impact Analysis: Impact Assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because because the Uplink Synchronisation Parameters for 1.28Mcps TDD are missing. The impact can be considered isolated because the change affects only the function of Uplink Synchronisation in 1.28Mcps TDD.
Consequences if not approved:	⌘	If this CR is not approved,.the concerned RAN-WG3 specifications are not aligned with RAN-WG1 and RAN-WG2 specifications which already contain the Uplink Synchronisation Parameters.

Clauses affected:	⌘	8.3.1, 8.3.2, 8.3.4, 8.3.7, 9.1.3.2, 9.1.6.2, 9.1.11.2, 9.1.16.2, 9.2.3.x, 9.2.3.y, 9.3.3, 9.3.4, 9.3.6			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ 25.423 v4.5.0 CR 706r2 25.433 v4.5.0 CR 728r2 25.433 v5.1.0 CR 729r2
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

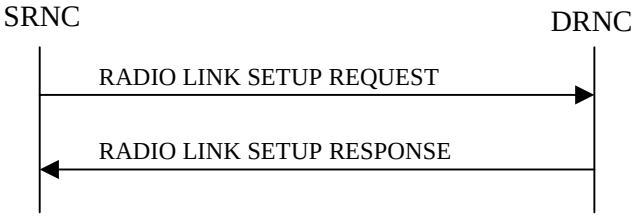

Figure 5: Radio Link Setup procedure: Successful Operation

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.

[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 Type* 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.

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

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].]

8.3.1.3 Unsuccessful Operation

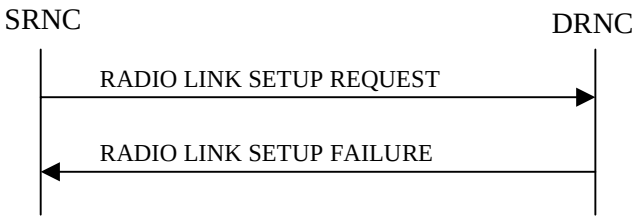

Figure 6: Radio Link Setup procedure: Unsuccessful Operation

In unsuccessful case (i.e. one or more RLs can not be established) the RADIO LINK SETUP FAILURE message shall be sent to the SRNC, indicating the reason for failure. If some radio links were established successfully, the DRNC shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.

If the RADIO LINK SETUP REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the *Permanent NAS UE Identity* IE is not present, the DRNC shall consider the procedure as failed and send the RADIO LINK SETUP FAILURE 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 FAILURE message.]

Typical cause values are:

Radio Network Layer Causes:

- [FDD - UL Scrambling Code Already in Use];
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- [FDD - Combining Resources not available];
- Combining not Supported
- Requested Configuration not Supported;
- Cell not Available;
- [FDD - Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- Number of DL codes not supported;
- Number of UL codes not supported;
- Dedicated Transport Channel Type not Supported;
- DL Shared Channel Type not Supported;
- [TDD - UL Shared Channel Type not Supported];
- [FDD - UL Spreading Factor not Supported];
- [FDD - DL Spreading Factor not Supported];
- CM not Supported;
- [FDD – DPC mode change not Supported];
- Cell reserved for operator use;
- Delayed Activation not supported.

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

- Control Processing Overload;
- HW Failure;
- Not enough User Plane Processing Resources.

8.3.1.4 Abnormal Conditions

If the DRNC receives either an S-RNTI or a D-RNTI which already has RL(s) established the DRNC shall send the RADIO LINK SETUP FAILURE message to the SRNC, indicating the reason for failure.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Active Pattern Sequence Information* IE, but the *Transmission Gap Pattern Sequence Information* IE is not present, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message includes both the *Initial DL TX Power* IE and the *Primary CPICH Ec/No* IE or does not include either of these IEs, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected" [TDD – or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected"] the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with a RADIO LINK SETUP FAILURE message.

[FDD - If only the *Initial DL TX Power* IE or the *Uplink SIR Target* IE is included in the RADIO LINK SETUP REQUEST message, then DRNC shall regard the Radio Link Setup procedure as failed and shall respond with the RADIO LINK SETUP FAILURE message.]

If the RADIO LINK SETUP REQUEST message includes a *DCH Information* IE with multiple *DCH Specific Info* IEs, and if the DCHs in the *DCH Information* IE do not have the same *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Enhanced Primary CPICH Ec/No* IE, but not the *Primary CPICH Ec/No* IE, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the RADIO LINK SETUP REQUEST message does not include the *Split Type* IE but includes *TFCI Signalling Mode* IE set to "Split", then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message does not include the *Length of TFCI2* IE but the *Split type* IE is set to "Logical", then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Split Type* IE set to the value "Hard" and the *Length of TFCI2* IE set to the value "5", then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the RADIO LINK SETUP REQUEST message does not include the *Split Type* IE but includes the *Length of TFCI2* IE, then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific DCH Information* IE included in the *RL Information* IE for a specific RL and the *Diversity Control Field* IE is set to "Must", the DRNC shall regard the Radio Link Setup procedure as failed and the DRNC shall respond with the RADIO LINK SETUP FAILURE message.

If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE or the *Binding ID* IE, and not both are present for a transport bearer intended to be established, the DRNC shall regard the Radio Link Setup procedure as failed and the DRNC shall respond with the RADIO LINK SETUP FAILURE message.

8.3.2 Radio Link Addition

8.3.2.1 General

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

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

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

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

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

8.3.2.2 Successful Operation

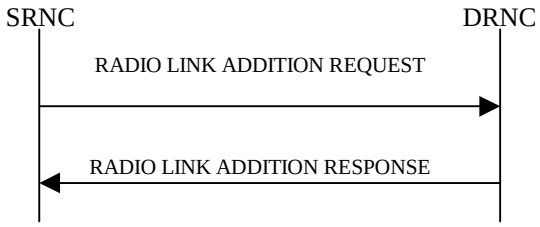

Figure 7: Radio Link Addition procedure: Successful Operation

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the SRNC to the DRNC.

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

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

Transport Channel Handling:

DSCH:

[TDD - If the radio link to be added includes a DSCH, the DRNC shall send a set of valid *DSCH Scheduling Priority* IE and *MAC-c/sh SDU Length* IE parameters to the SRNC in the message RADIO LINK ADDITION RESPONSE message.]

Physical Channels Handling:

[FDD-Compressed Mode]:

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE, the DRNS shall use the information to activate the indicated (all ongoing) Transmission Gap Pattern Sequence(s) in the new RL. The received *CM Configuration Change CFN* IE refers to the 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 *Active Pattern Sequence Information* IE is not included, the DRNS shall not activate the ongoing compressed mode pattern in the new RLs, but the ongoing pattern in the existing RL shall be maintained.]

[FDD - If some Transmission Gap Pattern sequences using SF/2 method are initialised in the DRNS, DRNS shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE in the RADIO LINK ADDITION RESPONSE message to indicate the Scrambling code change method that it selects for each channelisation code.]

[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 - The DRNS shall use the provided Uplink SIR Target value as the current target for the inner-loop power control.]

Radio Link Handling:

Diversity Combination Control:

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

- If the *Diversity Control Field* IE is set to "May" (be combined with another RL), the DRNS shall decide for any of the alternatives.
- If the *Diversity Control Field* IE is set to "Must", the DRNS shall combine the RL with one of the other RL. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.
- If the *Diversity Control Field* IE is set to "Must not", the DRNS shall not combine the RL with any other existing RL.

In the case of combining an RL with existing RL(s), the DRNC shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that the RL is combined. In this case, the *RL ID* IE indicates one of the existing RLs with which the new RL is combined.

[

In the case of not combining an RL with existing RL(s), the DRNC shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that no combining is done. In this case, the DRNC shall include in the *DCH Information Response* IE both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH, [TDD – and DSCH, USCH] of the RL in the RADIO LINK ADDITION RESPONSE message.

In the case of a set of co-ordinated DCHs, the *Binding ID* IE and the *Transport Layer Address* IE shall be included for only one of the DCHs in a set of co-ordinated DCHs.

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

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

[FDD-Transmit Diversity]:

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

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

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

DL Power Control:

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

[TDD - If the *Primary CCPCH RSCP* IE 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 included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use them in the calculation of the Initial DL TX Power. If the *Primary CCPCH RSCP* IE and [3.84Mcps TDD - *DL Time Slot ISCP Info* IE] and [1.28Mcps TDD - *DL Time Slot ISCP Info LCR* IE] are not present, the DRNS shall set the Initial DL TX Power based on the power relative to the Primary CCPCH power used by the existing RL.]

[FDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that 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 8.3.7)].

[TDD – The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that 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 *DPC Mode* IE is present in the RADIO LINK ADDITION 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 lifetime of the RL. If the *DPC Mode* IE is not present in the RADIO LINK ADDITION REQUEST message, DPC mode 0 shall be applied (see ref. [10]).]

The DRNC shall also provide the configured UL Maximum SIR and UL Minimum SIR for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

The DRNC shall provide the configured *Maximum DL TX Power* IE and *Minimum DL TX Power* IE for every new RL to the SRNC in the RADIO LINK ADDITION 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 [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].

[FDD – If the power balancing is active with the Power Balancing Adjustment Type of the UE Context set to "Individual" in the existing RL(s) and the RADIO LINK ADDITION REQUEST message includes the *DL Reference Power* IE, the DRNS shall activate the power balancing and use the *DL Reference Power* IE for the power balancing procedure in the new RL(s), if activation of power balancing by the RADIO LINK ADDITION REQUEST message is supported, according to subclause 8.3.15.]

[FDD – If activation of power balancing by the RADIO LINK ADDITION 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 ADDITION RESPONSE message.]

DL Code Information:

The DRNC shall also provide the selected scrambling and channelisation codes of the new RLs in order to enable the SRNC to inform the UE about the selected codes.

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 and 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 ADDITION 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.

[FDD - The DRNS shall use the provided Uplink SIR Target value as the current target for the inner-loop power control.]

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

General:

If the RADIO LINK ADDITION 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 ADDITION REQUEST message contains an *SSDT Cell Identity* IE, SSDT shall, if supported, be activated for the concerned new RL, with the indicated SSDT Cell Identity used for that RL.]

[FDD - If the RADIO LINK ADDITION 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.]

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 added RLs in the RADIO LINK ADDITION RESPONSE message.

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 ADDITION RESPONSE message.

[FDD - If the UE has been allocated one or several DCH controlled by DRAC and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK ADDITION 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 ADDITION RESPONSE message.]

[TDD - The DRNC shall include the [3.84Mcps TDD - *Secondary CCPCH Info TDD* IE] [1.28Mcps TDD – *Secondary CCPCH Info TDD LCR* IE] in the RADIO LINK ADDITION 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

ADDITION RESPONSE message if at least one [3.84Mcps TDD - *DSCH Information Response* IE] [1.28Mcps TDD – *DSCH Information Response LCR* IE or *USCH Information Response LCR* 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.]

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

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 ADDITION 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 ADDITION RESPONSE message.]

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

[FDD-Radio Link Set Handling]:

[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 ADDITION 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 new or existing RL, the DRNS shall assign the *RL Set ID* IE included in the RADIO LINK ADDITION RESPONSE message the same value. This value shall uniquely identify the RL Set within the UE Context.]

[FDD – After addition of the new RL(s), the UL out-of-sync algorithm defined in ref. [10] shall, for each of the previously existing and newly 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 suppporting the radio links of the RL Set.]

Response message:

If all requested RLs are successfully added, the DRNC shall respond with a RADIO LINK ADDITION RESPONSE message.

After sending the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation on the Uu interface.

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

- if the *Delayed Activation* IE indicates "Separate Indication":
  - not start any DL transmission for the concerning 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].]

/* partly omitted */

8.3.4 Synchronised Radio Link Reconfiguration Preparation

8.3.4.1 General

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

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

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

8.3.4.2 Successful Operation

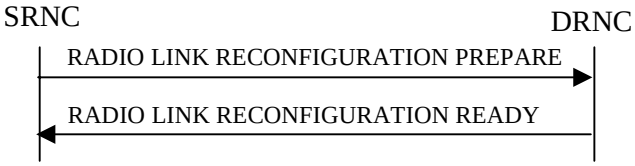

Figure 10: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

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 Type* 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.

[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.]

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD -If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.

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.]

/* partly omitted */

8.3.7 Unsynchronised Radio Link Reconfiguration

8.3.7.1 General

The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a DRNS.

The procedure is used when there is no need to synchronise the time of the switching from the old to the new radio link configuration in the cells used by the UE-UTRAN connection within the DRNS.

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

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

8.3.7.2 Successful Operation

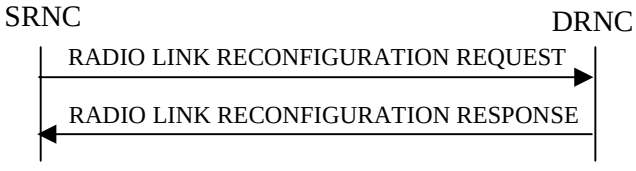

Figure 14: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION REQUEST message to the DRNC.

Upon reception, the DRNS shall modify the 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 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.

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

DCH Modification:

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

- If the *DCHs To Modify* IE includes multiple *DCH Specific Info* IEs, then the DRNS shall treat the DCHs 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 on 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 on 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.

- If the *DCH Specific Info* IE includes the *Frame Handling Priority* IE, 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, the DRNC should use this information to determine the transport bearer characteristics to apply between DRNC and Node B for the related DCH or set of co-ordinated DCHs.

- [FDD - If the *DRAC Control* IE is present and set to "requested" in *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 RESPONSE 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 RESPONSE 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 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 REQUEST message includes any *DCHs To Add* IEs, then 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 multiple DCH Specific Info IEs then 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 all of them can be 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].]

- 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 *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.

- [FDD - If the *DRAC Control* IE is set to "requested" in *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 RESPONSE 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 RESPONSE 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 uplink 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 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 uplink of the DCH.

DCH Deletion:

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCH To Delete* IE, 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 REQUEST message includes an *UL DPCH Information* IE, then the DRNS shall apply the parameters to the new configuration as follows:]

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

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

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

- [FDD - If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE for the DL, the DRNS shall apply the new TFCI Signalling Mode in the Downlink of the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the 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 in the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set 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 REQUEST 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 REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, and if the *Downlink Compressed Mode Method* 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 *DL Code Information* IE in the RADIO LINK RECONFIGURATION RESPONSE message, without changing any of the DL Channelisation Codes or DL Scrambling Codes, indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

[TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH Information To Modify* IEs or */DL CCTrCH Information To Modify* IEs and it includes *TFCS* IE, the DRNS shall apply the included *TFCS* IE as the new value to the referenced CCTrCH.]

[TDD – UL/DL CCTrCH Deletion]

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

DL Power Control:

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *DL Reference Power Information* IE and the power balancing is active, the 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 REQUEST message is supported, using the *DL Reference Power Information* IE in the RADIO LINK RECONFIGURATION REQUEST message. The updated reference power shall be used from the next adjustment period.]

[FDD – If updating of power balancing parameters by the RADIO LINK RECONFIGURATION REQUEST 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 RESPONSE message.]

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the *Uplink Synchronisation Parameters LCR* IE is present, the DRNC shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.

General:

If the requested modifications are allowed by the DRNS, and if the DRNS has successfully allocated the required resources and changed to the new configuration, the DRNC shall respond to the SRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

If the RADIO LINK RECONFIGURATION 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 any Transport Channel being added, or any Transport Channel 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 RESPONSE message the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. The detailed frame protocol handling during transport bearer replacement is described in [4], subclause 5.10.1.

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 DRNC shall return the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message 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 RESPONSE 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 RESPONSE message for this Radio Link.

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s), and the DRNC shall return this in the IEs *Maximum Uplink SIR* and *Minimum Uplink SIR* for each Radio Link in the RADIO LINK RECONFIGURATION RESPONSE 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].

/* partly omitted */

/* partly omitted */

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
SRNC-Id	M		RNC-Id 9.2.1.50		YES	reject
S-RNTI	M		9.2.1.53		YES	reject
D-RNTI	O		9.2.1.24		YES	reject
UL Physical Channel Information		*1*			YES	reject
>Maximum Number of Timeslots per Frame	M		9.2.3.3A	For the UL	–	
>Minimum Spreading Factor	M		9.2.3.4A	For the UL	–	
>Maximum Number of UL Physical Channels per Timeslot	M		9.2.3.3B		–	
DL Physical Channel Information		*1*			YES	reject
>Maximum Number of Timeslots per Frame	M		9.2.3.3A	For the DL	–	
>Minimum Spreading Factor	M		9.2.3.4A	For the DL	–	
>Maximum Number of DL Physical Channels per Frame	M		9.2.3.3C		–	
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL CCTrCH Information		*0..<maxnoofCCTrCHs>*		For DCH and USCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the UL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
DL CCTrCH Information		*0..<maxnoofCCTrCHs>*		For DCH and DSCH	EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	M		9.2.1.63	For the DL.	–	
>TFCI Coding	M		9.2.3.11		–	
>Puncture Limit	M		9.2.1.46		–	
>TDD TPC Downlink Step Size	M		9.2.3.10		–	
>TPC CCTrCH List		*0..<maxnoCCTrCHs>*		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.2		–	
DCH Information	O		DCH TDD Information 9.2.3.2A		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.3a		YES	reject
USCH Information	O		9.2.3.15		YES	reject
RL Information		*1*			YES	reject
>RL ID	M		9.2.1.49		–	
>C-Id	M		9.2.1.6		–	

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

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

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

/* partly omitted */

9.1.6 RADIO LINK ADDITION REQUEST

9.1.6.2 TDD Message

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

/* partly omitted */

9.1.11 RADIO LINK RECONFIGURATION PREPARE

9.1.11.2 TDD Message

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

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
DL CCTrCH to Delete		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
DCHs To Modify	O		TDD DCHs To Modify 9.2.3.8B		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.2A		YES	reject
DCHs to Delete		*0..<maxnoofDCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.16		–	
DSCHs To Modify		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		–	
>CCTrCH Id	O		9.2.3.2	DL CCTrCH in which the DSCH is mapped.	–	
>TrCh Source Statistics Descriptor	O		9.2.1.65		–	
>Transport Format Set	O		9.2.1.64		–	
>Allocation/Retention Priority	O		9.2.1.1		–	
>Scheduling Priority Indicator	O		9.2.1.51A		–	
>BLER	O		9.2.1.4		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
>Traffic Class	O		9.2.1.58A		YES	ignore
>Binding ID	O		9.2.1.3	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>Transport Layer Address	O		9.2.1.62	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
DSCHs To Add	O		DSCH TDD Information 9.2.3.3a		YES	reject
DSCHs to Delete		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DSCH ID	M		9.2.1.26A		–	
USCHs To Modify		*0..<maxnoofUSCHs>*			GLOBAL	reject
>USCH ID	M		9.2.3.14		–	
>CCTrCH Id	O		9.2.3.2	UL CCTrCH in which the USCH is mapped.	–	
>TrCh Source Statistics Descriptor	O		9.2.1.65		–	
>Transport Format Set	O		9.2.1.64		–	
>Allocation/Retention Priority	O		9.2.1.1		–	
>Scheduling Priority	O		9.2.1.51A		–	

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Indicator						
>BLER	O		9.2.1.4		–	
>Transport Bearer Request Indicator	M		9.2.1.61		–	
>Binding ID	O		9.2.1.3	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>Transport Layer Address	O		9.2.1.62	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>RB Info		*0..<maxnoofRB>*		All Radio Bearers using this USCH	–	
>>RB Identity	M		9.2.3.5B		–	
>Traffic class	O		9.2.1.58A		YES	ignore
USCHs To Add	O		USCH Information 9.2.3.15		YES	reject
USCHs to Delete		*0..<maxnoofUSCHs>*			GLOBAL	reject
>USCH ID	M		9.2.3.14		–	
RL Information		*0..1*			YES	ignore
>RL ID	M		9.2.1.49		–	
>RL Specific DCH Information	O		9.2.1.49A		–	
Primary CCPCH RSCP	O		9.2.3.5		YES	ignore
DL Time Slot ISCP Info	O		9.2.3.2D	Applicable to 3.84Mcps TDD only	YES	ignore
DL Time Slot ISCP Info LCR	O		9.2.3.2F	Applicable to 1.28Mcps TDD only	YES	ignore
HS-DSCH Information To Modify	O		9.2.1.30Q		YES	reject
HS-DSCH Information To Add	O		HS-DSCH TDD Information 9.2.3.3aa		YES	reject
HS-DSCH Information To Delete		*0..<maxnoofMACdFlows>*			GLOBAL	reject
>HS-DSCH MAC-d Flow ID	M		9.2.1.30O			
HS-PDSCH RL ID	O		RL ID 9.2.1.49		YES	reject
PDSCH-RL-ID	O		RL ID 9.2.1.49		YES	ignore
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>Uplink Synchronisation Step Size	M		9.2.3.x		-	
>Uplink Synchronisation Frequency	M		9.2.3.y		-	

Range bound	Explanation
maxnoofDCHs	Maximum number of DCHs for a UE.
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
maxnoofDSCHs	Maximum number of DSCHs for one UE.
maxnoofUSCHs	Maximum number of USCHs for one UE.
maxnoofMACdFlows	Maximum number of HS-DSCH MAC-d flows

/* partly omitted */

9.1.16 RADIO LINK RECONFIGURATION REQUEST

/* partly omitted *

9.1.16.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL CCTrCH Information To Modify		*0..<maxnoof CCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	O		9.2.1.63		–	
UL CCTrCH Information to Delete		*0..<maxnoof CCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
DL CCTrCH Information To Modify		*0..<maxnoof CCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
>TFCS	O		9.2.1.63		–	
DL CCTrCH Information to Delete		*0..<maxnoof CCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.2		–	
DCHs To Modify	O		TDD DCHs To Modify 9.2.3.8B		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.2A		YES	reject
DCHs to Delete		*0..<maxnoof DCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.16		–	
RL Information		*0..1*			YES	ignore
>RL ID	M		9.2.1.49		–	
>RL Specific DCH Information	O		9.2.1.49A		–	
UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>Uplink Synchronisation Step Size	M		9.2.3.x		-	
>Uplink Synchronisation Frequency	M		9.2.3.y		-	

Range Bound	Explanation
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE.
maxnoofDCHs	Maximum number of DCHs for one UE.

/* partly omitted */

9.2.3.x Uplink Synchronisation Step Size

The *UL Synchronisation Step Size* IE specifies the step size to be used for the adjustment of the uplink transmission timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink synchronisation step size			INTEGER (1..8)	Unit: 1/8 chip, step: 1.

9.2.3.y Uplink Synchronisation Frequency

The *UL Synchronisation Frequency* IE specifies the frequency of the adjustment of the uplink transmission timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink synchronisation frequency			INTEGER (1..8)	Unit: subframe, step: 1

9.3.3 PDU Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    Active-Pattern-Sequence-Information,
    AllocationRetentionPriority,
    AllowedQueuingTime,
    Allowed-Rate-Information,
    AlphaValue,
    AntennaColocationIndicator,
    BLER,
    SCTD-Indicator,
    BindingID,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    ClosedLoopMode1-SupportIndicator,
    ClosedLoopMode2-SupportIndicator,
    Closedlooptimingadjustmentmode,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CNDomainType,
    Cause,
    CellCapabilityContainer-FDD,
    CellCapabilityContainer-TDD,
    CellCapabilityContainer-TDD-LCR,
    CellParameterID,
    ChipOffset,
    CommonMeasurementAccuracy,
    CommonMeasurementType,
    CommonMeasurementValue,
```

```
    CommonMeasurementValueInformation,
    CommonTransportChannelResourcesInitialisationNotRequired,
    CongestionCause,
    CoverageIndicator,
    CriticalityDiagnostics,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-FDD-Information,
    DCH-ID,
    DCH-InformationResponse,
    DCH-TDD-Information,
    DL-DPCH-SlotFormat,
    DL-TimeslotISCP,
    DL-Power,
    DL-PowerBalancing-Information,
    DL-PowerBalancing-ActivationIndicator,
    DL-PowerBalancing-UpdatedIndicator,
    DL-ReferencePowerInformation,
    DL-ScramblingCode,
    DL-Timeslot-Information,
    DL-TimeslotLCR-Information,
    DL-TimeSlot-ISCP-Info,
    DL-TimeSlot-ISCP-LCR-Information,
    DPC-Mode,
    DPC-Mode-Change-SupportIndicator,
    DPCH-ID,
    DL-DPCH-TimingAdjustment,
    DRACControl,
    DRXCycleLengthCoefficient,
    DedicatedMeasurementType,
    DedicatedMeasurementValue,
    DedicatedMeasurementValueInformation,
    DelayedActivation,
    DelayedActivationUpdate,
    DiversityControlField,
    DiversityMode,
    DSCH-FDD-Information,
    DSCH-FDD-InformationResponse,
    DSCH-FlowControlInformation,
    DSCH-FlowControlItem,
    DSCH-TDD-Information,
    DSCH-ID,
    DSCH-RNTI,
    SchedulingPriorityIndicator,
    EnhancedDSCHPC,
    EnhancedDSCHPCCounter,
    EnhancedDSCHPCIndicator,
    EnhancedDSCHPCWnd,
    EnhancedDSCHPowerOffset,
    Enhanced-PrimaryCPICH-EcNo,
    FACH-FlowControlInformation,
    FDD-DCHs-to-Modify,
    FDD-DL-ChannelisationCodeNumber,
```

```
    FDD-DL-CodeInformation,
    FDD-S-CCPCH-Offset,
    FDD-TPC-DownlinkStepSize,
    FirstRLS-Indicator,
    FNReportingIndicator,
    FrameHandlingPriority,
    FrameOffset,
    GA-AccessPointPosition,
    GA-Cell,
    GA-CellAdditionalShapes,
    HCS-Prio,
    HSDSCH-FDD-Information,
    HSDSCH-FDD-Information-Response,
    HSDSCH-Information-to-Modify,
    HSDSCH-MACdFlow-ID,
    HSDSCH-RNTI,
    HSDSCH-TDD-Information,
    HSDSCH-TDD-Information-Response,
    IMSI,
    InformationExchangeID,
    InformationReportCharacteristics,
    InformationType,
    InnerLoopDLPCStatus,
    L3-Information,
    SplitType,
    LengthOfTFCI2,
    LimitedPowerIncrease,
    MaximumAllowedULTxPower,
    MaxNrDLPhysicalchannels,
    MaxNrOfUL-DPCHs,
    MaxNrTimeslots,
    MaxNrULPhysicalchannels,
    MeasurementFilterCoefficient,
    MeasurementID,
    MidambleAllocationMode,
    MidambleShiftAndBurstType,
    MidambleShiftLCR,
    MinimumSpreadingFactor,
    MinUL-ChannelisationCodeLength,
    MultiplexingPosition,
    NeighbouringFDDCellMeasurementInformation,
    NeighbouringTDDCellMeasurementInformation,
    Neighbouring-GSM-CellInformation,
    Neighbouring-UMTS-CellInformation,
    NeighbouringTDDCellMeasurementInformationLCR,
    NrOfDLchannelisationcodes,
    PagingCause,
    PagingRecordType,
    PDSCHCodeMapping,
    PayloadCRC-PresenceIndicator,
    PCCPCH-Power,
    PC-Preamble,
```

```
    Permanent-NAS-UE-Identity,
    PowerAdjustmentType,
    PowerOffset,
    PrimaryCCPCH-RSCP,
    PrimaryCPICH-EcNo,
    PrimaryCPICH-Power,
    PrimaryScramblingCode,
    PropagationDelay,
    PunctureLimit,
    QE-Selector,
    Qth-Parameter,
    RANAP-RelocationInformation,
    RB-Info,
    RL-ID,
    RL-Set-ID,
    RNC-ID,
    RepetitionLength,
    RepetitionPeriod,
    ReportCharacteristics,
    Received-total-wide-band-power,
    RequestedDataValue,
    RequestedDataValueInformation,
    RL-Specific-DCH-Info,
    RxTimingDeviationForTA,
    S-FieldLength,
    S-RNTI,
    SCH-TimeSlot,
    SAI,
    SFN,
    Secondary-CCPCH-Info,
    Secondary-CCPCH-Info-TDD,
    Secondary-LCR-CCPCH-Info-TDD,
    SpecialBurstScheduling,
    SSDT-CellID,
    SSDT-CellID-Length,
    SSDT-Indication,
    SSDT-SupportIndicator,
    STTD-Indicator,
    STTD-SupportIndicator,
    AdjustmentPeriod,
    ScaledAdjustmentRatio,
    MaxAdjustmentStep,
    SecondaryCCPCH-SlotFormat,
    SRB-Delay,
    SyncCase,
    SynchronisationConfiguration,
    TDD-ChannelisationCode,
    TDD-DCHs-to-Modify,
    TDD-DL-Code-Information,
    TDD-DPCHOffset,
    TDD-PhysicalChannelOffset,
    TDD-TPC-DownlinkStepSize,
    TDD-ChannelisationCodeLCR,
```

```
    TDD-DL-Code-LCR-Information,
    TDD-UL-Code-Information,
    TDD-UL-Code-LCR-Information,
    TFCI-Coding,
    TFCI-PC-SupportIndicator,
    TFCI-Presence,
    TFCI-SignallingMode,
    TimeSlot,
    TimeSlotLCR,
    TimingAdvanceApplied,
    ToAWE,
    ToAWS,
    TrafficClass,
    TransmitDiversityIndicator,
    TransportBearerID,
    TransportBearerRequestIndicator,
    TFCS,
    Transmission-Gap-Pattern-Sequence-Information,
    TransportFormatManagement,
    TransportFormatSet,
    TransportLayerAddress,
    TrCH-SrcStatisticsDescr,
    TSTD-Indicator,
    TSTD-Support-Indicator,
    UARFCN,
    UC-ID,
    UL-DPCCH-SlotFormat,
    UL-SIR,
    UL-FP-Mode,
    UL-PhysCH-SF-Variation,
    UL-ScramblingCode,
    UL-Timeslot-Information,
    UL-TimeslotLCR-Information,
    UL-TimeSlot-ISCP-Info,
    UL-TimeSlot-ISCP-LCR-Info,
    URA-ID,
    URA-Information,
    USCH-ID,
    USCH-Information,
    UL-Synchronisation-Parameters-LCR
FROM RNSAP-IEs
```

/* partly omitted */

```
    id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD,
    id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD,
    id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD,
    id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD,
    id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD,
    id-USCH-LCR-InformationListIEs-RL-SetupRspTDD,
    id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD,
```

```
    id-RL-LCR-InformationResponse-RL-AdditionRspTDD,
    id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD,
    id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD,
    id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD,
    id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD,
    id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD,
    id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD,
    id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,
    id-UL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD,
    id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD,
    id-DL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD,
    id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD,
    id-DL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD,
    id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD,
    id-TSTD-Support-Indicator-RL-SetupRqstTDD,
    id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD,
    id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD,
    id-DL-Timeslot-ISCP-LCR-Information-RL-ReconfPrepTDD,
    id-neighbouringTDDCellMeasurementInformationLCR,
    id-UL-SIR-Target-CCTrCH-InformationItem-RL-SetupRspTDD,
    id-UL-SIR-Target-CCTrCH-LCR-InformationItem-RL-SetupRspTDD,
    id-TrafficClass,
    id-UL-Synchronisation-Parameters-LCR

FROM RNSAP-Constants;
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK SETUP REQUEST TDD
--
-- **************************************************************

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

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SRNC-ID                                     CRITICALITY reject  TYPE RNC-ID                                     PRESENCE mandatory} |
    { ID id-S-RNTI                                      CRITICALITY reject  TYPE S-RNTI                                     PRESENCE mandatory} |
    { ID id-D-RNTI                                      CRITICALITY reject  TYPE D-RNTI                                     PRESENCE optional } |
    { ID id-UL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject  TYPE UL-Physical-Channel-Information-RL-SetupRqstTDD    PRESENCE
mandatory   } |
    { ID id-DL-Physical-Channel-Information-RL-SetupRqstTDD CRITICALITY reject  TYPE DL-Physical-Channel-Information-RL-SetupRqstTDD    PRESENCE
mandatory   } |
    { ID id-AllowedQueuingTime                          CRITICALITY reject  TYPE AllowedQueuingTime                         PRESENCE optional } |
```

```
    { ID id-UL-CCTrCH-InformationList-RL-SetupRqstTDD   CRITICALITY notify  TYPE UL-CCTrCH-InformationList-RL-SetupRqstTDD  PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationList-RL-SetupRqstTDD   CRITICALITY notify  TYPE DL-CCTrCH-InformationList-RL-SetupRqstTDD  PRESENCE optional } |
    { ID id-DCH-TDD-Information         CRITICALITY reject  TYPE DCH-TDD-Information            PRESENCE optional  } |
    { ID id-DSCH-TDD-Information        CRITICALITY reject  TYPE DSCH-TDD-Information           PRESENCE optional  } |
    { ID id-USCH-Information        CRITICALITY reject  TYPE USCH-Information          PRESENCE optional  } |
    { ID id-RL-Information-RL-SetupRqstTDD              CRITICALITY reject  TYPE RL-Information-RL-SetupRqstTDD             PRESENCE mandatory},
    ...
}

UL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
    maxNrTimeslots-UL               MaxNrTimeslots,
    minimumSpreadingFactor-UL       MinimumSpreadingFactor,
    maxNrULPhysicalchannels         MaxNrULPhysicalchannels,
    iE-Extensions                   ProtocolExtensionContainer { {UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Physical-Channel-Information-RL-SetupRqstTDD ::= SEQUENCE {
    maxNrTimeslots-DL               MaxNrTimeslots,
    minimumSpreadingFactor-DL       MinimumSpreadingFactor,
    maxNrDLPhysicalchannels         MaxNrDLPhysicalchannels,
    iE-Extensions                   ProtocolExtensionContainer { {DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-Physical-Channel-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-SetupRqstTDD           ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
InformationItemIEs-RL-SetupRqstTDD} }

UL-CCTrCH-InformationItemIEs-RL-SetupRqstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD   CRITICALITY notify  TYPE UL-CCTrCH-InformationItem-RL-SetupRqstTDD  PRESENCE mandatory   }
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    ul-TFCS                     TFCS,
    tFCI-Coding                 TFCI-Coding,
    ul-PunctureLimit                PunctureLimit,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
DL-CCTrCH-InformationList-RL-SetupRqstTDD          ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationItemIEs-RL-SetupRqstTDD} }

DL-CCTrCH-InformationItemIEs-RL-SetupRqstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD   CRITICALITY notify  TYPE DL-CCTrCH-InformationItem-RL-SetupRqstTDD  PRESENCE mandatory    }
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    dl-TFCS                     TFCS,
    tFCI-Coding                 TFCI-Coding,
    dl-PunctureLimit                PunctureLimit,
    tdd-TPC-DownlinkStepSize        TDD-TPC-DownlinkStepSize,
    cCTrCH-TPCList                  CCTrCH-TPCList-RL-SetupRqstTDD  OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCItem-RL-SetupRqstTDD

CCTrCH-TPCItem-RL-SetupRqstTDD   ::= SEQUENCE {
    cCTrCH-ID                       CCTrCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

RL-Information-RL-SetupRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-ISCP-LCR-Information-RL-SetupRqstTDD    CRITICALITY reject      EXTENSION    DL-TimeSlot-ISCP-LCR-Information PRESENCE
optional    }|
    { ID id-TSTD-Support-Indicator-RL-SetupRqstTDD              CRITICALITY ignore      EXTENSION    TSTD-Support-Indicator           PRESENCE
optional    }|
    --for 1.28Mcps TDD only
    { ID id-RL-Specific-DCH-Info    CRITICALITY ignore      EXTENSION   RL-Specific-DCH-Info    PRESENCE   optional }|
```

```
    { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional }|-
    { ID    id-UL-Synchronisation-Parameters-LCR           CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Permanent-NAS-UE-Identity              CRITICALITY ignore          EXTENSION Permanent-NAS-UE-Identity    PRESENCE optional }|
    { ID id-HSDSCH-TDD-Information                 CRITICALITY reject          EXTENSION HSDSCH-TDD-Information    PRESENCE optional }|
    { ID id-HSPDSCH-RL-ID                          CRITICALITY reject          EXTENSION RL-ID                        PRESENCE conditional }|
    { ID id-PDSCH-RL-ID            CRITICALITY ignore          EXTENSION RL-ID     PRESENCE optional },
    ...
}
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- **************************************************************

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

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

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

RL-Information-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD CRITICALITY reject      EXTENSION    DL-TimeSlot-ISCP-LCR-Information    PRESENCE
optional    }|
    --for 1.28Mcps TDD only
```

```
    { ID id-RL-Specific-DCH-Info        CRITICALITY ignore      EXTENSION   RL-Specific-DCH-Info  PRESENCE    optional }|
    { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional }|
    { ID    id-UL-Synchronisation-Parameters-LCR            CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

RadioLinkAdditionRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-Permanent-NAS-UE-Identity               CRITICALITY ignore          EXTENSION Permanent-NAS-UE-Identity   PRESENCE optional },
    ...
}
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- **************************************************************

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

RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY reject  TYPE AllowedQueuingTime             PRESENCE optional  } |
    { ID id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD   CRITICALITY notify  TYPE UL-CCTrCH-InformationAddList-RL-ReconfPrepTDDPRESENCE optional
    } |
    { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD    CRITICALITY notify  TYPE UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD  PRESENCE
optional    } |
    { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD    CRITICALITY notify  TYPE UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD  PRESENCE
optional    } |
    { ID id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD   CRITICALITY notify  TYPE DL-CCTrCH-InformationAddList-RL-ReconfPrepTDDPRESENCE optional
    } |
    { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD  PRESENCE
optional    } |
    { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD  PRESENCE
optional    } |
    { ID id-TDD-DCHs-to-Modify      CRITICALITY reject  TYPE TDD-DCHs-to-Modify     PRESENCE optional   } |
    { ID id-DCHs-to-Add-TDD     CRITICALITY reject  TYPE DCH-TDD-Information        PRESENCE optional   } |
    { ID id-DCH-DeleteList-RL-ReconfPrepTDD     CRITICALITY reject  TYPE DCH-DeleteList-RL-ReconfPrepTDD     PRESENCE optional }|
    { ID id-DSCH-ModifyList-RL-ReconfPrepTDD    CRITICALITY reject  TYPE DSCH-ModifyList-RL-ReconfPrepTDD    PRESENCE optional } |
    { ID id-DSCHs-to-Add-TDD        CRITICALITY reject  TYPE DSCH-TDD-Information            PRESENCE optional } |
    { ID id-DSCH-DeleteList-RL-ReconfPrepTDD    CRITICALITY reject  TYPE DSCH-DeleteList-RL-ReconfPrepTDD    PRESENCE optional } |
    { ID id-USCH-ModifyList-RL-ReconfPrepTDD    CRITICALITY reject  TYPE USCH-ModifyList-RL-ReconfPrepTDD    PRESENCE optional } |
    { ID id-USCHs-to-Add        CRITICALITY reject  TYPE USCH-Information            PRESENCE optional   } |
    { ID id-USCH-DeleteList-RL-ReconfPrepTDD    CRITICALITY reject  TYPE USCH-DeleteList-RL-ReconfPrepTDD    PRESENCE optional },
```

```
    ...
}

UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD       ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
AddInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD   CRITICALITY notify  TYPE UL-CCTrCH-AddInformation-RL-ReconfPrepTDD  PRESENCE mandatory   }
}

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TFCS,
    tFCI-Coding                 TFCI-Coding,
    punctureLimit                   PunctureLimit,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-SIRTarget        CRITICALITY reject      EXTENSION       UL-SIR      PRESENCE optional},
    -- This IE shall be mandatory for 1.28Mcps TDD, not applicable for 3.84Mcps TDD.
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
ModifyInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD    CRITICALITY notify  TYPE UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD PRESENCE mandatory
    }
}

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TFCS        OPTIONAL,
    tFCI-Coding                 TFCI-Coding             OPTIONAL,
    punctureLimit                   PunctureLimit               OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-SIRTarget        CRITICALITY reject      EXTENSION       UL-SIR      PRESENCE optional},
    -- This IE shall be applicable for 1.28Mcps TDD only.
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
DeleteInformation-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
```

```
    { ID id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD    CRITICALITY notify  TYPE UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD PRESENCE mandatory
    }
}

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD       ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
AddInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD   CRITICALITY notify  TYPE DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDDPRESENCE mandatory
    }
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TFCS,
    tFCI-Coding                 TFCI-Coding,
    punctureLimit                   PunctureLimit,
    cCTrCH-TPCList                  CCTrCH-TPCAddList-RL-ReconfPrepTDD  OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD

CCTrCH-TPCAddItem-RL-ReconfPrepTDD   ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    iE-Extensions               ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
ModifyInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
```

```
    { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD  PRESENCE
mandatory   }
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TFCS        OPTIONAL,
    tFCI-Coding                 TFCI-Coding             OPTIONAL,
    punctureLimit                   PunctureLimit               OPTIONAL,
    cCTrCH-TPCList                  CCTrCH-TPCModifyList-RL-ReconfPrepTDD       OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CCTrCH-TPCModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCModifyItem-RL-ReconfPrepTDD

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    iE-Extensions               ProtocolExtensionContainer { { CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
DeleteInformation-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD  PRESENCE
mandatory   }
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepTDD             ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepTDD

DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    iE-Extensions               ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
```

```
    ...
}

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

DSCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-ModifyItem-RL-ReconfPrepTDD

DSCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                         DSCH-ID,
    dl-ccTrCHID                     CCTrCH-ID                       OPTIONAL,
    trChSourceStatisticsDescriptor  TrCH-SrcStatisticsDescr OPTIONAL,
    transportFormatSet              TransportFormatSet              OPTIONAL,
    allocationRetentionPriority     AllocationRetentionPriority     OPTIONAL,
    schedulingPriorityIndicator     SchedulingPriorityIndicator     OPTIONAL,
    bLER                            BLER                            OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    iE-Extensions                   ProtocolExtensionContainer { {DSCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DSCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TrafficClass            CRITICALITY ignore  EXTENSION TrafficClass              PRESENCE optional }|
    { 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-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-DeleteItem-RL-ReconfPrepTDD

DSCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                         DSCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {DSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

USCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-ModifyItem-RL-ReconfPrepTDD

USCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                         USCH-ID,
    ul-ccTrCHID                     CCTrCH-ID                       OPTIONAL,
    trChSourceStatisticsDescriptor  TrCH-SrcStatisticsDescr OPTIONAL,
    transportFormatSet              TransportFormatSet              OPTIONAL,
    allocationRetentionPriority     AllocationRetentionPriority     OPTIONAL,
    schedulingPriorityIndicator     SchedulingPriorityIndicator     OPTIONAL,
    bLER                            BLER                            OPTIONAL,
```

```
    transportBearerRequestIndicator     TransportBearerRequestIndicator,
    rb-Info                             RB-Info                         OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { {USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-TrafficClass            CRITICALITY ignore  EXTENSION TrafficClass             PRESENCE optional }|
    { 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.
    ...
}

USCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-DeleteItem-RL-ReconfPrepTDD

USCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                             USCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {USCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD  CRITICALITY ignore      EXTENSION   PrimaryCCPCH-RSCP   PRESENCE optional }|
    { ID id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD  CRITICALITY ignore      EXTENSION   DL-TimeSlot-ISCP-Info PRESENCE optional }|
    { ID id-DL-Timeslot-ISCP-LCR-Information-RL-ReconfPrepTDD   CRITICALITY ignore      EXTENSION    DL-TimeSlot-ISCP-LCR-Information PRESENCE
optional    }|
    { ID id-HSDSCH-Information-to-Modify            CRITICALITY reject      EXTENSION HSDSCH-Information-to-Modify    PRESENCE optional}|
    { ID id-HSDSCH-TDD-Information-to-Add       CRITICALITY reject      EXTENSION HSDSCH-TDD-Information                 PRESENCE optional}|
    { ID id-HSDSCH-TDD-Information-to-Delete        CRITICALITY reject      EXTENSION HSDSCH-DeleteList-RL-ReconfPrepTDD  PRESENCE optional}|
    { ID id-HSPDSCH-RL-ID                   CRITICALITY reject      EXTENSION RL-ID             PRESENCE optional}|
    { ID id-PDSCH-RL-ID             CRITICALITY ignore          EXTENSION RL-ID     PRESENCE optional }|
    { ID    id-UL-Synchronisation-Parameters-LCR            CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

HSDSCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-DeleteItem-RL-ReconfPrepTDD

HSDSCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    hSDSCH-MACdFlow-ID                      HSDSCH-MACdFlow-ID,
    iE-Extensions                           ProtocolExtensionContainer { { HSDSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
}

HSDSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- **************************************************************

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

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY reject  TYPE AllowedQueuingTime             PRESENCE optional  } |
    { ID id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD    CRITICALITY notify  TYPE UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD  PRESENCE
optional    } |
    { ID id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD    CRITICALITY notify  TYPE UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD  PRESENCE
optional    } |
    { ID id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD  PRESENCE
optional    } |
    { ID id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD  PRESENCE
optional    } |
    { ID id-TDD-DCHs-to-Modify      CRITICALITY reject  TYPE TDD-DCHs-to-Modify     PRESENCE optional  } |
    { ID id-DCHs-to-Add-TDD     CRITICALITY reject  TYPE DCH-TDD-Information        PRESENCE optional  } |
    { ID id-DCH-DeleteList-RL-ReconfRqstTDD     CRITICALITY reject  TYPE DCH-DeleteList-RL-ReconfRqstTDD     PRESENCE optional },
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
InformationModifyList-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD    CRITICALITY notify  TYPE UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD  PRESENCE
mandatory   }
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TFCS        OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {UL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD    CRITICALITY notify  TYPE UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD  PRESENCE
mandatory   }
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationModifyList-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD  PRESENCE
mandatory   }
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    tFCS                        TFCS        OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD        ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container { {DL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD    CRITICALITY notify  TYPE DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD  PRESENCE
mandatory   }
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                   CCTrCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

DCH-DeleteList-RL-ReconfRqstTDD            ::= SEQUENCE (SIZE(0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                      DCH-ID,
    iE-Extensions                   ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-RL-ReconfigurationRequestTDD-RL-Information   CRITICALITY ignore      EXTENSION   RL-ReconfigurationRequestTDD-RL-Information    PRESENCE
    optional},
    ...
}

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

RL-ReconfigurationRequestTDD-RL-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID    id-UL-Synchronisation-Parameters-LCR            CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}
```

/*Partly omitted*/

9.3.4 Information Element Definitions

/* partly omitted */

```
-- U
```

/* partly omitted */

```
UL-Synchronisation-Parameters-LCR ::= SEQUENCE {
```

```
    uL-Synchronisation-StepSize         UL-Synchronisation-StepSize,
    uL-Synchronisation-Frequency            UL-Synchronisation-Frequency,
    iE-Extensions                   ProtocolExtensionContainer { { UL-Synchronisation-Parameters-LCR-ExtIEs } }       OPTIONAL,
    ...
}

UL-Synchronisation-Parameters-LCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Synchronisation-StepSize ::= INTEGER (1..8)

UL-Synchronisation-Frequency ::= INTEGER (1..8)
```

/* partly omitted */

9.3.6 Constant Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN
```

/*Partly omitted*/

```
id-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-UL-Synchronisation-Parameters-LCR                         ProtocolIE-ID ::= 464

END
```

/*Partly omitted*/

3GPP TSG-RAN WG3 Meeting #31
Stockholm, Sweden, 19th – 23rd August 2002

Tdoc ⌘ R3-022159

CR-Form-v7

CHANGE REQUEST

⌘ **25.433** **CR** **728** ⌘ **rev** **2** ⌘ Current version: **4.5.0** ⌘

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

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

Title:	⌘	Uplink Synchronisation in 1.28Mcps TDD
Source:	⌘	RAN WG3
Work item code:	⌘	LCRTDD-IublIur
Date:	⌘	23/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-4

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

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

Reason for change: ⌘

In TR 25.402 v4.5.0 section 8.3.5, the establishment of UL synchronisation and maintenance of the UL synchronisation in 1.28Mpcs is described. In 1.28Mcps TDD Uplink Synchronisation is performed at Layer 1 for uplink DPCH.

After establishing the UL synchronisation, the Node B will continuously measure the timing of the UE and send the necessary synchronisation shift commands in each sub-frame. On receipt of these synchronisation shift commands the UE shall adjust the timing of its transmissions accordingly, in steps of ±k/8 chips or do nothing, each M sub-frames.

The values of the Uplink Synchronisation Step Size (k) and the Uplink Synchronisation Frequency (M) are determined in the SRNC, and have to be conveyed to the Node B and to the CRNC, if CRNC and SRNC are not co-incident.

Summary of change: ⌘

Introduction of Uplink Synchronisation Parameters for 1.28Mcps TDD: *Uplink Synchronisation Step Size* IE and *Uplink Synchronisation Frequency* IE. Modification of several DL messages to now include the Uplink Synchronisation Parameters for 1.28Mcps TDD.

Revision1:
- Cover sheet was updated.
- Units and steps were added to the semantic descriptions of the IEs.

Revision2:
- Semantic Description has been added

		- Criticality for the new Ies has been changed from “reject” to “ignore”. Impact Analysis: Impact Assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because the Uplink Synchronisation Parameters for 1.28Mcps TDD are missing. The impact can be considered isolated because the change affects only the function of Uplink Synchronisation in 1.28Mcps TDD. -
Consequences if not approved:	⌘	If this CR is not approved,.the concerned RAN-WG3 specifications are not aligned with RAN-WG1 and RAN-WG2 specifications which already contain the Uplink Synchronisation Parameters.

Clauses affected:	⌘	8.2.17, 8.3.1, 8.3.2, 8.3.5, 9.1.36.2, 9.1.39.2, 9.1.42.2, 9.1.47.2, 9.2.3.x, 9.2.3.y, 9.3.3, 9.3.4, 9.3.6				
		Y	**N**			
Other specs	⌘	**X**		Other core specifications	⌘	25.423 v4.5.0 CR 706r2 25.423 v5.2.0 CR 707r2 25.433 v5.1.0 CR 729r2
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.

8.2.17 Radio Link Setup

8.2.17.1 General

This procedure is used for establishing the necessary resources for a new Node B Communication Context in the Node B.

[FDD – The Radio Link Setup procedure is used to establish one or more radio links. The procedure establishes one or more DCHs on all radio links, and in addition, it can include the establishment of one or more DSCHs on one radio link.]

[TDD – The Radio Link Setup procedure is used to establish one radio link including one or more transport channels. The transport channels can be a mix of DCHs, DSCHs, and USCHs, including also combinations where one or more transport channel types are not present.]

8.2.17.2 Successful Operation

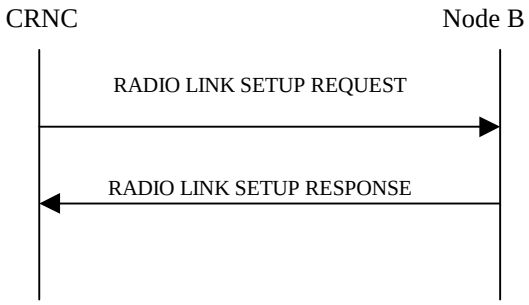

Figure 24: Radio Link Setup procedure, Successful Operation

The procedure is initiated with a RADIO LINK SETUP REQUEST message sent from the CRNC to the Node B using the Node B Control Port.

Upon reception of the RADIO LINK SETUP REQUEST message, the Node B shall reserve necessary resources and configure the new Radio Link(s) according to the parameters given in the message.

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

Transport Channels Handling:

DCH(s):

[TDD – If the *DCH Information* IE is present, the Node B shall configure the new DCH(s) 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 Node B shall treat the DCHs in the *DCH Information* IE as a set of co-ordinated DCHs. The Node B 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. [16]. 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. [16].]

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. [16]. [FDD - If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE, ref. [16]. If all DCHs have *QE-Selector* IE set to "non-selected", the Physical channel BER shall be used for the QE, ref. [16]].

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

The Node B 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 in the configuration.

The Node B 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 in the configuration.

The received *Frame Handling Priority* IE specified for each Transport Channel should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new RL(s) has been activated.

[FDD – The *Diversity Control Field* IE indicates for each RL (except the first RL in the message) whether the Node B shall combine the concerned RL or not.

- If the *Diversity Control Field* IE is set to"May", the Node B shall decide for either of the alternatives.
- If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL.
- If the *Diversity Control Field* IE is set to "Must not", the Node B shall not combine the RL with any other existing RL.

Diversity combining is applied to Dedicated Transport Channels (DCH), i.e. it is not applied to the DSCHs. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.]

[FDD – In the RADIO LINK SETUP RESPONSE message, the Node B 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 Node B 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 Node B shall include 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.]

In the case of a set of co-ordinated DCHs, the *Binding ID* IE and the *Transport Layer Address* IE shall be specified for only one of the DCHs in the set of co-ordinated DCHs.

DSCH(s):

If the *DSCH Information* IE is present, the Node B shall configure the new DSCH(s) according to the parameters given in the message.

[FDD – If the RADIO LINK SETUP REQUEST message includes the *TFCI2 Bearer Information* IE then the Node B shall support the establishment of a transport bearer on which the DSCH TFCI Signaling control frames shall be received. The Node B shall manage the time of arrival of these frames according to the values of ToAWS and ToAWE specified in the IEs. The *Binding ID* IE and the *Transport Layer Address* IE for the new bearer to be set up for this purpose shall be returned in the RADIO LINK SETUP RESPONSE message.]

The Node B shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and the *Transport Layer Address* IE for the transport bearer to be established for each DSCH of this RL.

[TDD – USCH(s)]:

[TDD – If the *USCH Information* IE is present, the Node B shall configure the new USCH(s) according to the parameters given in the message.]

[TDD – If the *USCH Information* IE is present, the Node B shall include in the RADIO LINK SETUP RESPONSE message the *Binding ID* IE and the *Transport Layer Address* IE for the transport bearer to be established for each USCH of this RL.]

Physical Channels Handling:

[FDD – Compressed Mode]:

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the Node B 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 Node B until the next Compressed Mode Configuration is configured in the Node B or the Node B Communication Context is deleted.]

[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 Node B shall use or not the alternate scrambling code as indicated for each DL Channelisation Code in the *Transmission Gap Pattern Sequence Code Information* IE.]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the Node B shall use the information to activate the indicated Transmission Gap Pattern Sequence(s) in the new RL. The received *CM Configuration Change CFN* refers to the latest passed CFN with that value The Node B 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 Node B 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 Node B 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 Node B 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 – DL Code Information]:

[FDD – When more than one DL DPDCH is 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*".]

[TDD – PDSCH RL ID]:

[TDD – If the *PDSCH RL ID* IE is included in RADIO LINK SETUP REQUEST message, the Node B shall use the PDSCH RL ID as an identifier for the PDSCH and/or PUSCH in this radio link.]

General:

[FDD – If the *Propagation Delay* IE is included, the Node B may use this information to speed up the detection of L1 synchronisation.]

[FDD – The *UL SIR Target* IE included in the message shall be used by the Node B as initial UL SIR target for the UL inner loop power control.]

[1.28Mcps TDD – The *UL SIR Target* IE included in the message shall be used by the Node B as initial UL SIR target for the UL inner loop power control according [19] and [21].]

[FDD – If the received *Limited Power Increase* IE is set to "Used", the Node B 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 *TFCI Signalling Mode* IE within the RADIO LINK SETUP REQUEST message indicates that there shall be a hard split on the TFCI field but the *TFCI2 Bearer Information* IE is not included in the message, then the Node B shall transmit the TFCI2 field with zero power.]

[FDD - If the *TFCI Signalling Mode* IE within the RADIO LINK SETUP REQUEST message indicates that there shall be a hard split on the TFCI and the *TFCI2 Bearer Information* IE is included in the message, then the Node B shall transmit the TFCI2 field with zero power until Synchronization is achieved on the TFCI2 transport bearer and the first valid DSCH TFCI Signalling control frame is received on this bearer (see ref. [24]).]

Radio Link Handling:

[FDD – Transmit Diversity]:

[FDD – When the *Diversity Mode* IE is set to "*STTD*", "*Closedloop mode1*" or "*Closedloop mode2*", the Node B shall activate/deactivate the Transmit Diversity for each Radio Link in accordance with the *Transmit Diversity Indication* IE]

DL Power Control:

[FDD – The Node B shall start the DL transmission using the initial DL power specified in the message on each DL DPCH of the RL until either UL synchronisation on the Uu interface is achieved for the RLS or Power Balancing is activated. No inner loop power control or 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 subclause 8.3.7), but shall always be kept within the maximum and minimum limit specified in the RADIO LINK SETUP REQUEST message. During compressed mode, 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 the *DPC Mode* IE is present in the RADIO LINK SETUP REQUEST message, the Node B 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]).]

[TDD – The Node B shall start the DL transmission using the initial DL power specified in the message on each DL DPCH and on each Time Slot of the RL until the UL synchronisation on the Uu interface is achieved for the 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), but shall always be kept within the maximum and minimum limit specified in the RADIO LINK SETUP REQUEST message.]

[TDD – If the [3.84Mcps TDD - *DL Time Slot ISCP Info* IE] or [1.28Mcps TDD - *DL Timeslot ISCP LCR* IE] is present, the Node B shall use the indicated value when deciding the initial DL TX Power for each timeslot as specified in [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged].

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

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the RADIO LINK SETUP REQUEST message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

General:

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

[FDD – Irrespective of SSDT activation, the Node B shall include in the RADIO LINK SETUP RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK

SETUP REQUEST message requested SSDT activation and the RADIO LINK SETUP RESPONSE message indicates that the SSDT capability is supported for this RL, SSDT is activated in the Node B.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity for EDSCHPC* IE, the Node B 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 Node B shall ignore the value in *SSDT Cell Identity For EDSCHPC* IE]

The Node B 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 Node B together with the value of the *DL TPC Pattern 01 Count* IE which the Node B has received in the Cell Setup procedure, 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 Node B 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 Node B Communication Context.]

[FDD – For all RLs having a common generation of the TPC commands in the DL with another RL, the Node B 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 Node B Communication Context.]

[FDD – The UL out-of-sync algorithm defined in [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:

If the RLs are successfully established, the Node B shall respond with a RADIO LINK SETUP RESPONSE message.

After sending the RADIO LINK SETUP RESPONSE message, the Node B shall continuously attempt to obtain UL synchronisation on the Uu interface. [FDD – The Node B shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [16].] [TDD – The Node B shall start transmission on the new RL immediately as specified in [16].]

8.2.17.3 Unsuccessful Operation

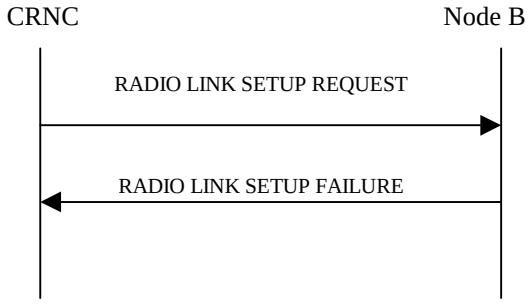

Figure 25: Radio Link Setup procedure: Unsuccessful Operation

If the establishment of at least one radio link is unsuccessful, the Node B shall respond with a RADIO LINK SETUP FAILURE message. The message contains the failure cause in the *Cause* IE.

[FDD – If some radio links were established successfully, the Node B shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message. In this case, the Node B shall include the *Communication Control Port Id* IE in the RADIO LINK SETUP FAILURE message.]

Typical cause values are as follows:

Radio Network Layer Cause

- Combining not supported
- Combining Resources not available
- Requested Tx Diversity Mode not supported
- Number of DL codes not supported
- Number of UL codes not supported
- UL SF not supported
- DL SF not supported
- Dedicated Transport Channel Type not supported
- Downlink Shared Channel Type not supported
- Uplink Shared Channel Type not supported
- CM not supported
- DPC mode change not supported

Transport Layer Cause

- Transport Resources Unavailable

Miscellaneous Cause

- O&M Intervention
- Control processing overload
- HW failure

8.2.17.4 Abnormal Conditions

[FDD – If the RADIO LINK SETUP REQUEST message contains the *Active Pattern Sequence Information* IE, but the *Transmission Gap Pattern Sequence Information* IE is not present, then the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected" [TDD – or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected"], the Node B shall regard the Radio Link Setup procedure as failed and shall respond with a RADIO LINK SETUP FAILURE message.

If the RADIO LINK SETUP REQUEST message includes a *DCH Information* IE with multiple *DCH Specific Info* IEs, and if the DCHs in the *DCH Information* IE do not have the same *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE, then the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.

8.2.18 Physical Shared Channel Reconfiguration [TDD]

8.2.18.1 General

This procedure is used for handling PDSCH Sets and PUSCH Sets in the Node B, i.e.

- Adding new PDSCH Sets and/or PUSCH Sets,
- Modifying these, and
- Deleting them.

8.2.18.2 Successful Operation

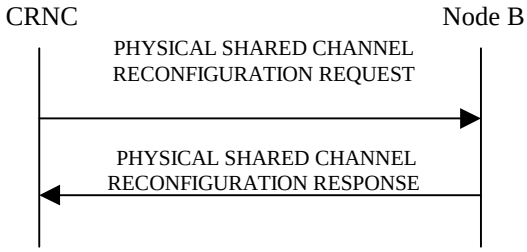

Figure 26: Physical Shared Channel Reconfiguration: Successful Operation

The procedure is initiated with a PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message sent from the CRNC to the Node B using the Node B Control Port.

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes an *SFN* IE, the Node B shall activate the new configuration on that specified SFN.

PDSCH/PUSCH Addition

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be added, the Node B shall add these new sets to its PDSCH/PUSCH configuration.

PDSCH/PUSCH Modification

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be modified, and includes any of [3.84Mcps TDD - *TDD Channelisation Code* IE, *Midamble Shift And Burst Type* IE, *Time Slot* IE], [1.28Mcps TDD - *TDD Channelisation Code LCR* IE, *Midamble Shift LCR* IE, *Time Slot LCR* IE], *TDD Physical Channel Offset* IE, *Repetition Period* IE, *Repetition Length* IE or *TFCI Presence* IE, the Node B shall apply these as the new values, otherwise the old values specified for this set are still applicable.

PDSCH/PUSCH Deletion

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be deleted, the Node B shall delete these sets from its PDSCH/PUSCH configuration.

In the successful case, the Node B shall add, modify and delete the PDSCH Sets and PUSCH Sets in the Common Transport Channel data base, as requested in the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message, and shall make these available to all the current and future DSCH and USCH transport channels. The Node B shall respond with the PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE message.

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

8.2.18.3 Unsuccessful Operation

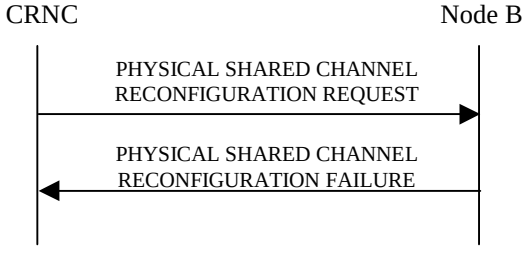

Figure 27: Physical Shared Channel Reconfiguration procedure: Unsuccessful Opreration

If the Node B is not able to support all parts of the configuration, it shall reject the configuration of all the channels in the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message. The *Cause* IE shall be set to an appropriate value.

If the configuration was unsuccessful, the Node B shall respond with the PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE message.

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available
- Node B Resources unavailable

Transport Layer Cause

- Transport Resources Unavailable

Miscellaneous Cause

- O&M Intervention
- Control processing overload
- HW failure

8.2.18.4 Abnormal Conditions

-

/* partly omitted */

8.3.1 Radio Link Addition

8.3.1.1 General

This procedure is used for establishing the necessary resources in the Node B for one or more additional RLs towards a UE when there is already a Node B Communication Context for this UE in the Node B.

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

8.3.1.2 Successful Operation

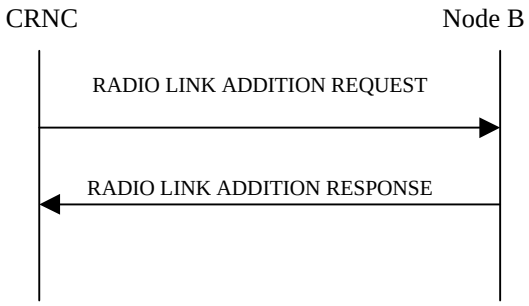

Figure: 28 Radio Link Addition procedure, Successful Operation

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the CRNC to the Node B using the Communication Control Port assigned to the concerned Node B Communication Context.

Upon reception, the Node B shall reserve the necessary resources and configure the new RL(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

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

Physical Channels Handling:

[TDD – If the *UL DPCH Information* IE is present, the Node B shall configure the new UL DPCH(s) according to the parameters given in the message.]

[TDD – If the *DL DPCH Information* IE is present, the Node B shall configure the new DL DPCH(s) according to the parameters given in the message.]

[FDD – Compressed Mode]:

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Compressed Mode Deactivation Flag* IE with value "Deactivate", the Node B shall not activate any compressed mode pattern in the new RLs. In all the other cases (Flag set to "Maintain Active" or not present), the ongoing compressed mode (if existing) shall be applied also to the added RLs.]

[FDD- If the RADIO LINK ADDITION REQUEST message contains the *Transmission Gap Pattern Sequence Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate scrambling code as indicated for each DL Channelisation Code for which the *Transmission Gap Pattern Sequence Code Information* IE is set to "Code Change".]

[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 ref. [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*".]

[TDD – CCTrCH Handling]:

[TDD – If the *UL CCTrCH Information* IE is present, the Node B shall configure the new UL CCTrCH(s) according to the parameters given in the message.]

[TDD – If the *DL CCTrCH Information* IE is present, the Node B shall configure the new DL CCTrCH(s) according to the parameters given in the message.]

Radio Link Handling:

Diversity Combination Control:

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

- If the *Diversity Control Field* IE is set to "May", the Node B shall decide for any of the alternatives.
- If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL.
- If the *Diversity Control Field* IE is set to "Must not", the Node B shall not combine the RL with any other existing RL.

When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.

In the case of combining an RL with existing RL(s), the Node B shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that the RL is combined. In this case, the *RL ID* IE indicates one of the existing RLs that the new RL is combined with.

In the case of not combining an RL with existing RL(s), the Node B shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that no

combining is done. In this case, the Node B shall include in the *DCH Information Response* IE both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH, [TDD – DSCH, USCH] of the RL in the RADIO LINK ADDITION RESPONSE message.

In the case of a set of co-ordinated DCHs, the *Binding ID* IE and the *Transport Layer Address* IE shall be included for only one of the DCHs in a set of coordinated DCHs.

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

[FDD – Transmit Diversity]:

[FDD – When the *Diversity Mode* IE is set to "*STTD*", "*Closedloop mode1*" or "*Closedloop mode2*", the Node B shall activate/deactivate the Transmit Diversity for each Radio Link in accordance with the *Transmit Diversity Indication* IE.]

[FDD – When the *Transmit Diversity Indicator* IE is present, the Node B shall activate/deactivate the Transmit Diversity for each new Radio Link in accordance with the *Transmit Diversity Indicator* IE and the already known diversity mode.]

DL Power Control:

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall apply the given power to the transmission on each DL DPCH of the RL when starting transmission until either UL synchronisation on the Uu interface is achieved for the RLS or Power Balancing is activated. If no *Initial DL Transmission Power* IE is included, the Node B shall use any transmission power level currently used on already existing RLs for this Node B Communication Context. No inner loop power control or 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) with DPC MODE currently configured for the relevant Node B Communication Context and the downlink power control procedure (see subclause 8.3.7).]

[TDD – If the RADIO LINK ADDITION REQUEST message includes the [3.84Mcps TDD - *Initial DL Transmission Power* IE] [1.28Mcps TDD – *DL Time Slot ISCP Info LCR* IE], the Node B shall apply the given power to the transmission on each DL DPCH and on each Time Slot of the RL when starting transmission until the UL synchronisation on the Uu interface is achieved for the RL. If no *Initial DL Transmission Power* IE is included, the Node B shall use any transmission power level currently used on already existing RLs for this Node B Communication Context. 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).]

If the RADIO LINK ADDITION REQUEST message includes the *Maximum DL Power* IE, the Node B shall store this value and not transmit with a higher power on any DL DPCH of the RL. If no *Maximum DL Power* IE is included, any Maximum DL power stored for already existing RLs for this Node B Communication Contextshall be applied. [FDD - During compressed mode, 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.]

If the RADIO LINK ADDITION REQUEST message includes the *Minimum DL Power* IE, the Node B shall store this value and never transmit with a lower power on any DL DPCH of the RL. If no *Minimum DL Power* IE is included, any Minimum DL power stored for already existing RLs for this Node B Communication Contextshall be applied.

[TDD – If the RADIO LINK ADDITION REQUEST message includes the *DL Time Slot ISCP Info* IE, the Node B shall use the indicated value when deciding the DL TX Power for each timeslot as specified in ref. [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged].

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the RADIO LINK ADDITION REQUEST message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

General:

[FDD – If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, the Node B shall activate SSDT, if supported, for the concerned new RL, with the indicated SSDT cell identity used for that RL.]

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

[FDD – Radio Link Set Handling]:

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

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

[FDD – After addition of the new RL(s), the UL out-of-sync algorithm defined in [10] shall, for each of the previously existing and newly 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:

If all requested RLs are successfully added, the Node B shall respond with a RADIO LINK ADDITION RESPONSE message.

After sending the RADIO LINK ADDITION RESPONSE message, the Node B shall continuously attempt to obtain UL synchronisation on the Uu interface. [FDD – The Node B shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [16].] [TDD – The Node B shall start transmission on the new RL immediately as specified in [16].]

8.3.1.3 Unsuccessful Operation

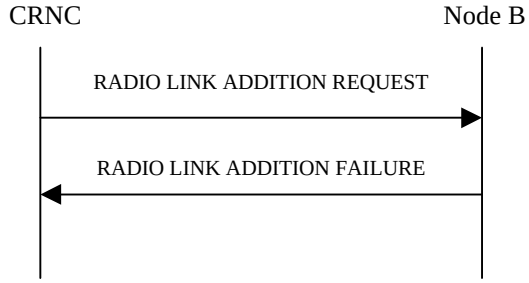

Figure 29: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one radio link is unsuccessful, the Node B shall respond with a RADIO LINK ADDITION FAILURE message. The message contains the failure cause in the *Cause* IE.

[FDD - If some RL(s) were established successfully, the Node B shall indicate this in the RADIO LINK ADDITION FAILURE message in the same way as in the RADIO LINK ADDITION RESPONSE message.]

[FDD – If the RADIO LINK ADDITION REQUEST contains a *C-ID* IE indicating that a Radio Link must be established on a Cell where DPC Mode change is not supported and DPC Mode can be changed for the relevant Node B Communication Context, the Node B shall consider the procedure as failed for the concerned Radio Link and shall respond with a RADIO LINK ADDITION FAILURE with the appropriate cause value ("DPC Mode change not supported").]

Typical cause values are as follows:

Radio Network Layer Cause

- Combining not supported
- Combining Resources not available
- Requested Tx Diversity Mode not supported
- UL SF not supported
- DL SF not supported
- Reconfiguration CFN not elapsed
- CM not supported
- [FDD – DPC Mode change not supported]

Transport Layer Cause

- Transport Resources Unavailable

Miscellaneous Cause

- O&M Intervention
- Control processing overload
- HW failure

8.3.1.4 Abnormal conditions

[FDD – If the RADIO LINK ADDITION REQUEST message contains the *Compressed Mode Deactivation Flag* IE with the value "Deactivate" when compressed mode is active for the existing RL(s), and at least one of the new RL is added in a cell that has the same UARFCN (both UL and DL) of at least one cell with an already existing RL, the Node B shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

8.3.2 Synchronised Radio Link Reconfiguration Preparation

8.3.2.1 General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of Radio Link(s) related to one Node B Communication Context.

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

8.3.2.2 Successful Operation

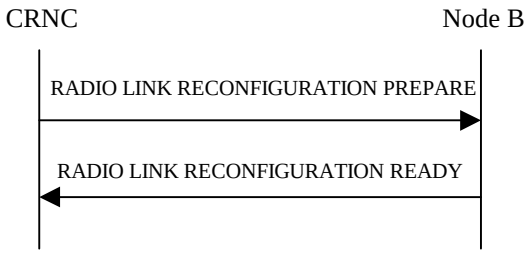

Figure 30: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the CRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the Node B. The message shall use the Communication Control Port assigned for this Node B Communication Context.

Upon reception, the Node B 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.

The Node B 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* IE then the Node B shall treat them each as follows:

- If the *DCHs to Modify* IE includes the *Frame Handling Priority* IE, the Node B 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 Node B once the new configuration has been activated.

- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the UL of a DCH, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the DL of a DCH, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IE, the Node B shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The Node B 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 DCH which belongs to a set of co-ordinated DCHs, the Node B 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 DCH which belongs to a set of co-ordinated DCHs, the Node B 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 DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- [TDD – If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]

- [TDD – If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs to Add* IE then the Node B shall treat them each as follows:

- If the *DCHs to Add* IE includes multiple *DCH Specific Info* IEs, the Node B shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The Node B 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. [16]. 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. [16].]

- 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. [16]. [FDD – If no Transport channel BER is

available for the selected DCH, the Physical channel BER shall be used for the QE, ref. [16]. If all DCHs have the *QE-Selector* IE set to "non-selected", the Physical channel BER shall be used for the QE, ref. [16].]

- The Node B 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 Uu interface in congestion situations within the Node B once the new configuration has been activated.

- The Node B 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 Node B 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 Node B 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 Node B shall apply the *CCTrCH ID* IE (for the DL) in the Downlink of this DCH in the new configuration.]

- [TDD – The Node B shall apply the *CCTrCH ID* IE (for the UL) in the Uplink of this DCH in the new configuration.]

DCH Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs to Delete* IE, the Node B 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 Node B 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, then the Node B shall apply the parameters to the new configuration as follows:]

- [FDD – If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the Node B 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 Node B shall apply the value in the new configuration. The Node B 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 *UL SIR Target* IE, the Node B shall use the value for the UL inner loop power control when the new configuration is being used.]

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

- [FDD – The Node B shall use the *TFCS* IE for the UL (if present) when reserving resources for the uplink of the new configuration. The Node B 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 Node B shall set the new Uplink DPCCH Structure to the new configuration.]

- [FDD - If the *UL DPCH Information* IE includes the *Diversity Mode* IE, the Node B 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 Node B shall apply the values in the new configuration.]

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

- [FDD – The Node B shall use the *TFCS* IE for the DL (if it is present) when reserving resources for the downlink of the new configuration. The Node B shall apply the new TFCS in the Downlink of the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE or the *TFCI Presence* IE, the Node B shall use the information when building TFCIs in the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *DL DPCCH Slot Format* IE, the Node B shall set the new Downlink DPCCH Structure to the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *Multiplexing Position* IE, the Node B shall apply the indicated multiplexing type in the new configuration.]

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

- [FDD – If the *DL DPCH Information* IE includes the *PDSCH Code Mapping* IE, then the Node B shall apply the defined mapping between TFCI values and PDSCH channelisation codes.]

- [FDD – If the *DL DPCH Information* IE includes the *PDSCH RL ID* IE, then the Node B shall infer that the PDSCH for the specified user will be transmitted on the defined radio link.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information* IE, the Node B 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 Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

[TDD – UL/DL CCTrCH Modification]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH to Modify* or *DL CCTrCH to Modify* IE, then the Node B shall treat them each as follows:]

- [TDD – If the IE includes any of the *TFCS* IE, *TFCI coding* IE or *Puncture Limit* IE, the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]

- [TDD – If the IE includes any *UL DPCH To Add* IE or *DL DPCH To Add* IE, the Node B shall include this DPCH in the new configuration.]

- [TDD – If the IE includes any *UL DPCH To Delete* IE or *DL DPCH To Delete* IE, the Node B shall remove this DPCH in the new configuration.]

- [TDD – If the IE includes any *UL DPCH To Modify* IE or *DL DPCH To Modify* IE and includes any of the *Repetition Period* IE, *Repetition Length* IE or *TDD DPCH Offset* IE, or the message includes UL/DL Timeslot Information and includes any of the [3.84Mcps TDD - *Midamble Shift And Burst Type* IE, *Time Slot* IE], [1.28Mcps TDD - *Midamble Shift LCR* IE, *Time Slot LCR* IE], or *TFCI Presence* IE or the message includes UL/DL Code information and includes [3.84Mcps TDD - *TDD Channelisation Code* IE], [1.28Mcps TDD - *TDD Channelisation Code LCR* IE], the Node B shall apply these specified information elements as the new values, otherwise the old values specified for this DPCH configuration are still applicable.]

- [1.28Mcps TDD – If the *UL CCTrCH To Modify* IE includes the *UL SIR Target* IE, the Node B shall use the value for the UL inner loop power control according [19] and [21] 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* IE or *DL CCTrCH To Add* IE, the Node B shall include this CCTrCH in the new configuration.]

[TDD – If the *UL/DL CCTrCH To Add* IE includes any *UL/DL DPCH Information* IE, the Node B shall reserve necessary resources for the new configuration of the UL/DL DPCH(s) according to the parameters given in the message.]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes a *DL CCTrCH To Add* IE, the Node B 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 Node B 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 [19] and [21] in the new configuration.]

[TDD – UL/DL CCTrCH Deletion]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any UL or DL CCTrCH to be deleted , the Node B shall remove this CCTrCH in the new configuration.]

DSCH Addition/Modification/Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DSCH To Add*, *DSCH To Modify* or *DSCH To Delete* IE, then the Node B 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.

The Node B shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DSCH.

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *TFCI2 Bearer Information* IE, then the Node B shall support the establishment of a transport bearer on which the DSCH TFCI Signaling control frames shall be received if one does not already exist or shall apply the new values if such a bearer does already exist for this Node B Communication Context. The *Binding ID* IE and *Transport Layer Address* IE of any new bearer to be set up for this purpose shall be returned in the RADIO LINK RECONFIGURATION READY message. If the RADIO LINK RECONFIGURATION PREPARE message specifies that the TFCI2 transport bearer is to be deleted, then the Node B shall release the resources associated with that bearer in the new configuration.]

[FDD – If the *TFCI Signalling Mode* IE within the RADIO LINK RECONFIGURATION PREPARE message indicates that there shall be a hard split on the TFCI field but a TFCI2 transport bearer has not already been set up and *TFCI2 Bearer Information* IE is not included in the message, then the Node B shall transmit the TFCI2 field with zero power in the new configuration.]

[FDD – If the *TFCI Signalling Mode* IE within the RADIO LINK RECONFIGURATION PREPARE message indicates that there shall be a hard split on the TFCI and the *TFCI2 Bearer Information* IE is included in the message, then the Node B shall transmit the TFCI2 field with zero power until Synchronisation is achieved on the TFCI2 transport bearer and the first valid DSCH TFCI Signalling control frame is received on this bearer in the new configuration (see ref. [24]).]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *DSCH Common Information* IE, the Node B shall treat it as follows:]

- [FDD - If the *Enhanced DSCH PC Indicator* IE is included and set to "Enhanced DSCH PC Active in the UE ", the Node B 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* IE 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 RADIO LINK RECONFIGURATION PREPARE message includes the *Enhanced DSCH PC Indicator* IE set to "Enhanced DSCH PC not Active in the UE", the Node B shall deactivate enhanced DSCH power control in the new configuration.]

[TDD – USCH Addition/Modification/Deletion:]

- [TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes USCH information for the USCHs to be added/modified/deleted then the Node B 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.]

- [TDD – The Node B shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each USCH.]

RL Information:

If the RADIO LINK RECONFIGURATION PREPARE message includes the *RL Information* IE, the Node B shall treat it as follows:

- [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 *RL Information* IE includes the *SSDT Indication* IE set to "SSDT Active in the UE", the Node B may activate SSDT using the *SSDT Cell Identity* IE in the new configuration.]

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

- [FDD – If the *RL Information* IE includes a *DL Code Information* IE, the Node B shall apply the values in the new configuration.]

- [FDD – If the *RL Information* IE contains the *Transmission Gap Pattern Sequence Code Information* IE in the *DL Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]

- If the *RL Information* IE includes the *Maximum DL Power* and/or the *Minimum DL Power* IEs, the Node B shall apply the values in the new configuration. [FDD - During compressed mode, 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 *RL Information* IE includes the *Initial DL Transmission Power* IE, the Node B shall apply the given power to the transmission on each DPCH of the CCTrCH when starting transmission on a new CCTrCH until the UL synchronisation on the Uu interface is achieved for the CCTrCH. If no *Initial DL Transmission Power* IE is included with a new CCTrCH, the Node B shall use any transmission power level currently used on already existing CCTrCHs when starting transmission for a new CCTrCH. 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).]

- [1.28Mcps TDD - If the RADIO LINK RECONFIGURATION PREPARE message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

[TDD - PDSCH RL ID]

- [TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *PDSCH RL ID* IE then in the new configuration the Node B shall use the PDSCH and/or PUSCH in this radio link.]

General

If the requested modifications are allowed by the Node B and the Node B has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the CRNC 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.

In the RADIO LINK RECONFIGURATION READY message, the Node B shall include the *RL Information Response* IE for each affected Radio Link.

The Node B 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 being added or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

In case of a DCH requiring a new transport bearer on Iub, the *Transport Layer Address* IE and the *Binding ID* IE shall be included in the IE *DCH Information Response* IE.

In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iub 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 DCH in the set of co-ordinated DCHs.

In the case of a Radio Link being combined with another Radio Link within the Node B,the *RL Information Response* IE shall be included only for one of the combined RLs. 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.

/* Partly omitted */

8.3.5 Unsynchronised Radio Link Reconfiguration

8.3.5.1 General

The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a Node B.

The Unsynchronised Radio Link Reconfiguration procedure is used when there is no need to synchronise the time of the switching from the old to the new configuration in one Node B used for a UE-UTRAN connection with any other Node B also used for the UE–UTRAN connection.

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

8.3.5.2 Successful Operation

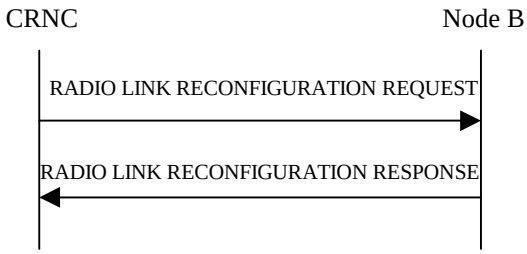

Figure 34: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the CRNC by sending the RADIO LINK RECONFIGURATION REQUEST message to the Node B. The message shall use the Communication Control Port assigned for this Node B Communication Context.

Upon reception, the Node B shall modify the 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.

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

DCH Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCHs To Modify* IE then the Node B shall treat them each as follows:

- If the *DCHs To Modify* IE includes the *Frame Handling Priority* IE, the Node B 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 Uu interface in congestion situations within the Node B once the new configuration has been activated.

- If the *DCHs To Modify* IE includes the *Transport Format Set* IE for the UL, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

- If the *DCHs To Modify* IE includes the *Transport Format Set* IE for the DL, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

- If the *DCHs To Modify* IE includes multiple *DCH Specific Info* IEs, then the Node B shall treat the DCHs in the *DCHs Tto Modify* IE as a set of co-ordinated DCHs. The Node B 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, the Node B 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, the Node B 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, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- [TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]

- [TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

DCH Addition:

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCH To Add* IE, the Node B shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCHs in the new configuration. In particular:

- If a *DCHs To Add* IE includes multiple *DCH Specific Info* IEs for a DCH to be added, the Node B shall treat the DCHs in the *DCHs To Add* IE as a set of co-ordinated DCHs. The Node B 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 Node B shall use the Transport channel BER from that DCHas 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 [16]. 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. [16].]

- For a set of co-ordinated DCHs, the Node B shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" as the QE in the UL data frames [16]. [FDD – If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE [16]. If all DCHs have the *QE-Selector* IE set to "non-selected", the Physical channel BER shall be used for the QE [16].]

- The Node B 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 Uu interface in congestion situations within the Node B once the new configuration has been activated.

- The Node B 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 Node B 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 Node B 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 – If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the DL of a DCH to be added, the Node B shall apply the new CCTrCH ID in the downlink of this DCH in the new configuration.]

- [TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the UL of a DCH to be added, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

DCH Deletion:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be deleted from the Radio Link(s), the Node B shall not include this DCH in the new configuration.

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

[FDD - Physical Channel Modification:]

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

- [FDD – If the *UL DPCH Information* IE includes the *TFCS* IE for the UL, the Node B shall apply the new TFCS in the Uplink of the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes a *DL DPCH Information* IE, then the Node B shall apply the parameters to the new configuration as follows:]

- [FDD – If the *DL DPCH Information* IE includes on the *TFCS* IE for the DL, the Node B shall apply the new TFCS in the Downlink of the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE, the Node B shall use the information when building TFCIs in the new configuration.

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

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the Node B 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 Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

[TDD – UL/DL CCTrCH Modification]

[TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH To Modify* IE or *DL CCTrCH To Modify* IE in the Radio Link(s), the Node B shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message.]

[TDD – If the *UL/DL CCTrCH To Modify* IE includes *TFCS* IE and/or *Puncture Limit* IE, the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]

[TDD – UL/DL CCTrCH Deletion]

[TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH To Delete* IE or *DL CCTrCH To Delete* IE, the Node B shall not include this CCTrCH in the new configuration.]

RL Information:

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RL Information* IE, the Node B shall treat it as follows:

- If the *RL Information* IE includes the *Maximum DL Power* IE, the Node B shall apply this value to the new configuration and not transmit with a higher power on any Downlink DPCH of the Radio Link once the new configuration is being used. [FDD - During compressed mode, 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.]

- If the *RL Information* IE includes the *Minimum DL Power* IE, the Node B shall apply this value to the new configuration and never transmit with a lower power on any Downlink Channelisation Code of the Radio Link once the new configuration is being used.

- [FDD – If the *RL Information* IE contains the *Transmission Gap Pattern Sequence Code Information* IE in the *DL Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]

- [1.28Mcps TDD - If the RADIO LINK RECONFIGURATION REQUEST message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

General

If the requested modifications are allowed by the Node B, the Node B has successfully allocated the required resources, and changed to the new configuration, it shall respond to the CRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

In the RADIO LINK RECONFIGURATION RESPONSE message, the Node B shall include the *RL Information Response* IE for each affected Radio Link.

The Node B shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE for any Transport Channel being added or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. The detailed frame protocol handling during transport bearer replacement is described in [16], subclause 5.10.1.

In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iub 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 DCH in the set of coordinated DCHs.

In the case of a Radio Link being combined with another Radio Link within the Node B, the *RL Information Response* IE shall be included only for one of the combined Radio Links. 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.

/*Partly omitted*/

9.1.36 RADIO LINK SETUP REQUEST

9.1.36.2 TDD message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value “All CRNCCC” shall not be used.	YES	reject
UL CCTrCH Information		*0..<maxnoCCTrCH>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>UL DPCH Information		*0..1*		Applicable to 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH Information LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
>UL SIR Target	O		UL SIR 9.2.1.67A	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
DL CCTrCH Information		*0..<maxnoCCTrCH>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>TDD TPC DL Step Size	M		9.2.3.21		–	
>TPC CCTrCH List		*0..<maxnoCCTrCH>*		List of uplink CCTrCH which provide TPC	**–**	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH information		*0..1*		Applicable to 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	

>DL DPCH information LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
>>TSTD Indicator	M		9.2.1.64		–	
DCH Information	O		DCH TDD Information 9.2.3.4C		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.5A		YES	reject
USCH Information	O		9.2.3.28		YES	reject
RL Information		*1*			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Special Burst Scheduling	M		9.2.3.18A		–	
>Initial DL Transmission Power	M		DL Power 9.2.1.21	Initial power on DPCH	–	
>Maximum DL Power	M		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	M		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>DL Time Slot ISCP Info	O		9.2.3.4F	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.40A	Applicable to 1.28Mcps TDD only	YES	reject
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.x		-	
>>Uplink Synchronisation Frequency	M		9.2.3.y		-	
PDSCH-RL-ID	O		RL ID 9.2.1.53		YES	ignore

Range Bound	Explanation
maxnoCCTrCH	Number of CCTrCHs for one UE

/* partly omitted */

9.1.39 RADIO LINK ADDITION REQUEST

/* partly omitted */

9.1.39.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value “All NBCC” shall not be used.	YES	reject
UL CCTrCH Information		*0..<maxnoCCTrCH>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>UL DPCH Information		*0..1*		Applicable to 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH Information LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
DL CCTrCH Information		*0..<maxnoCCTrCH>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>DL DPCH information		*0..1*		Applicable to 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
>DL DPCH information LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
RL Information		*1*			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Diversity Control Field	M		9.2.1.25		–	
>Initial DL Transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	–	
>Maximum DL Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	O		DL Power	Minimum	–	

			9.2.1.21	allowed power on DPCH		
>DL Time Slot ISCP Info	O		9.2.3.4F	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.40A	Applicable to 1.28Mcps TDD only	YES	reject
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
>>Uplink Synchronisation Step Size	M		9.2.3.x		-	
>>Uplink Synchronisation Frequency	M		9.2.3.y		-	

Range Bound	Explanation
maxnoCCTrCH	Number of CCTrCH for one UE

/* partly omitted */

9.1.42 RADIO LINK RECONFIGURATION PREPARE

/* partly omitted */

9.1.42.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value “All NBCC” shall not be used.	YES	reject
UL CCTrCH To Add		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>UL DPCH Information		*0..1*		Applicable to 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH Information LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
>UL SIR Target	O		UL SIR 9.2.1.67A	Mandatory for 1.28Mcps TDD; not Applicable to 3.84Mcps TDD	YES	reject
UL CCTrCH To Modify		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>TFCI Coding	O		9.2.3.22		–	
>Puncture Limit	O		9.2.1.50		–	
>UL DPCH To Add		*0..1*		Applicable to 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH To Modify		*0..1*			YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	
>>UL Timeslot Information		*0..<maxnoofULts>*		Applicable to 3.84Mcps TDD only	–	

>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>UL Code Information		*0..<maxnoofDPCHs>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>>UL Timeslot Information LCR		*0..<maxnoofULtsLCR>*		Applicable to 1.28Mcps TDD only	GLOBAL	reject
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble Shift LCR	O		9.2.3.7A			
>>>TFCI Presence	O		9.2.1.57		–	
>>>UL Code Information LCR		*0..<maxnoofDPCHsLCR>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code LCR	O		9.2.3.19a		–	
>UL DPCH To Delete		*0..<maxnoofDPCHs>*			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
>UL DPCH To Add LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
>UL SIR Target	O		UL SIR 9.2.1.67A	Applicable to 1.28Mcps TDD only	YES	reject
UL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DL CCTrCH To Add		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>TPC CCTrCH List		*0..<maxnoofCCTrCHs>*		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH Information		*0..1*		Applicable to 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
>DL DPCH Information		*0..1*		Applicable to 1.28Mcps TDD	YES	reject

LCR				only		
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
DL CCTrCH To Modify		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3.		–	
>TFCS	O		9.2.1.58		–	
>TFCI Coding	O		9.2.3.22		–	
>Puncture Limit	O		9.2.1.50		–	
>TPC CCTrCH List		*0..<maxnoofCCTrCHs>*		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH To Add		*0..1*		Applicable to 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
>DL DPCH To Modify		*0..1*			YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	
>>DL Timeslot Information		*0..<maxnoofDLts>*		Applicable to 3.84Mcps TDD only	–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>DL Code Information		*0..<maxnoofDPCHs>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>>DL Timeslot Information LCR		*0..<maxnoofDLtsLCR>*		Applicable to 1.28Mcps TDD only	GLOBAL	reject
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble Shift LCR	O		9.2.3.7A			
>>>TFCI Presence	O		9.2.1.57		–	
>>>DL Code Information LCR		*0..<maxnoofDPCHsLCR>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code LCR	O		9.2.3.19a		–	
>DL DPCH To Delete		*0..<maxnoofDPCHs>*			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
>DL DPCH To Add LCR		*0..1*		Applicable to 1.28Mcps TDD	YES	reject

				only		
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
DL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DCHs To Modify	O		DCHs TDD To Modify 9.2.3.4D		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.4C		YES	reject
DCHs To Delete		*0..<maxnoofDCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
DSCH To Modify		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
>CCTrCH ID	O		9.2.3.3	DL CCTrCH in which the DSCH is mapped	–	
>Transport Format Set	O		9.2.1.59		–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>Frame Handling Priority	O		9.2.1.30		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
DSCH To Add	O		DSCH TDD Information 9.2.3.5A		YES	reject
DSCH To Delete		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
USCH To Modify		*0..<maxnoofUSCHs>*			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	
>Transport Format Set	O		9.2.1.59		–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>CCTrCH ID	O		9.2.3.2	UL CCTrCH in which the USCH is mapped	–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
USCH To Add	O		USCH Information 9.2.3.28		YES	reject
USCH To Delete		*0..<maxnoofUSCHs>*			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	
RL Information		*0..1*			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21	Maximum allowed power	–	

				on DPCH		
>Minimum Downlink Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>Initial DL Transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	YES	ignore
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not applicable to 3.84Mcps TDD.	YES	ignore
>> Uplink Synchronisation Step Size	M		9.2.3.x			
>> Uplink Synchronisation Frequency	M		9.2.3.y			
PDSCH-RL-ID	O		RL ID 9.2.1.53		YES	ignore

Range Bound	Explanation
maxnoofDCHs	Maximum number of DCHs for a UE
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE
maxnoofDPCHs	Maximum number of DPCHs in one CCTrCH for 3.84Mcps TDD
maxnoofDPCHsLCR	Maximum number of DPCHs in one CCTrCH for 1.28Mcps TDD
mmaxnoofDSCHs	Maximum number of DSCHs for one UE
maxnoofUSCHs	Maximum number of USCHs for one UE
maxnoofDLts	Maximum number of Downlink time slots per Radio Link for 3.84Mcps TDD
maxnoofDLtsLCR	Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD
maxnoofULts	Maximum number of Uplink time slots per Radio Link for 3.84Mcps TDD
maxnoofULtsLCR	Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD

/* Partly omitted */

RADIO LINK RECONFIGURATION REQUEST

/* Partly omitted */

9.1.47.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantic Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value “All NBCC” shall not be used.	YES	reject
UL CCTrCH To Modify		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
UL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
DL CCTrCH To Modify		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
DL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
DCHs To Modify	O		DCHs TDD To Modify 9.2.3.4D		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.4C		YES	reject
DCHs To Delete		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
RL Information		*0..1*			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum Downlink Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.x		-	
>>Uplink Synchronisation Frequency	M		9.2.3.y		-	

Range Bound	Explanation
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE

/*Partly omitted*/

9.2.3.x Uplink Synchronisation Step Size

The *UL Synchronisation Step Size* IE specifies the step size to be used for the adjustment of the uplink transmission timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink synchronisation step size			INTEGER (1..8)	Unit: 1/8 chip, step: 1.

9.2.3.y Uplink Synchronisation Frequency

The *UL Synchronisation Frequency* IE specifies the frequency of the adjustment of the uplink transmission timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink synchronisation frequency			INTEGER (1..8)	Unit: subframe, step: 1

/* partly omitted */

9.3.3 PDU Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    Active-Pattern-Sequence-Information,
    AddorDeleteIndicator,
    AICH-Power,
    AICH-TransmissionTiming,
    AllocationRetentionPriority,
    APPreambleSignature,
    APSubChannelNumber,
    AvailabilityStatus,
    BCCH-ModificationTime,
    BindingID,
    BlockingPriorityIndicator,
    SCTD-Indicator,
    Cause,
    CCTrCH-ID,
    CDSubChannelNumbers,
    CellParameterID,
    CellSyncBurstCode,
    CellSyncBurstCodeShift,
    CellSyncBurstRepetitionPeriod,
    CellSyncBurstSIR,
    CellSyncBurstTiming,
    CellSyncBurstTimingThreshold,
    CFN,
    Channel-Assignment-Indication,
    ChipOffset,
    C-ID,
    Closedlooptimingadjustmentmode,
    CommonChannelsCapacityConsumptionLaw,
```

```
    Compressed-Mode-Deactivation-Flag,
    CommonMeasurementAccuracy,
    CommonMeasurementType,
    CommonMeasurementValue,
    CommonMeasurementValueInformation,
    CommonPhysicalChannelID,
    Common-PhysicalChannel-Status-Information,
    Common-TransportChannel-Status-Information,
    CommonTransportChannelID,
    CommonTransportChannel-InformationResponse,
    CommunicationControlPortID,
    ConfigurationGenerationID,
    ConstantValue,
    CriticalityDiagnostics,
    CPCH-Allowed-Total-Rate,
    CPCHScramblingCodeNumber,
    CPCH-UL-DPCCH-SlotFormat,
    CRNC-CommunicationContextID,
    CSBMeasurementID,
    CSBTransmissionID,
    DCH-FDD-Information,
    DCH-InformationResponse,
    DCH-ID,
    FDD-DCHs-to-Modify,
    TDD-DCHs-to-Modify,
    DCH-TDD-Information,
    DedicatedChannelsCapacityConsumptionLaw,
    DedicatedMeasurementType,
    DedicatedMeasurementValue,
    DedicatedMeasurementValueInformation,
    DiversityControlField,
    DiversityMode,
    DL-DPCH-SlotFormat,
    DL-or-Global-CapacityCredit,
    DL-Power,
    DLPowerAveragingWindowSize,
    DL-ScramblingCode,
    DL-TimeslotISCP,
    DL-Timeslot-Information,
    DL-TimeslotLCR-Information,
    DL-TimeslotISCPInfo,
    DL-TimeslotISCPInfoLCR,
    DL-TPC-Pattern01Count,
    DPC-Mode,
    DPCH-ID,
    DSCH-ID,
    DSCH-FDD-Common-Information,
    DSCH-FDD-Information,
    DSCH-InformationResponse,
    DSCH-TDD-Information,
    DwPCH-Power,
    End-Of-Audit-Sequence-Indicator,
    EnhancedDSCHPC,
```

```
    EnhancedDSCHPCCounter,
    EnhancedDSCHPCIndicator,
    EnhancedDSCHPCWnd,
    EnhancedDSCHPowerOffset,
    FDD-DL-ChannelisationCodeNumber,
    FDD-DL-CodeInformation,
    FDD-S-CCPCH-Offset,
    FDD-TPC-DownlinkStepSize,
    FirstRLS-Indicator,
    FNReportingIndicator,
    FPACH-Power,
    FrameAdjustmentValue,
    FrameHandlingPriority,
    FrameOffset,
    IB-OC-ID,
    IB-SG-DATA,
    IB-SG-POS,
    IB-SG-REP,
    IB-Type,
    InformationExchangeID,
    InformationReportCharacteristics,
    InformationType,
    InnerLoopDLPCStatus,
    IPDL-FDD-Parameters,
    IPDL-TDD-Parameters,
    IPDL-Indicator,
    LimitedPowerIncrease,
    Local-Cell-ID,
    MaximumDL-PowerCapability,
    MaximumTransmissionPower,
    Max-Number-of-PCPCHes,
    MaxNrOfUL-DPDCHs,
    MaxPRACH-MidambleShifts,
    MeasurementFilterCoefficient,
    MeasurementID,
    MidambleAllocationMode,
    MidambleShiftAndBurstType,
    MidambleShiftLCR,
    MinimumDL-PowerCapability,
    MinSpreadingFactor,
    MinUL-ChannelisationCodeLength,
    MultiplexingPosition,
    NEOT,
    NCyclesPerSFNperiod,
    NFmax,
    NRepetitionsPerCyclePeriod,
    N-INSYNC-IND,
    N-OUTSYNC-IND,
    NeighbouringCellMeasurementInformation,
    NeighbouringFDDCellMeasurementInformation,
    NeighbouringTDDCellMeasurementInformation,
    NodeB-CommunicationContextID,
    NStartMessage,
```

```
    PagingIndicatorLength,
    PayloadCRC-PresenceIndicator,
    PCCPCH-Power,
    PCP-Length,
    PDSCH-CodeMapping,
    PDSCHSet-ID,
    PDSCH-ID,
    PICH-Mode,
    PICH-Power,
    PowerAdjustmentType,
    PowerOffset,
    PowerRaiseLimit,
    PRACH-Midamble,
    PreambleSignatures,
    PreambleThreshold,
    PredictedSFNSFNDeviationLimit,
    PredictedTUTRANGPSDeviationLimit,
    PrimaryCPICH-Power,
    PrimaryScramblingCode,
    PropagationDelay,
    SCH-TimeSlot,
    PunctureLimit,
    PUSCHSet-ID,
    PUSCH-ID,
    QE-Selector,
    RACH-SlotFormat,
    RACH-SubChannelNumbers,
    ReferenceClockAvailability,
    ReferenceSFNoffset,
    RepetitionLength,
    RepetitionPeriod,
    ReportCharacteristics,
    RequestedDataValue,
    RequestedDataValueInformation,
    ResourceOperationalState,
    RL-Set-ID,
    RL-ID,
    Received-total-wide-band-power-Value,
    AdjustmentPeriod,
    ScaledAdjustmentRatio,
    MaxAdjustmentStep,
    RNC-ID,
    ScramblingCodeNumber,
    SecondaryCCPCH-SlotFormat,
    Segment-Type,
    S-FieldLength,
    SFN,
    SFNSFNChangeLimit,
    SFNSFNDriftRate,
    SFNSFNDriftRateQuality,
    SFNSFNQuality,
    ShutdownTimer,
    SIB-Originator,
```

```
    SpecialBurstScheduling,
    SSDT-Cell-Identity,
    SSDT-CellID-Length,
    SSDT-Indication,
    Start-Of-Audit-Sequence-Indicator,
    STTD-Indicator,
    SSDT-SupportIndicator,
    SyncCase,
    SYNCDlCodeId,
    SyncFrameNumber,
    SynchronisationReportCharacteristics,
    SynchronisationReportType,
    T-Cell,
    T-RLFAILURE,
    TDD-ChannelisationCode,
    TDD-ChannelisationCodeLCR,
    TDD-DL-Code-LCR-Information,
    TDD-DPCHOffset,
    TDD-TPC-DownlinkStepSize,
    TDD-PhysicalChannelOffset,
    TDD-UL-Code-LCR-Information,
    TFCI2-BearerInformationResponse,
    TFCI-Coding,
    TFCI-Presence,
    TFCI-SignallingMode,
    TFCS,
    TimeSlot,
    TimeSlotLCR,
    TimeSlotDirection,
    TimeSlotStatus,
    TimingAdjustmentValue,
    TimingAdvanceApplied,
    ToAWE,
    ToAWS,
    TransmissionDiversityApplied,
    TransmitDiversityIndicator,
    TransmissionGapPatternSequenceCodeInformation,
    Transmission-Gap-Pattern-Sequence-Information,
    TransportBearerRequestIndicator,
    TransportFormatSet,
    TransportLayerAddress,
    TSTD-Indicator,
    TUTRANGPS,
    TUTRANGPSChangeLimit,
    TUTRANGPSDriftRate,
    TUTRANGPSDriftRateQuality,
    TUTRANGPSQuality,
    UARFCN,
    UC-Id,
    USCH-Information,
    USCH-InformationResponse,
    UL-CapacityCredit,
```

```
    UL-DPCCH-SlotFormat,
    UL-SIR,
    UL-FP-Mode,
    UL-PhysCH-SF-Variation,
    UL-ScramblingCode,
    UL-Timeslot-Information,
    UL-TimeslotLCR-Information,
    UL-TimeSlot-ISCP-Info,
    UL-TimeSlot-ISCP-LCR-Info,
    UL-TimeslotISCP-Value,
    UL-TimeslotISCP-Value-IncrDecrThres,
    USCH-ID,
    UL-Synchronisation-Parameters-LCR
FROM NBAP-IEs
```

/* partly omitted */

```
id-UL-DPCH-LCR-Information-RL-SetupRqstTDD,
    id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD,
    id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD,
    id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD,
    id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD,
    id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD,
    id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD,
    id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD,
    id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD,
    id-UL-DPCH-LCR-InformationModify-AddList,
    id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD,
    id-UL-SIRTarget,
    id-PDSCH-AddInformation-LCR-PSCH-ReconfRqst,
    id-PDSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst,
    id-PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst,
    id-PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst,
    id-PUSCH-AddInformation-LCR-PSCH-ReconfRqst,
    id-PUSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst,
    id-PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst,
    id-PUSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst,
    id-PUSCH-Info-DM-Rqst,
    id-PUSCH-Info-DM-Rsp,
    id-PUSCH-Info-DM-Rprt,
    id-RL-InformationResponse-LCR-RL-AdditionRspTDD,
    id-UL-Synchronisation-Parameters-LCR,

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

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

/* Partly omitted */

```
-- **************************************************************
--
-- RADIO LINK SETUP REQUEST TDD
--
-- **************************************************************

RadioLinkSetupRequestTDD ::= SEQUENCE {
```

```
    protocolIEs             ProtocolIE-Container    {{RadioLinkSetupRequestTDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer  {{RadioLinkSetupRequestTDD-Extensions}}                    OPTIONAL,
    ...
}

RadioLinkSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                      CRITICALITY reject          TYPE                    CRNC-CommunicationContextID
                PRESENCE    mandatory   }|
    { ID    id-UL-CCTrCH-InformationList-RL-SetupRqstTDD        CRITICALITY notify          TYPE                    UL-CCTrCH-InformationList-RL-
SetupRqstTDD        PRESENCE    optional    }|
    { ID    id-DL-CCTrCH-InformationList-RL-SetupRqstTDD        CRITICALITY notify          TYPE                    DL-CCTrCH-InformationList-RL-
SetupRqstTDD        PRESENCE    optional    }|
    { ID    id-DCH-TDD-Information              CRITICALITY reject          TYPE    DCH-TDD-Information                 PRESENCE optional }|
    { ID    id-DSCH-TDD-Information             CRITICALITY reject          TYPE    DSCH-TDD-Information              PRESENCE optional }|
    { ID    id-USCH-Information             CRITICALITY reject          TYPE    USCH-Information                  PRESENCE optional }|
    { ID    id-RL-Information-RL-SetupRqstTDD                   CRITICALITY reject          TYPE                    RL-Information-RL-SetupRqstTDD
                PRESENCE    mandatory   },
    ...
}

RadioLinkSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-PDSCH-RL-ID             CRITICALITY ignore          EXTENSION RL-ID     PRESENCE optional },
    ...
}

UL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfCCTrCHs)) OF
    ProtocolIE-Single-Container{{ UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD }}

UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD        CRITICALITY     notify          TYPE                UL-CCTrCH-InformationItem-RL-
SetupRqstTDD        PRESENCE    mandatory}
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    tFCS                                    TFCS,
    tFCI-Coding                             TFCI-Coding,
    punctureLimit                           PunctureLimit,
    uL-DPCH-Information                     UL-DPCH-Information-RL-SetupRqstTDD     OPTIONAL,   -- Applicable to 3.84Mcps TDD only
    iE-Extensions                           ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-LCR-Information-RL-SetupRqstTDD CRITICALITY notify      EXTENSION   UL-DPCH-LCR-Information-RL-SetupRqstTDD   PRESENCE optional
    }|  -- Applicable to 1.28Mcps TDD only
    { ID id-UL-SIRTarget        CRITICALITY reject      EXTENSION       UL-SIR      PRESENCE optional               },
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD.
    ...
}

UL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ UL-DPCH-InformationIE-RL-SetupRqstTDD }}
```

```
UL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationList-RL-SetupRqstTDD     CRITICALITY notify  TYPE UL-DPCH-InformationItem-RL-SetupRqstTDD    PRESENCE mandatory   }
}

UL-DPCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-Information                 UL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-LCR-Information-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-TimeslotLCR-Information              UL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container{{ DL-CCTrCH-InformationItemIE-RL-
SetupRqstTDD }}

DL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD           CRITICALITY     notify                          TYPE  DL-CCTrCH-InformationItem-
RL-SetupRqstTDD     PRESENCE    mandatory}
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    tFCS                                    TFCS,
    tFCI-Coding                             TFCI-Coding,
    punctureLimit                           PunctureLimit,
    tdd-TPC-DownlinkStepSize                TDD-TPC-DownlinkStepSize,
    cCTrCH-TPCList                          CCTrCH-TPCList-RL-SetupRqstTDD          OPTIONAL,
    dL-DPCH-Information                     DL-DPCH-Information-RL-SetupRqstTDD     OPTIONAL,   -- Applicable to 3.84Mcps TDD only
    iE-Extensions                           ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-LCR-Information-RL-SetupRqstTDD CRITICALITY notify      EXTENSION   DL-DPCH-LCR-Information-RL-SetupRqstTDD   PRESENCE optional
    },  -- Applicable to 1.28Mcps TDD only
```

```
    ...
}

CCTrCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCItem-RL-SetupRqstTDD

CCTrCH-TPCItem-RL-SetupRqstTDD   ::= SEQUENCE {
    cCTrCH-ID                           CCTrCH-ID,
    iE-Extensions                       ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ DL-DPCH-InformationIE-RL-SetupRqstTDD }}

DL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationList-RL-SetupRqstTDD     CRITICALITY notify  TYPE DL-DPCH-InformationItem-RL-SetupRqstTDD    PRESENCE mandatory   }
}

DL-DPCH-InformationItem-RL-SetupRqstTDD  ::= SEQUENCE {
    repetitionPeriod                    RepetitionPeriod,
    repetitionLength                    RepetitionLength,
    tdd-DPCHOffset                      TDD-DPCHOffset,
    dL-Timeslot-Information            DL-Timeslot-Information,
    iE-Extensions                       ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-LCR-Information-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod                    RepetitionPeriod,
    repetitionLength                    RepetitionLength,
    tdd-DPCHOffset                      TDD-DPCHOffset,
    dL-TimeslotLCR-Information          DL-TimeslotLCR-Information,
    tstdIndicator                       TSTD-Indicator,
    iE-Extensions                       ProtocolExtensionContainer { { DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID                               RL-ID,
    c-ID                                C-ID,
    frameOffset                         FrameOffset,
    specialBurstScheduling              SpecialBurstScheduling,
```

```
    initialDL-transmissionPower             DL-Power,
    maximumDL-power                         DL-Power,
    minimumDL-power                         DL-Power,
    dL-TimeSlotISCPInfo                     DL-TimeslotISCPInfo OPTIONAL,   -- Applicable to 3.84Mcps TDD only
    iE-Extensions                           ProtocolExtensionContainer { { RL-Information-RL-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

RL-Information-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD   CRITICALITY reject      EXTENSION   DL-TimeslotISCPInfoLCR    PRESENCE optional }|
    -- Applicable to 1.28Mcps TDD only
    { ID    id-UL-Synchronisation-Parameters-LCR            CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
...
}
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- **************************************************************

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

RadioLinkAdditionRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                         CRITICALITY     reject                          TYPE  NodeB-
CommunicationContextID                      PRESENCE    mandatory   }|
    { ID    id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD         CRITICALITY     reject                          TYPE  UL-CCTrCH-InformationList-
RL-AdditionRqstTDD          PRESENCE    optional    }|
    { ID    id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD         CRITICALITY     reject                          TYPE  DL-CCTrCH-InformationList-
RL-AdditionRqstTDD          PRESENCE    optional    }|
    { ID    id-RL-Information-RL-AdditionRqstTDD                    CRITICALITY     reject                          TYPE  RL-Information-RL-
AdditionRqstTDD                 PRESENCE    mandatory   },
    ...
}

RadioLinkAdditionRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-AdditionRqstTDD

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    uL-DPCH-Information                     UL-DPCH-InformationList-RL-AdditionRqstTDD      OPTIONAL, -- Applicable to 3.84cps TDD only
```

```
    iE-Extensions                           ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD           CRITICALITY     notify                          EXTENSION   UL-DPCH-
InformationItem-LCR-RL-AdditionRqstTDD          PRESENCE    optional }, -- Applicable to 1.28cps TDD only
    ...
}

UL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

UL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-UL-DPCH-InformationItem-RL-AdditionRqstTDD           CRITICALITY     notify                          TYPE  UL-DPCH-InformationItem-RL-
AdditionRqstTDD         PRESENCE    optional}   -- For 3.84Mcps TDD only
}

UL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-Information             UL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-AdditionRqstTDD

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    dL-DPCH-Information                     DL-DPCH-InformationList-RL-AdditionRqstTDD      OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD           CRITICALITY     notify                          EXTENSION   DL-DPCH-
InformationItem-LCR-RL-AdditionRqstTDD          PRESENCE    optional }, -- Applicable to 1.28Mcps TDD only
    ...
}

DL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

DL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DL-DPCH-InformationItem-RL-AdditionRqstTDD           CRITICALITY     notify                          TYPE  DL-DPCH-InformationItem-RL-
AdditionRqstTDD         PRESENCE    mandatory}  -- Applicable to 3.84Mcps TDD only
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
```

```
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-Timeslot-Information             DL-Timeslot-Information,
    iE-Extensions                               ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }        OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    c-ID                                    C-ID,
    frameOffset                             FrameOffset,
    diversityControlField                   DiversityControlField,
    initial-DL-Transmission-Power           DL-Power            OPTIONAL,
    maximumDL-Power                         DL-Power            OPTIONAL,
    minimumDL-Power                         DL-Power            OPTIONAL,
    dL-TimeSlotISCPInfo                     DL-TimeslotISCPInfo OPTIONAL,   -- Applicable to 3.84Mcps TDD only
    iE-Extensions                           ProtocolExtensionContainer { { RL-information-RL-AdditionRqstTDD-ExtIEs} }        OPTIONAL,
    ...
 }

RL-information-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD          CRITICALITY     reject                          EXTENSION   DL-
TimeslotISCPInfoLCR         PRESENCE    optional }|    -- Applicable to 1.28Mcps TDD only
    { ID    id-UL-Synchronisation-Parameters-LCR            CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
...
}

UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-TimeslotLCR-Information              UL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-TimeslotLCR-Information              DL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs} }     OPTIONAL,
    ...
```

```
}

DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- **************************************************************

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

RadioLinkReconfigurationPrepareTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                         CRITICALITY     reject      TYPE                NodeB-CommunicationContextID
                PRESENCE    mandatory   }|
    { ID    id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD            CRITICALITY     reject                      TYPE  UL-CCTrCH-
InformationAddList-RL-ReconfPrepTDD         PRESENCE    optional        } |
    { ID    id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD         CRITICALITY     reject                      TYPE  UL-CCTrCH-
InformationModifyList-RL-ReconfPrepTDD          PRESENCE    optional        } |
    { ID    id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD         CRITICALITY     reject                      TYPE  UL-CCTrCH-
InformationDeleteList-RL-ReconfPrepTDD          PRESENCE    optional        } |
    { ID    id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD            CRITICALITY     reject                      TYPE  DL-CCTrCH-
InformationAddList-RL-ReconfPrepTDD         PRESENCE    optional        } |
    { ID    id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD         CRITICALITY     reject                      TYPE  DL-CCTrCH-
InformationModifyList-RL-ReconfPrepTDD          PRESENCE    optional        } |
    { ID    id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD         CRITICALITY     reject                      TYPE  DL-CCTrCH-
InformationDeleteList-RL-ReconfPrepTDD          PRESENCE    optional        } |
    { ID    id-TDD-DCHs-to-Modify                       CRITICALITY     reject      TYPE    TDD-DCHs-to-Modify                  PRESENCE optional
    } |
    { ID    id-DCHs-to-Add-TDD                          CRITICALITY     reject      TYPE    DCH-TDD-Information                 PRESENCE optional
    } |
    { ID    id-DCH-DeleteList-RL-ReconfPrepTDD                      CRITICALITY     reject      TYPE                DCH-DeleteList-RL-ReconfPrepTDD
                PRESENCE    optional        } |
    { ID    id-DSCH-Information-ModifyList-RL-ReconfPrepTDD         CRITICALITY     reject      TYPE                DSCH-Information-ModifyList-RL-
ReconfPrepTDD       PRESENCE    optional        } |
    { ID    id-DSCHs-to-Add-TDD         CRITICALITY     reject      TYPE    DSCH-TDD-Information                        PRESENCE    optional    } |
    { ID    id-DSCH-Information-DeleteList-RL-ReconfPrepTDD         CRITICALITY     reject      TYPE                DSCH-Information-DeleteList-RL-
ReconfPrepTDD       PRESENCE    optional        } |
    { ID    id-USCH-Information-ModifyList-RL-ReconfPrepTDD         CRITICALITY     reject      TYPE                USCH-Information-ModifyList-RL-
ReconfPrepTDD       PRESENCE    optional        } |
    { ID    id-USCH-Information-Add         CRITICALITY     reject      TYPE    USCH-Information                        PRESENCE    optional    } |
    { ID    id-USCH-Information-DeleteList-RL-ReconfPrepTDD         CRITICALITY     reject      TYPE                USCH-Information-DeleteList-RL-
ReconfPrepTDD       PRESENCE    optional        } |
```

```
    { ID    id-RL-Information-RL-ReconfPrepTDD                    CRITICALITY     reject      TYPE                RL-Information-RL-ReconfPrepTDD
                    PRESENCE    optional        },
    ...
}

RadioLinkReconfigurationPrepareTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-PDSCH-RL-ID             CRITICALITY ignore          EXTENSION RL-ID     PRESENCE optional },
    ...
}

UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    tFCS                                        TFCS,
    tFCI-Coding                                 TFCI-Coding,
    punctureLimit                               PunctureLimit,
    ul-DPCH-InformationList                     UL-DPCH-InformationAddList-RL-ReconfPrepTDD OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD   CRITICALITY reject      EXTENSION UL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD
    PRESENCE optional }|    -- Applicable to 1.28Mcps TDD only
    { ID id-UL-SIRTarget        CRITICALITY reject      EXTENSION       UL-SIR      PRESENCE optional               },
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD.
    ...
}

UL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE UL-DPCH-InformationAddItem-RL-ReconfPrepTDD    PRESENCE
mandatory }
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-Information                 UL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
```

```
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-InformationLCR              UL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    tFCS                                        TFCS                                                                    OPTIONAL,
    tFCI-Coding                                 TFCI-Coding                                                             OPTIONAL,
    punctureLimit                               PunctureLimit                                                           OPTIONAL,
    ul-DPCH-InformationAddList                  UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD                    OPTIONAL,
    ul-DPCH-InformationModifyList               UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD                OPTIONAL,
    ul-DPCH-InformationDeleteList               UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD                OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-LCR-InformationModify-AddList    CRITICALITY reject     EXTENSION    UL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD
    PRESENCE optional }|    -- Applicable to 1.28Mcps TDD only
    { ID id-UL-SIRTarget        CRITICALITY reject      EXTENSION       UL-SIR      PRESENCE optional               },
    -- Applicable to 1.28Mcps TDD only.
    ...
}

UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD   CRITICALITY reject       TYPE UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD
    PRESENCE mandatory }
}

UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-Information             UL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
UL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-InformationLCR              UL-TimeslotLCR-Information,
    iE-Extensions                               ProtocolExtensionContainer { { UL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD   CRITICALITY reject        TYPE UL-DPCH-InformationModify-ModifyItem-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod    OPTIONAL,
    repetitionLength                        RepetitionLength    OPTIONAL,
    tdd-DPCHOffset                          TDD-DPCHOffset      OPTIONAL,
    uL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD              UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD      OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD     CRITICALITY reject      EXTENSION   UL-TimeslotLCR-InformationModify-ModifyList-RL-
ReconfPrepTDD       PRESENCE optional },    -- Applicable to 1.28Mcps TDD only
    ...
}

UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD   -- Applicable to 3.84Mcps TDD only

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlot                                TimeSlot,
    midambleShiftAndBurstType               MidambleShiftAndBurstType       OPTIONAL,
    tFCI-Presence                           TFCI-Presence       OPTIONAL,
    uL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD               UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD     OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
```

```
}

UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
    tdd-ChannelisationCode                  TDD-ChannelisationCode      OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeslotLCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF UL-Timeslot-LCR-InformationModify-
ModifyItem-RL-ReconfPrepTDD -- Applicable to 1.28Mcps TDD only

UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlotLCR                             TimeSlotLCR,
    midambleShiftLCR            MidambleShiftLCR        OPTIONAL,
    tFCI-Presence                           TFCI-Presence       OPTIONAL,
    uL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLCR                UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLCR    OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLCR ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLCR ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
    tdd-ChannelisationCodeLCR               TDD-ChannelisationCodeLCR       OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLCR-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD   CRITICALITY reject        TYPE UL-DPCH-InformationModify-DeleteListIE-RL-
ReconfPrepTDD       PRESENCE mandatory }
```

```
}

UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    tFCS                                        TFCS,
    tFCI-Coding                                 TFCI-Coding,
    punctureLimit                               PunctureLimit,
    cCTrCH-TPCList                              CCTrCH-TPCAddList-RL-ReconfPrepTDD                          OPTIONAL,
    dl-DPCH-InformationList                     DL-DPCH-InformationAddList-RL-ReconfPrepTDD                 OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD   CRITICALITY reject        EXTENSION                       DL-DPCH-LCR-
InformationAddList-RL-ReconfPrepTDD     PRESENCE optional },    -- Applicable to 1.28Mcps TDD only
    ...
}

CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD      -- Applicable to 3.84Mcps TDD
only

CCTrCH-TPCAddItem-RL-ReconfPrepTDD   ::= SEQUENCE {
```

```
    cCTrCH-ID                               CCTrCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE DL-DPCH-InformationAddItem-RL-ReconfPrepTDD    PRESENCE
mandatory }
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-Timeslot-Information                 DL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-Timeslot-InformationLCR              DL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    tFCS                                        TFCS                                                        OPTIONAL,
    tFCI-Coding                                 TFCI-Coding                                                 OPTIONAL,
    punctureLimit                               PunctureLimit                                               OPTIONAL,
    cCTrCH-TPCList                              CCTrCH-TPCModifyList-RL-ReconfPrepTDD                       OPTIONAL,
    dl-DPCH-InformationAddList                  DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD        OPTIONAL,
    dl-DPCH-InformationModifyList               DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD   OPTIONAL,
    dl-DPCH-InformationDeleteList               DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD   OPTIONAL,
```

```
    iE-Extensions                                ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD CRITICALITY reject       EXTENSION              DL-DPCH-LCR-InformationModify-
AddList-RL-ReconfPrepTDD        PRESENCE optional },
    ...
}

CCTrCH-TPCModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCModifyItem-RL-ReconfPrepTDD

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}
-- Applicable to 3.84Mcps TDD only

DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD   CRITICALITY reject       TYPE DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD
    PRESENCE mandatory }
}

DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-Timeslot-Information                 DL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-Timeslot-InformationLCR              DL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}
```

```
DL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD   CRITICALITY reject       TYPE DL-DPCH-InformationModify-ModifyItem-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod            OPTIONAL,
    repetitionLength                        RepetitionLength            OPTIONAL,
    tdd-DPCHOffset                          TDD-DPCHOffset              OPTIONAL,
    dL-Timeslot-InformationAddModify-ModifyList-RL-ReconfPrepTDD       DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD       OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD   CRITICALITY reject                         EXTENSION       DL-Timeslot-
LCR-InformationModify-ModifyList-RL-ReconfPrepTDD       PRESENCE optional },
    ...
}

DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    timeSlot                                TimeSlot,
    midambleShiftAndBurstType               MidambleShiftAndBurstType           OPTIONAL,
    tFCI-Presence                           TFCI-Presence           OPTIONAL,
    dL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD              DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD        OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
    tdd-ChannelisationCode                  TDD-ChannelisationCode      OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}
```

```
DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSLCRs)) OF DL-Timeslot-InformationModify-ModifyItem-
RL-ReconfPrepTDD

DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    timeSlotLCR                         TimeSlotLCR,
    midambleShiftLCR            MidambleShiftLCR            OPTIONAL,
    tFCI-Presence                       TFCI-Presence           OPTIONAL,
    dL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD              DL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD      OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    dPCH-ID                             DPCH-ID,
    tdd-ChannelisationCodeLCR           TDD-ChannelisationCodeLCR       OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD   CRITICALITY reject        TYPE DL-DPCH-InformationModify-DeleteListIE-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}
```

```
DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    iE-Extensions                               ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepTDD

DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID                                  DCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-ModifyItem-RL-ReconfPrepTDD

DSCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                                 DSCH-ID,
    cCTrCH-ID                               CCTrCH-ID               OPTIONAL,
    transportFormatSet                      TransportFormatSet      OPTIONAL,
    allocationRetentionPriority             AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority                   FrameHandlingPriority   OPTIONAL,
    toAWS                                   ToAWS                   OPTIONAL,
    toAWE                                   ToAWE                   OPTIONAL,
    transportBearerRequestIndicator         TransportBearerRequestIndicator,
    iE-Extensions                           ProtocolExtensionContainer { { DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
 }

DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-DeleteItem-RL-ReconfPrepTDD

DSCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                                 DSCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
```

```
    ...
}

DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-ModifyItem-RL-ReconfPrepTDD

USCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                                 USCH-ID,
    transportFormatSet                      TransportFormatSet      OPTIONAL,
    allocationRetentionPriority             AllocationRetentionPriority OPTIONAL,
    cCTrCH-ID                               CCTrCH-ID               OPTIONAL,
    transportBearerRequestIndicator         TransportBearerRequestIndicator,
    iE-Extensions                           ProtocolExtensionContainer { { USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
}

USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-DeleteItem-RL-ReconfPrepTDD

USCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                                 USCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...

}

USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    maxDL-Power                             DL-Power            OPTIONAL,
    minDL-Power                             DL-Power            OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { RL-Information-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

RL-Information-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    {   ID id-InitDL-Power      CRITICALITY ignore      EXTENSION DL-Power      PRESENCE optional                   }|
    { ID    id-UL-Synchronisation-Parameters-LCR            CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
...
}
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- **************************************************************

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

RadioLinkReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                         CRITICALITY     reject                          TYPE  NodeB-
CommunicationContextID                  PRESENCE    mandatory   } |
    { ID    id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  UL-CCTrCH-
InformationModifyList-RL-ReconfRqstTDD      PRESENCE    optional    } |
    { ID    id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  UL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD      PRESENCE    optional    } |
    { ID    id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  DL-CCTrCH-
InformationModifyList-RL-ReconfRqstTDD      PRESENCE    optional    } |
    { ID    id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  DL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD      PRESENCE    optional    } |
    { ID    id-TDD-DCHs-to-Modify                       CRITICALITY     reject          TYPE    TDD-DCHs-to-Modify              PRESENCE optional } |
       { ID    id-DCHs-to-Add-TDD                           CRITICALITY     reject          TYPE                    DCH-TDD-Information
    PRESENCE    optional    } |
    { ID    id-DCH-DeleteList-RL-ReconfRqstTDD                      CRITICALITY     reject                          TYPE  DCH-DeleteList-RL-
ReconfRqstTDD                   PRESENCE    optional    } |
    { ID    id-RL-Information-RL-ReconfRqstTDD                  CRITICALITY     reject          TYPE                RL-Information-RL-ReconfRqstTDD
            PRESENCE    optional    },
    ...
}

RadioLinkReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  UL-CCTrCH-
InformationModifyItem-RL-ReconfRqstTDD      PRESENCE    mandatory}
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    tFCS                                        TFCS            OPTIONAL,
    punctureLimit                               PunctureLimit   OPTIONAL,
```

```
    iE-Extensions                                   ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  UL-CCTrCH-
InformationDeleteItem-RL-ReconfRqstTDD      PRESENCE    mandatory}
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                       CCTrCH-ID,
    iE-Extensions                                   ProtocolExtensionContainer { { UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  DL-CCTrCH-
InformationModifyItem-RL-ReconfRqstTDD      PRESENCE    mandatory}
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                       CCTrCH-ID,
    tFCS                                            TFCS            OPTIONAL,
    punctureLimit                                   PunctureLimit   OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
```

```
    { ID    id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD        CRITICALITY     notify                          TYPE  DL-CCTrCH-
InformationDeleteItem-RL-ReconfRqstTDD      PRESENCE    mandatory}
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                       CCTrCH-ID,
    iE-Extensions                                   ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                                          DCH-ID,
    iE-Extensions                                   ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} }      OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    rL-ID                                       RL-ID,
    maxDL-Power                                 DL-Power        OPTIONAL,
    minDL-Power                                 DL-Power        OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstTDD-ExtIEs} }      OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-UL-Synchronisation-Parameters-LCR            CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
...
}
```

/* partly omitted */

9.3.4 Information Element Definitions

/* partly omitted */

```
-- ==========================================
--  U
-- ==========================================

UARFCN ::= INTEGER (0..16383, ...)
-- corresponds to 1885.2MHz .. 2024.8MHz

UC-Id ::= SEQUENCE {
    rNC-ID              RNC-ID,
    c-ID                C-ID,
    iE-Extensions           ProtocolExtensionContainer { {UC-Id-ExtIEs} } OPTIONAL,
    ...
}
UC-Id-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UDRE ::= ENUMERATED {
    udre-minusequal-one-m,
    udre-betweenoneandfour-m,
    udre-betweenfourandeight-m,
    udre-greaterequaleight-m
}

UL-CapacityCredit ::= INTEGER (0..65535)

UL-DL-mode ::= ENUMERATED {
    ul-only,
    dl-only,
    both-ul-and-dl
}


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

UL-Timeslot-Information ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationItem

UL-Timeslot-InformationItem ::= SEQUENCE {
    timeSlot                                TimeSlot,
    midambleShiftAndBurstType               MidambleShiftAndBurstType,
```

```
    tFCI-Presence                           TFCI-Presence,
    uL-Code-InformationList                 TDD-UL-Code-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Timeslot-InformationItem-ExtIEs} }      OPTIONAL,
    ...
}

UL-Timeslot-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeslotLCR-Information ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF UL-TimeslotLCR-InformationItem

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

UL-TimeslotLCR-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCCH-SlotFormat ::= INTEGER (0..5,...)

UL-SIR ::= INTEGER (-82..173)
-- According to mapping in [16]

UL-FP-Mode ::= ENUMERATED {
    normal,
    silent,
    ...
}

UL-PhysCH-SF-Variation ::= ENUMERATED {
    sf-variation-supported,
    sf-variation-not-supported
}

UL-ScramblingCode ::= SEQUENCE {
    uL-ScramblingCodeNumber         UL-ScramblingCodeNumber,
    uL-ScramblingCodeLength         UL-ScramblingCodeLength,
    iE-Extensions                   ProtocolExtensionContainer { { UL-ScramblingCode-ExtIEs } }                    OPTIONAL,
    ...
}

UL-ScramblingCode-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)
```

```
UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

UL-TimeSlot-ISCP-Info ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF  UL-TimeSlot-ISCP-InfoItem

UL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot                        TimeSlot,
    iSCP                            UL-TimeslotISCP-Value,
    iE-Extensions                   ProtocolExtensionContainer { { UL-TimeSlot-ISCP-InfoItem-ExtIEs} }               OPTIONAL,
    ...
 }

UL-TimeSlot-ISCP-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeSlot-ISCP-LCR-Info ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF   UL-TimeSlot-ISCP-LCR-InfoItem

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

UL-TimeSlot-ISCP-LCR-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationItem

USCH-InformationItem ::= SEQUENCE {
    uSCH-ID                                 USCH-ID,
    cCTrCH-ID                               CCTrCH-ID,
    transportFormatSet                      TransportFormatSet,
    allocationRetentionPriority             AllocationRetentionPriority,
    iE-Extensions                           ProtocolExtensionContainer { { USCH-InformationItem-ExtIEs} }           OPTIONAL,
    ...
}

USCH-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationResponseItem

USCH-InformationResponseItem ::= SEQUENCE {
    uSCH-ID                                     USCH-ID,
    bindingID                                   BindingID               OPTIONAL,
    transportLayerAddress                       TransportLayerAddress   OPTIONAL,
```

```
    iE-Extensions                           ProtocolExtensionContainer { { USCH-InformationResponseItem-ExtIEs} }    OPTIONAL,
    ...
}

USCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeslotISCP-Value ::= INTEGER (0..127)
-- According to mapping in [23]

UL-TimeslotISCP-Value-IncrDecrThres ::= INTEGER (0..126)

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

UL-Synchronisation-Parameters-LCR ::= SEQUENCE {
    uL-Synchronisation-StepSize         UL-Synchronisation-StepSize,
    uL-Synchronisation-Frequency            UL-Synchronisation-Frequency,
    iE-Extensions                   ProtocolExtensionContainer { { UL-Synchronisation-Parameters-LCR-ExtIEs } }       OPTIONAL,
    ...
}

UL-Synchronisation-Parameters-LCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Synchronisation-StepSize ::= INTEGER (1..8)

UL-Synchronisation-Frequency ::= INTEGER (1..8)


-- ==========================================
--  V
-- ==========================================
```

/* partly omitted */

9.3.6 Constant Definitions

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

NBAP-Constants {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
```

```
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Constants (4)}

DEFINITIONS AUTOMATIC TAGS ::=
```

/* partly omitted */

```
-- **************************************************************
--
-- IEs
--
-- **************************************************************

id-AICH-Information                                          ProtocolIE-ID ::= 0
id-AICH-InformationItem-ResourceStatusInd                    ProtocolIE-ID ::= 1
id-BCH-Information                                           ProtocolIE-ID ::= 7
id-BCH-InformationItem-ResourceStatusInd                     ProtocolIE-ID ::= 8
id-BCCH-ModificationTime                                     ProtocolIE-ID ::= 9
id-BlockingPriorityIndicator                                 ProtocolIE-ID ::= 10
id-Cause                                                     ProtocolIE-ID ::= 13
id-CCP-InformationItem-AuditRsp                              ProtocolIE-ID ::= 14
id-CCP-InformationList-AuditRsp                              ProtocolIE-ID ::= 15
id-CCP-InformationItem-ResourceStatusInd                     ProtocolIE-ID ::= 16
id-Cell-InformationItem-AuditRsp                             ProtocolIE-ID ::= 17
id-Cell-InformationItem-ResourceStatusInd                    ProtocolIE-ID ::= 18
id-Cell-InformationList-AuditRsp                             ProtocolIE-ID ::= 19
id-CellParameterID                                           ProtocolIE-ID ::= 23
id-CFN                                                       ProtocolIE-ID ::= 24
id-C-ID                                                      ProtocolIE-ID ::= 25
id-CommonMeasurementAccuracy                                 ProtocolIE-ID ::= 39
id-CommonMeasurementObjectType-CM-Rprt                       ProtocolIE-ID ::= 31
id-CommonMeasurementObjectType-CM-Rqst                       ProtocolIE-ID ::= 32
id-CommonMeasurementObjectType-CM-Rsp                        ProtocolIE-ID ::= 33
id-CommonMeasurementType                                     ProtocolIE-ID ::= 34
id-CommonPhysicalChannelID                                   ProtocolIE-ID ::= 35
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD               ProtocolIE-ID ::= 36
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD               ProtocolIE-ID ::= 37
id-CommunicationControlPortID                                ProtocolIE-ID ::= 40
id-ConfigurationGenerationID                                 ProtocolIE-ID ::= 43
id-CRNC-CommunicationContextID                               ProtocolIE-ID ::= 44
id-CriticalityDiagnostics                                    ProtocolIE-ID ::= 45
id-DCHs-to-Add-FDD                                           ProtocolIE-ID ::= 48
id-DCH-AddList-RL-ReconfPrepTDD                              ProtocolIE-ID ::= 49
id-DCHs-to-Add-TDD                                           ProtocolIE-ID ::= 50
id-DCH-DeleteList-RL-ReconfPrepFDD                           ProtocolIE-ID ::= 52
id-DCH-DeleteList-RL-ReconfPrepTDD                           ProtocolIE-ID ::= 53
id-DCH-DeleteList-RL-ReconfRqstFDD                           ProtocolIE-ID ::= 54
id-DCH-DeleteList-RL-ReconfRqstTDD                           ProtocolIE-ID ::= 55
id-DCH-FDD-Information                                       ProtocolIE-ID ::= 56
```

```
id-DCH-TDD-Information                                  ProtocolIE-ID ::= 57
id-DCH-InformationResponse                              ProtocolIE-ID ::= 59
id-FDD-DCHs-to-Modify                                   ProtocolIE-ID ::= 62
id-TDD-DCHs-to-Modify                                   ProtocolIE-ID ::= 63
id-DCH-ModifyList-RL-ReconfRqstTDD                      ProtocolIE-ID ::= 65
id-DedicatedMeasurementObjectType-DM-Rprt               ProtocolIE-ID ::= 67
id-DedicatedMeasurementObjectType-DM-Rqst               ProtocolIE-ID ::= 68
id-DedicatedMeasurementObjectType-DM-Rsp                ProtocolIE-ID ::= 69
id-DedicatedMeasurementType                             ProtocolIE-ID ::= 70
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD            ProtocolIE-ID ::= 72
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD         ProtocolIE-ID ::= 73
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD            ProtocolIE-ID ::= 76
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD           ProtocolIE-ID ::= 77
id-DL-DPCH-InformationList-RL-SetupRqstTDD              ProtocolIE-ID ::= 79
id-DL-DPCH-Information-RL-ReconfPrepFDD                 ProtocolIE-ID ::= 81
id-DL-DPCH-Information-RL-ReconfRqstFDD                 ProtocolIE-ID ::= 82
id-DL-DPCH-Information-RL-SetupRqstFDD                  ProtocolIE-ID ::= 83
id-DL-ReferencePowerInformationItem-DL-PC-Rqst          ProtocolIE-ID ::= 84
id-DLReferencePower                                     ProtocolIE-ID ::= 85
id-DLReferencePowerList-DL-PC-Rqst                      ProtocolIE-ID ::= 86
id-DSCH-AddItem-RL-ReconfPrepFDD                        ProtocolIE-ID ::= 87
id-DSCHs-to-Add-FDD                                     ProtocolIE-ID ::= 89
id-DSCH-DeleteItem-RL-ReconfPrepFDD                     ProtocolIE-ID ::= 91
id-DSCH-DeleteList-RL-ReconfPrepFDD                     ProtocolIE-ID ::= 93
id-DSCHs-to-Add-TDD                                     ProtocolIE-ID ::= 96
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD         ProtocolIE-ID ::= 98
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD         ProtocolIE-ID ::= 100
id-DSCH-InformationResponse                             ProtocolIE-ID ::= 105
id-DSCH-FDD-Information                                 ProtocolIE-ID ::= 106
id-DSCH-TDD-Information                                 ProtocolIE-ID ::= 107
id-DSCH-ModifyItem-RL-ReconfPrepFDD                     ProtocolIE-ID ::= 108
id-DSCH-ModifyList-RL-ReconfPrepFDD                     ProtocolIE-ID ::= 112
id-End-Of-Audit-Sequence-Indicator                      ProtocolIE-ID ::= 113
id-FACH-Information                                     ProtocolIE-ID ::= 116
id-FACH-InformationItem-ResourceStatusInd               ProtocolIE-ID ::= 117
id-FACH-ParametersList-CTCH-ReconfRqstTDD               ProtocolIE-ID ::= 120
id-FACH-ParametersListIE-CTCH-SetupRqstFDD              ProtocolIE-ID ::= 121
id-FACH-ParametersListIE-CTCH-SetupRqstTDD              ProtocolIE-ID ::= 122
id-IndicationType-ResourceStatusInd                     ProtocolIE-ID ::= 123
id-Local-Cell-ID                                        ProtocolIE-ID ::= 124
id-Local-Cell-Group-InformationItem-AuditRsp            ProtocolIE-ID ::= 2
id-Local-Cell-Group-InformationItem-ResourceStatusInd   ProtocolIE-ID ::= 3
id-Local-Cell-Group-InformationItem2-ResourceStatusInd  ProtocolIE-ID ::= 4
id-Local-Cell-Group-InformationList-AuditRsp            ProtocolIE-ID ::= 5
id-Local-Cell-InformationItem-AuditRsp                  ProtocolIE-ID ::= 125
id-Local-Cell-InformationItem-ResourceStatusInd         ProtocolIE-ID ::= 126
id-Local-Cell-InformationItem2-ResourceStatusInd        ProtocolIE-ID ::= 127
id-Local-Cell-InformationList-AuditRsp                  ProtocolIE-ID ::= 128
id-AdjustmentPeriod                                     ProtocolIE-ID ::= 129
id-MaxAdjustmentStep                                    ProtocolIE-ID ::= 130
id-MaximumTransmissionPower                             ProtocolIE-ID ::= 131
id-MeasurementFilterCoefficient                         ProtocolIE-ID ::= 132
id-MeasurementID                                        ProtocolIE-ID ::= 133
```

```
id-MessageStructure                                    ProtocolIE-ID ::= 115
id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst     ProtocolIE-ID ::= 134
id-NodeB-CommunicationContextID                        ProtocolIE-ID ::= 143
id-NeighbouringCellMeasurementInformation              ProtocolIE-ID ::= 455
id-P-CCPCH-Information                                 ProtocolIE-ID ::= 144
id-P-CCPCH-InformationItem-ResourceStatusInd           ProtocolIE-ID ::= 145
id-P-CPICH-Information                                 ProtocolIE-ID ::= 146
id-P-CPICH-InformationItem-ResourceStatusInd           ProtocolIE-ID ::= 147
id-P-SCH-Information                                   ProtocolIE-ID ::= 148
id-PCCPCH-Information-Cell-ReconfRqstTDD               ProtocolIE-ID ::= 150
id-PCCPCH-Information-Cell-SetupRqstTDD                ProtocolIE-ID ::= 151
id-PCH-Parameters-CTCH-ReconfRqstTDD                   ProtocolIE-ID ::= 155
id-PCH-ParametersItem-CTCH-SetupRqstFDD                ProtocolIE-ID ::= 156
id-PCH-ParametersItem-CTCH-SetupRqstTDD                ProtocolIE-ID ::= 157
id-PCH-Information                                     ProtocolIE-ID ::= 158
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst         ProtocolIE-ID ::= 161
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst      ProtocolIE-ID ::= 162
id-PDSCHSets-AddList-PSCH-ReconfRqst                   ProtocolIE-ID ::= 163
id-PDSCHSets-DeleteList-PSCH-ReconfRqst                ProtocolIE-ID ::= 164
id-PDSCHSets-ModifyList-PSCH-ReconfRqst                ProtocolIE-ID ::= 165
id-PICH-Information                                    ProtocolIE-ID ::= 166
id-PICH-Parameters-CTCH-ReconfRqstTDD                  ProtocolIE-ID ::= 168
id-PowerAdjustmentType                                 ProtocolIE-ID ::= 169
id-PRACH-Information                                   ProtocolIE-ID ::= 170
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD         ProtocolIE-ID ::= 175
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD          ProtocolIE-ID ::= 176
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD         ProtocolIE-ID ::= 177
id-PrimaryCPICH-Information-Cell-SetupRqstFDD          ProtocolIE-ID ::= 178
id-PrimarySCH-Information-Cell-ReconfRqstFDD           ProtocolIE-ID ::= 179
id-PrimarySCH-Information-Cell-SetupRqstFDD            ProtocolIE-ID ::= 180
id-PrimaryScramblingCode                               ProtocolIE-ID ::= 181
id-SCH-Information-Cell-ReconfRqstTDD                  ProtocolIE-ID ::= 183
id-SCH-Information-Cell-SetupRqstTDD                   ProtocolIE-ID ::= 184
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst         ProtocolIE-ID ::= 185
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst      ProtocolIE-ID ::= 186
id-PUSCHSets-AddList-PSCH-ReconfRqst                   ProtocolIE-ID ::= 187
id-PUSCHSets-DeleteList-PSCH-ReconfRqst                ProtocolIE-ID ::= 188
id-PUSCHSets-ModifyList-PSCH-ReconfRqst                ProtocolIE-ID ::= 189
id-RACH-Information                                    ProtocolIE-ID ::= 190
id-RACH-ParametersItem-CTCH-SetupRqstFDD               ProtocolIE-ID ::= 196
id-RACH-ParameterItem-CTCH-SetupRqstTDD                ProtocolIE-ID ::= 197
id-ReportCharacteristics                               ProtocolIE-ID ::= 198
id-Reporting-Object-RL-FailureInd                      ProtocolIE-ID ::= 199
id-Reporting-Object-RL-RestoreInd                      ProtocolIE-ID ::= 200
id-RL-InformationItem-DM-Rprt                          ProtocolIE-ID ::= 202
id-RL-InformationItem-DM-Rqst                          ProtocolIE-ID ::= 203
id-RL-InformationItem-DM-Rsp                           ProtocolIE-ID ::= 204
id-RL-InformationItem-RL-AdditionRqstFDD               ProtocolIE-ID ::= 205
id-RL-informationItem-RL-DeletionRqst                  ProtocolIE-ID ::= 206
id-RL-InformationItem-RL-FailureInd                    ProtocolIE-ID ::= 207
id-RL-InformationItem-RL-PreemptRequiredInd            ProtocolIE-ID ::= 286
id-RL-InformationItem-RL-ReconfPrepFDD                 ProtocolIE-ID ::= 208
id-RL-InformationItem-RL-ReconfRqstFDD                 ProtocolIE-ID ::= 209
```

```
id-RL-InformationItem-RL-RestoreInd                                ProtocolIE-ID ::= 210
id-RL-InformationItem-RL-SetupRqstFDD                              ProtocolIE-ID ::= 211
id-RL-InformationList-RL-AdditionRqstFDD                           ProtocolIE-ID ::= 212
id-RL-informationList-RL-DeletionRqst                              ProtocolIE-ID ::= 213
id-RL-InformationList-RL-PreemptRequiredInd                        ProtocolIE-ID ::= 237
id-RL-InformationList-RL-ReconfPrepFDD                             ProtocolIE-ID ::= 214
id-RL-InformationList-RL-ReconfRqstFDD                             ProtocolIE-ID ::= 215
id-RL-InformationList-RL-SetupRqstFDD                              ProtocolIE-ID ::= 216
id-RL-InformationResponseItem-RL-AdditionRspFDD                    ProtocolIE-ID ::= 217
id-RL-InformationResponseItem-RL-ReconfReady                       ProtocolIE-ID ::= 218
id-RL-InformationResponseItem-RL-ReconfRsp                         ProtocolIE-ID ::= 219
id-RL-InformationResponseItem-RL-SetupRspFDD                       ProtocolIE-ID ::= 220
id-RL-InformationResponseList-RL-AdditionRspFDD                    ProtocolIE-ID ::= 221
id-RL-InformationResponseList-RL-ReconfReady                       ProtocolIE-ID ::= 222
id-RL-InformationResponseList-RL-ReconfRsp                         ProtocolIE-ID ::= 223
id-RL-InformationResponseList-RL-SetupRspFDD                       ProtocolIE-ID ::= 224
id-RL-InformationResponse-RL-AdditionRspTDD                        ProtocolIE-ID ::= 225
id-RL-InformationResponse-RL-SetupRspTDD                           ProtocolIE-ID ::= 226
id-RL-Information-RL-AdditionRqstTDD                               ProtocolIE-ID ::= 227
id-RL-Information-RL-ReconfRqstTDD                                 ProtocolIE-ID ::= 228
id-RL-Information-RL-ReconfPrepTDD                                 ProtocolIE-ID ::= 229
id-RL-Information-RL-SetupRqstTDD                                  ProtocolIE-ID ::= 230
id-RL-ReconfigurationFailureItem-RL-ReconfFailure                  ProtocolIE-ID ::= 236
id-RL-Set-InformationItem-DM-Rprt                                  ProtocolIE-ID ::= 238
id-RL-Set-InformationItem-DM-Rsp                                   ProtocolIE-ID ::= 240
id-RL-Set-InformationItem-RL-FailureInd                            ProtocolIE-ID ::= 241
id-RL-Set-InformationItem-RL-RestoreInd                            ProtocolIE-ID ::= 242
id-S-CCPCH-Information                                             ProtocolIE-ID ::= 247
id-S-CPICH-Information                                             ProtocolIE-ID ::= 249
id-SCH-Information                                                 ProtocolIE-ID ::= 251
id-S-SCH-Information                                               ProtocolIE-ID ::= 253
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD                        ProtocolIE-ID ::= 257
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD               ProtocolIE-ID ::= 258
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD                   ProtocolIE-ID ::= 259
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD               ProtocolIE-ID ::= 260
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD                ProtocolIE-ID ::= 261
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD               ProtocolIE-ID ::= 262
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD                ProtocolIE-ID ::= 263
id-SecondarySCH-Information-Cell-ReconfRqstFDD                     ProtocolIE-ID ::= 264
id-SecondarySCH-Information-Cell-SetupRqstFDD                      ProtocolIE-ID ::= 265
id-SegmentInformationListIE-SystemInfoUpdate                       ProtocolIE-ID ::= 266
id-SFN                                                             ProtocolIE-ID ::= 268
id-ShutdownTimer                                                   ProtocolIE-ID ::= 269
id-Start-Of-Audit-Sequence-Indicator                               ProtocolIE-ID ::= 114
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD         ProtocolIE-ID ::= 270
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD            ProtocolIE-ID ::= 271
id-SyncCase                                                        ProtocolIE-ID ::= 274
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH                    ProtocolIE-ID ::= 275
id-T-Cell                                                          ProtocolIE-ID ::= 276
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD                    ProtocolIE-ID ::= 277
id-TimeSlotConfigurationList-Cell-SetupRqstTDD                     ProtocolIE-ID ::= 278
id-TransmissionDiversityApplied                                    ProtocolIE-ID ::= 279
id-TypeOfError                                                     ProtocolIE-ID ::= 508
```

```
id-UARFCNforNt                                                  ProtocolIE-ID ::= 280
id-UARFCNforNd                                                  ProtocolIE-ID ::= 281
id-UARFCNforNu                                                  ProtocolIE-ID ::= 282
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD                    ProtocolIE-ID ::= 284
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD                 ProtocolIE-ID ::= 285
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD                    ProtocolIE-ID ::= 288
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD                   ProtocolIE-ID ::= 289
id-UL-DPCH-InformationList-RL-SetupRqstTDD                      ProtocolIE-ID ::= 291
id-UL-DPCH-Information-RL-ReconfPrepFDD                         ProtocolIE-ID ::= 293
id-UL-DPCH-Information-RL-ReconfRqstFDD                         ProtocolIE-ID ::= 294
id-UL-DPCH-Information-RL-SetupRqstFDD                          ProtocolIE-ID ::= 295
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD    ProtocolIE-ID ::= 296
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD       ProtocolIE-ID ::= 297
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD        ProtocolIE-ID ::= 300
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD           ProtocolIE-ID ::= 301
id-USCH-Information-Add                                         ProtocolIE-ID ::= 302
id-USCH-Information-DeleteList-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 304
id-USCH-Information-ModifyList-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 306
id-USCH-InformationResponse                                     ProtocolIE-ID ::= 309
id-USCH-Information                                             ProtocolIE-ID ::= 310
id-Active-Pattern-Sequence-Information                          ProtocolIE-ID ::= 315
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD                     ProtocolIE-ID ::= 316
id-AdjustmentRatio                                              ProtocolIE-ID ::= 317
id-AP-AICH-Information                                          ProtocolIE-ID ::= 320
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD                  ProtocolIE-ID ::= 322
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD                     ProtocolIE-ID ::= 323
id-CauseLevel-PSCH-ReconfFailureTDD                             ProtocolIE-ID ::= 324
id-CauseLevel-RL-AdditionFailureFDD                             ProtocolIE-ID ::= 325
id-CauseLevel-RL-AdditionFailureTDD                             ProtocolIE-ID ::= 326
id-CauseLevel-RL-ReconfFailure                                  ProtocolIE-ID ::= 327
id-CauseLevel-RL-SetupFailureFDD                                ProtocolIE-ID ::= 328
id-CauseLevel-RL-SetupFailureTDD                                ProtocolIE-ID ::= 329
id-CDCA-ICH-Information                                         ProtocolIE-ID ::= 330
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD                 ProtocolIE-ID ::= 332
id-Closed-Loop-Timing-Adjustment-Mode                           ProtocolIE-ID ::= 333
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD                 ProtocolIE-ID ::= 334
id-Compressed-Mode-Deactivation-Flag                            ProtocolIE-ID ::= 335
id-CPCH-Information                                             ProtocolIE-ID ::= 336
id-CPCH-Parameters-CTCH-SetupRsp                                ProtocolIE-ID ::= 342
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD                     ProtocolIE-ID ::= 343
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD                ProtocolIE-ID ::= 346
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD             ProtocolIE-ID ::= 347
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD             ProtocolIE-ID ::= 348
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD             ProtocolIE-ID ::= 349
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD             ProtocolIE-ID ::= 350
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD             ProtocolIE-ID ::= 351
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD             ProtocolIE-ID ::= 352
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD                ProtocolIE-ID ::= 353
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD         ProtocolIE-ID ::= 355
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD      ProtocolIE-ID ::= 356
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD      ProtocolIE-ID ::= 357
id-DL-TPC-Pattern01Count                                        ProtocolIE-ID ::= 358
id-DPC-Mode                                                     ProtocolIE-ID ::= 450
```

```
id-DPCHConstant                                                 ProtocolIE-ID ::= 359
id-DSCH-FDD-Common-Information                                  ProtocolIE-ID ::= 94
id-EnhancedDSCHPC                                               ProtocolIE-ID ::= 110
id-EnhancedDSCHPCIndicator                                      ProtocolIE-ID ::= 111
id-FACH-ParametersList-CTCH-SetupRsp                            ProtocolIE-ID ::= 362
id-Limited-power-increase-information-Cell-SetupRqstFDD         ProtocolIE-ID ::= 369
id-PCH-Parameters-CTCH-SetupRsp                                 ProtocolIE-ID ::= 374
id-PCH-ParametersItem-CTCH-ReconfRqstFDD                        ProtocolIE-ID ::= 375
id-PCPCH-Information                                            ProtocolIE-ID ::= 376
id-PICH-ParametersItem-CTCH-ReconfRqstFDD                       ProtocolIE-ID ::= 380
id-PRACHConstant                                                ProtocolIE-ID ::= 381
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD                    ProtocolIE-ID ::= 383
id-PUSCHConstant                                                ProtocolIE-ID ::= 384
id-RACH-Parameters-CTCH-SetupRsp                                ProtocolIE-ID ::= 385
id-SSDT-CellIDforEDSCHPC                                        ProtocolIE-ID ::= 443
id-Synchronisation-Configuration-Cell-ReconfRqst                ProtocolIE-ID ::= 393
id-Synchronisation-Configuration-Cell-SetupRqst                 ProtocolIE-ID ::= 394
id-Transmission-Gap-Pattern-Sequence-Information                ProtocolIE-ID ::= 395
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD                ProtocolIE-ID ::= 396
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD             ProtocolIE-ID ::= 397
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD             ProtocolIE-ID ::= 398
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD             ProtocolIE-ID ::= 399
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD             ProtocolIE-ID ::= 400
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD             ProtocolIE-ID ::= 401
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD             ProtocolIE-ID ::= 402
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD                ProtocolIE-ID ::= 403
id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD         ProtocolIE-ID ::= 405
id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD      ProtocolIE-ID ::= 406
id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD      ProtocolIE-ID ::= 407
id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD              ProtocolIE-ID ::= 408
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD              ProtocolIE-ID ::= 409
id-CommunicationContextInfoItem-Reset                           ProtocolIE-ID ::= 412
id-CommunicationControlPortInfoItem-Reset                       ProtocolIE-ID ::= 414
id-ResetIndicator                                               ProtocolIE-ID ::= 416
id-TFCI2-Bearer-Information-RL-SetupRqstFDD                     ProtocolIE-ID ::= 417
id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD             ProtocolIE-ID ::= 418
id-TFCI2-BearerInformationResponse                              ProtocolIE-ID ::= 419
id-TimingAdvanceApplied                                         ProtocolIE-ID ::= 287
id-CFNReportingIndicator                                        ProtocolIE-ID ::= 6
id-SFNReportingIndicator                                        ProtocolIE-ID ::= 11
id-InnerLoopDLPCStatus                                          ProtocolIE-ID ::= 12
id-TimeslotISCPInfo                                             ProtocolIE-ID ::= 283
id-PICH-ParametersItem-CTCH-SetupRqstTDD                        ProtocolIE-ID ::= 167
id-PRACH-ParametersItem-CTCH-SetupRqstTDD                       ProtocolIE-ID ::= 20
id-CCTrCH-InformationItem-RL-FailureInd                         ProtocolIE-ID ::= 46
id-CCTrCH-InformationItem-RL-RestoreInd                         ProtocolIE-ID ::= 47
id-CauseLevel-SyncAdjustmntFailureTDD                           ProtocolIE-ID ::= 420
id-CellAdjustmentInfo-SyncAdjustmntRqstTDD                      ProtocolIE-ID ::= 421
id-CellAdjustmentInfoItem-SyncAdjustmentRqstTDD                 ProtocolIE-ID ::= 494
id-CellSyncBurstInfoList-CellSyncReconfRqstTDD                  ProtocolIE-ID ::= 482
id-CellSyncBurstTransInit-CellSyncInitiationRqstTDD             ProtocolIE-ID ::= 422
id-CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD           ProtocolIE-ID ::= 423
id-CellSyncBurstTransReconfiguration-CellSyncReconfRqstTDD      ProtocolIE-ID ::= 424
```

```
id-CellSyncBurstMeasReconfiguration-CellSyncReconfRqstTDD          ProtocolIE-ID ::= 425
id-CellSyncBurstTransInfoList-CellSyncReconfRqstTDD                ProtocolIE-ID ::= 426
id-CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD                 ProtocolIE-ID ::= 427
id-CellSyncBurstTransReconfInfo-CellSyncReconfRqstTDD              ProtocolIE-ID ::= 428
id-CellSyncInfo-CellSyncReprtTDD                                   ProtocolIE-ID ::= 429
id-CSBTransmissionID                                               ProtocolIE-ID ::= 430
id-CSBMeasurementID                                                ProtocolIE-ID ::= 431
id-IntStdPhCellSyncInfoItem-CellSyncReprtTDD                       ProtocolIE-ID ::= 432
id-NCyclesPerSFNperiod                                             ProtocolIE-ID ::= 433
id-NRepetitionsPerCyclePeriod                                      ProtocolIE-ID ::= 434
id-SyncFrameNumber                                                 ProtocolIE-ID ::= 437
id-SynchronisationReportType                                       ProtocolIE-ID ::= 438
id-SynchronisationReportCharacteristics                            ProtocolIE-ID ::= 439
id-Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD   ProtocolIE-ID ::= 440
id-LateEntranceCellSyncInfoItem-CellSyncReprtTDD                   ProtocolIE-ID ::= 119
id-ReferenceClockAvailability                                      ProtocolIE-ID ::= 435
id-ReferenceSFNoffset                                              ProtocolIE-ID ::= 436
id-InformationExchangeID                                           ProtocolIE-ID ::= 444
id-InformationExchangeObjectType-InfEx-Rqst                        ProtocolIE-ID ::= 445
id-InformationType                                                 ProtocolIE-ID ::= 446
id-InformationReportCharacteristics                                ProtocolIE-ID ::= 447
id-InformationExchangeObjectType-InfEx-Rsp                         ProtocolIE-ID ::= 448
id-InformationExchangeObjectType-InfEx-Rprt                        ProtocolIE-ID ::= 449
id-IPDLParameter-Information-Cell-ReconfRqstFDD                    ProtocolIE-ID ::= 451
id-IPDLParameter-Information-Cell-SetupRqstFDD                     ProtocolIE-ID ::= 452
id-IPDLParameter-Information-Cell-ReconfRqstTDD                    ProtocolIE-ID ::= 453
id-IPDLParameter-Information-Cell-SetupRqstTDD                     ProtocolIE-ID ::= 454
id-DL-DPCH-LCR-Information-RL-SetupRqstTDD                         ProtocolIE-ID ::= 74
id-DwPCH-LCR-Information                                           ProtocolIE-ID ::= 78
id-DwPCH-LCR-InformationList-AuditRsp                              ProtocolIE-ID ::= 90
id-DwPCH-LCR-Information-Cell-SetupRqstTDD                         ProtocolIE-ID ::= 97
id-DwPCH-LCR-Information-Cell-ReconfRqstTDD                        ProtocolIE-ID ::= 99
id-DwPCH-LCR-Information-ResourceStatusInd                         ProtocolIE-ID ::= 101
id-maxFACH-Power-LCR-CTCH-SetupRqstTDD                             ProtocolIE-ID ::= 154
id-maxFACH-Power-LCR-CTCH-ReconfRqstTDD                            ProtocolIE-ID ::= 174
id-FPACH-LCR-Information                                           ProtocolIE-ID ::= 290
id-FPACH-LCR-Information-AuditRsp                                  ProtocolIE-ID ::= 292
id-FPACH-LCR-InformationList-AuditRsp                              ProtocolIE-ID ::= 22
id-FPACH-LCR-InformationList-ResourceStatusInd                     ProtocolIE-ID ::= 311
id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD                          ProtocolIE-ID ::= 312
id-FPACH-LCR-Parameters-CTCH-ReconfRqstTDD                         ProtocolIE-ID ::= 314
id-PCCPCH-LCR-Information-Cell-SetupRqstTDD                        ProtocolIE-ID ::= 456
id-PCH-Power-LCR-CTCH-SetupRqstTDD                                 ProtocolIE-ID ::= 457
id-PCH-Power-LCR-CTCH-ReconfRqstTDD                                ProtocolIE-ID ::= 458
id-PICH-LCR-Parameters-CTCH-SetupRqstTDD                           ProtocolIE-ID ::= 459
id-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD                      ProtocolIE-ID ::= 461
id-RL-InformationResponse-LCR-RL-SetupRspTDD                       ProtocolIE-ID ::= 463
id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD             ProtocolIE-ID ::= 465
id-TimeSlot                                                        ProtocolIE-ID ::= 495
id-TimeSlotConfigurationList-LCR-Cell-ReconfRqstTDD                ProtocolIE-ID ::= 466
id-TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD                 ProtocolIE-ID ::= 467
id-TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD                       ProtocolIE-ID ::= 468
id-TimeSlotLCR-CM-Rqst                                             ProtocolIE-ID ::= 469
```

```
id-UL-DPCH-LCR-Information-RL-SetupRqstTDD                          ProtocolIE-ID ::= 470
id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD                   ProtocolIE-ID ::= 472
id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD                   ProtocolIE-ID ::= 473
id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD              ProtocolIE-ID ::= 474
id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD                  ProtocolIE-ID ::= 475
id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD           ProtocolIE-ID ::= 477
id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD    ProtocolIE-ID ::= 479
id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD                           ProtocolIE-ID ::= 480
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD                ProtocolIE-ID ::= 481
id-UL-DPCH-LCR-InformationModify-AddList                            ProtocolIE-ID ::= 483
id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD                      ProtocolIE-ID ::= 485
id-UL-SIRTarget                                                     ProtocolIE-ID ::= 510
id-PDSCH-AddInformation-LCR-PSCH-ReconfRqst                         ProtocolIE-ID ::= 486
id-PDSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst               ProtocolIE-ID ::= 487
id-PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst                      ProtocolIE-ID ::= 488
id-PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst         ProtocolIE-ID ::= 489
id-PUSCH-AddInformation-LCR-PSCH-ReconfRqst                         ProtocolIE-ID ::= 490
id-PUSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst               ProtocolIE-ID ::= 491
id-PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst                      ProtocolIE-ID ::= 492
id-PUSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst         ProtocolIE-ID ::= 493
id-timeslotInfo-CellSyncInitiationRqstTDD                           ProtocolIE-ID ::= 496
id-SyncReportType-CellSyncReprtTDD                                  ProtocolIE-ID ::= 497
id-PUSCH-Info-DM-Rqst                                               ProtocolIE-ID ::= 505
id-PUSCH-Info-DM-Rsp                                                ProtocolIE-ID ::= 506
id-PUSCH-Info-DM-Rprt                                               ProtocolIE-ID ::= 507
id-InitDL-Power                                                     ProtocolIE-ID ::= 509
id-cellSyncBurstRepetitionPeriod                                    ProtocolIE-ID ::= 511
id-ReportCharacteristicsType-OnModification                         ProtocolIE-ID ::= 512
id-SFNSFNMeasurementValueInformation                                ProtocolIE-ID ::= 513
id-SFNSFNMeasurementThresholdInformation                            ProtocolIE-ID ::= 514
id-TUTRANGPSMeasurementValueInformation                             ProtocolIE-ID ::= 515
id-TUTRANGPSMeasurementThresholdInformation                         ProtocolIE-ID ::= 516
id-Rx-Timing-Deviation-Value-LCR                                    ProtocolIE-ID ::= 520
id-RL-InformationResponse-LCR-RL-AdditionRspTDD                     ProtocolIE-ID ::= 51
id-PDSCH-RL-ID                                                      ProtocolIE-ID ::= 66
id-UL-Synchronisation-Parameters-LCR                                ProtocolIE-ID ::= 554


END

/*Partly omitted*/
```

3GPP TSG-RAN WG3 Meeting #31
Stockholm, Sweden, 19th – 23rd August 2002

Tdoc ⌘ R3-022160

CR-Form-v7

CHANGE REQUEST

⌘ **25.433** **CR** **729** ⌘ **rev** **2** ⌘ Current version: **5.1.0** ⌘

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

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

Title:	⌘	Uplink Synchronisation in 1.28Mcps TDD
Source:	⌘	RAN WG3
Work item code:	⌘	LCRTDD-IublIur
Date:	⌘	23/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

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

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change: ⌘

In TR 25.402 v5.1.0 section 8.3.5, the establishment of UL synchronisation and maintenance of the UL synchronisation in 1.28Mpcs is described. In 1.28Mcps TDD Uplink Synchronisation is performed at Layer 1 for uplink DPCH.

After establishing the UL synchronisation, the Node B will continuously measure the timing of the UE and send the necessary synchronisation shift commands in each sub-frame. On receipt of these synchronisation shift commands the UE shall adjust the timing of its transmissions accordingly, in steps of ±k/8 chips or do nothing, each M sub-frames.

The values of the Uplink Synchronisation Step Size (k) and the Uplink Synchronisation Frequency (M) are determined in the CRNC, and have to be conveyed to the Node B and to the SRNC, if CRNC and SRNC are not co-incident.

Summary of change: ⌘

Introduction of Uplink Synchronisation Parameters for 1.28Mcps TDD: *Uplink Synchronisation Step Size* IE and *Uplink Synchronisation Frequency* IE. Modification of several DL messages to now include the Uplink Synchronisation Parameters for 1.28Mcps TDD.

Revision1:
- Cover sheet was updated.
- Units and steps were added to the semantic descriptions of the IEs.

Revison2:
- Semantic Description has been added

		- Criticality for the new Ies has been changed from “reject” to “ignore Impact Analysis: Impact Assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because the Uplink Synchronisation Parameters for 1.28Mcps TDD are missing. The impact can be considered isolated because the change affects only the function of Uplink Synchronisation in 1.28Mcps TDD.
Consequences if not approved:	⌘	If this CR is not approved,.the concerned RAN-WG3 specifications are not aligned with RAN-WG1 and RAN-WG2 specifications which already contain the Uplink Synchronisation Parameters.

Clauses affected:	⌘	8.2.17, 8.3.1, 8.3.2, 8.3.5, 9.1.36.2, 9.1.39.2, 9.1.42.2, 9.1.47.2, 9.2.3.x, 9.2.3.y, 9.3.3, 9.3.4, 9.3.6				
		Y	**N**			
Other specs	⌘	**X**		Other core specifications	⌘	25.423 v4.5.0 CR 706r2 25.423 v5.2.0 CR 707r2 25.433 v4.5.0 CR 728r2
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.

8.2.17 Radio Link Setup

8.2.17.1 General

This procedure is used for establishing the necessary resources for a new Node B Communication Context in the Node B.

[FDD – The Radio Link Setup procedure is used to establish one or more radio links. The procedure establishes one or more DCHs on all radio links, and in addition, it can include the establishment of one or more DSCHs or an HS-DSCH on one radio link.]

[TDD – The Radio Link Setup procedure is used to establish one radio link including one or more transport channels. The transport channels can be a mix of DCHs, DSCHs, and USCHs, or DCHs and an HS-DSCH, including also combinations where one or more transport channel types are not present.]

8.2.17.2 Successful Operation

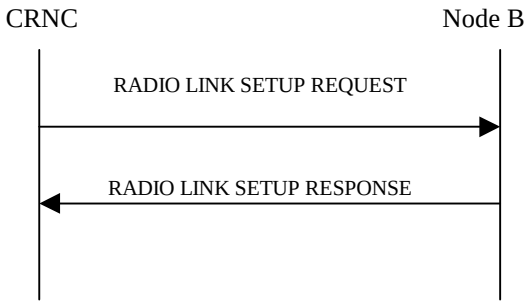

Figure 24: Radio Link Setup procedure, Successful Operation

The procedure is initiated with a RADIO LINK SETUP REQUEST message sent from the CRNC to the Node B using the Node B Control Port.

Upon reception of the RADIO LINK SETUP REQUEST message, the Node B shall reserve necessary resources and configure the new Radio Link(s) according to the parameters given in the message.

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

Transport Channels Handling:

DCH(s):

[TDD – If the *DCH Information* IE is present, the Node B shall configure the new DCH(s) 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 Node B shall treat the DCHs in the *DCH Information* IE as a set of co-ordinated DCHs. The Node B 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. [16]. 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. [16].]

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. [16]. [FDD - If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE, ref. [16]. If all DCHs have *QE-Selector* IE set to "non-selected", the Physical channel BER shall be used for the QE, ref. [16]].

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

The Node B 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 in the configuration.

The Node B 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 in the configuration.

The received *Frame Handling Priority* IE specified for each Transport Channel should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new RL(s) has been activated.

[FDD – The *Diversity Control Field* IE indicates for each RL (except the first RL in the message) whether the Node B shall combine the concerned RL or not.

- If the *Diversity Control Field* IE is set to"May", the Node B shall decide for either of the alternatives.
- If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL.
- If the *Diversity Control Field* IE is set to "Must not", the Node B shall not combine the RL with any other existing RL.

Diversity combining is applied to Dedicated Transport Channels (DCH), i.e. it is not applied to the DSCHs. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.]

[FDD – In the RADIO LINK SETUP RESPONSE message, the Node B 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 Node B 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 Node B shall include 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.]

In the case of a set of co-ordinated DCHs, the *Binding ID* IE and the *Transport Layer Address* IE shall be specified for only one of the DCHs in the set of co-ordinated DCHs.

DSCH(s):

If the *DSCH Information* IE is present, the Node B shall configure the new DSCH(s) according to the parameters given in the message.

[FDD – If the RADIO LINK SETUP REQUEST message includes the *TFCI2 Bearer Information* IE then the Node B shall support the establishment of a transport bearer on which the DSCH TFCI Signaling control frames shall be received. The Node B shall manage the time of arrival of these frames according to the values of ToAWS and ToAWE specified in the IEs. The *Binding ID* IE and the *Transport Layer Address* IE for the new bearer to be set up for this purpose shall be returned in the RADIO LINK SETUP RESPONSE message.]

If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE and *Binding ID* IE in the *DSCH Information* IE, the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a transport bearer for the DSCH.

The Node B shall include in the RADIO LINK SETUP RESPONSE the *Binding ID* IE and the *Transport Layer Address* IE for the transport bearer to be established for each DSCH of this RL.

[TDD – USCH(s)]:

[TDD – If the *USCH Information* IE is present, the Node B shall configure the new USCH(s) according to the parameters given in the message.]

[TDD - If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE and *Binding ID* IE in the *USCH Information* IE, the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a transport bearer for the USCH.]

[TDD –If the *USCH Information* IE is present, the Node B shall include in the RADIO LINK SETUP RESPONSE message the *Binding ID* IE and the *Transport Layer Address* IE for the transport bearer to be established for each USCH of this RL.]

HS-DSCH(s):

If the *HS-DSCH Information* IE is present, the Node B shall configure the new HS-DSCH resources according to the parameters given in the message.

[FDD – If the *HS-DSCH Information* IE and the *HS-PDSCH RL ID* IE are present, the Node B shall configure the new HS-DSCH resources in the radio link specified by the HS-PDSCH RL ID.]

In addition, the Node B shall include in the RADIO LINK SETUP RESPONSE message the *Binding ID* IE and *Transport Layer Address* IE for the transport bearers to be established for the HS-DSCH MAC-d flows of this RL.

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 Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a transport bearer for the concerned HS-DSCH MAC-d flow.

If the *HS-DSCH-RNTI* IE is present, the Node B shall use the HS-DSCH RNTI value for HS-DSCH processing for the respective Node B Communication Context.

The Node B shall include the *HS-DSCH Initial Capacity Allocation* IE in the RADIO LINK SETUP RESPONSE message for each MAC-d flow, if the Node B allows the CRNC to start transmission of the MAC-d PDUs before the Node B has allocated capacity on user plane as described in [24].

Physical Channels Handling:

[FDD – Compressed Mode]:

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the Node B 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 Node B until the next Compressed Mode Configuration is configured in the Node B or the Node B Communication Context is deleted.]

[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 Node B shall use or not the alternate scrambling code as indicated for each DL Channelisation Code in the *Transmission Gap Pattern Sequence Code Information* IE.]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the Node B shall use the information to activate the indicated Transmission Gap Pattern Sequence(s) in the new RL. The received *CM Configuration Change CFN* refers to the latest passed CFN with that value The Node B 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 Node B 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 Node B 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 Node B 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 – DL Code Information]:

[FDD – When more than one DL DPDCH is 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*".]

[TDD – PDSCH RL ID]:

[TDD – If the *PDSCH RL ID* IE is included in RADIO LINK SETUP REQUEST message, the Node B shall use the PDSCH RL ID as an identifier for the PDSCH and/or PUSCH in this radio link.]

General:

[FDD – If the *Propagation Delay* IE is included, the Node B may use this information to speed up the detection of L1 synchronisation.]

[FDD – The *UL SIR Target* IE included in the message shall be used by the Node B as initial UL SIR target for the UL inner loop power control.]

[1.28Mcps TDD – The *UL SIR Target* IE included in the message shall be used by the Node B as initial UL SIR target for the UL inner loop power control according [19] and [21].]

[FDD – If the received *Limited Power Increase* IE is set to "Used", the Node B 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 *TFCI Signalling Mode* IE within the RADIO LINK SETUP REQUEST message indicates that there shall be a hard split on the TFCI field but the *TFCI2 Bearer Information* IE is not included in the message, then the Node B shall transmit the TFCI2 field with zero power.]

[FDD - If the *TFCI Signalling Mode* IE within the RADIO LINK SETUP REQUEST message indicates that there shall be a hard split on the TFCI and the *TFCI2 Bearer Information* IE is included in the message, then the Node B shall transmit the TFCI2 field with zero power until Synchronization is achieved on the TFCI2 transport bearer and the first valid DSCH TFCI Signalling control frame is received on this bearer (see ref. [24]).]

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Length Of TFCI2* IE, then the Node B shall apply the length of TFCI (field 2) indicated in the message.]

[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 Node B shall assume the length of the TFCI (field 2) is 5 bits.]

Radio Link Handling:

[FDD – Transmit Diversity]:

[FDD – When the *Diversity Mode* IE is set to "*STTD*", "*Closedloop mode1*" or "*Closedloop mode2*", the Node B shall activate/deactivate the Transmit Diversity for each Radio Link in accordance with the *Transmit Diversity Indication* IE]

DL Power Control:

[FDD – The Node B shall start any DL transmission using the initial DL power specified in the message on each DL DPCH of the RL until either UL synchronisation on the Uu interface is achieved for the RLS or Power Balancing is activated. No inner loop power control or 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 subclause 8.3.7), but shall always be kept within the maximum and minimum limit specified in the RADIO LINK SETUP REQUEST message. During compressed mode, 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 the *DPC Mode* IE is present in the RADIO LINK SETUP REQUEST message, the Node B 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]).]

[TDD – The Node B shall determine the initial CCTrCH DL power for each CCTrCH by the following rule: If the *CCTrCH Initial DL Transmission Power* IE is included for that CCTrCH, then the Node B shall use that power for the initial CCTrCH DL power, otherwise the initial CCTrCH DL power is the *Initial DL Transmission Power* IE included in the *RL Information* IE. The Node B shall start any DL transmission on each CCTrCH using the initial CCTrCH DL power, as determined above, on each DL DPCH and on each Time Slot of the CCTrCH until the UL synchronisation on the Uu interface is achieved for the CCTrCH. 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), but shall always be kept within the maximum and minimum limit specified in the RADIO LINK SETUP REQUEST message.]

[TDD – If the [3.84Mcps TDD - *DL Time Slot ISCP Info* IE] or [1.28Mcps TDD - *DL Timeslot ISCP LCR* IE] is present, the Node B shall use the indicated value when deciding the initial DL TX Power for each timeslot as specified in [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged].

[FDD – If the received *Inner Loop DL PC Status* IE is set to "Active", the Node B shall activate the inner loop DL power control for all RLs. If *Inner Loop DL PC Status* IE is set to "Inactive", the Node B shall deactivate the inner loop DL power control for all RLs according to 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 Node B shall activate the power balancing, if activation of power balancing by the RADIO LINK SETUP REQUEST message is supported, according to subclause 8.3.7, using the *DL Power Balancing Information* IE. If the Node B 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 Node B, the Node B shall include the *DL Power Balancing Activation Indicator* IE in the *RL Information Response* IE in the RADIO LINK SETUP RESPONSE message.]

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the RADIO LINK SETUP REQUEST message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

General:

If the RADIO LINK SETUP REQUEST message includes the *RL Specific DCH Information* IE,the Node B may use the transport layer address and the binding identifier received from the CRNC 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 Node B 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 Node B shall use the *Qth Parameter* IE, if Qth signalling is supported, when SSDT is activated.]

[FDD – Irrespective of SSDT activation, the Node B shall include in the RADIO LINK SETUP RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK SETUP REQUEST message requested SSDT activation and the RADIO LINK SETUP RESPONSE message indicates that the SSDT capability is supported for this RL, SSDT is activated in the Node B.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity for EDSCHPC* IE, the Node B 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 Node B shall ignore the value in *SSDT Cell Identity For EDSCHPC* IE. If the enhanced DSCH power control is activated and the TFCI power control in DSCH hard split mode is supported, the primary/secondary status determination in the enhanced DSCH power control is also applied to the TFCI power control in DSCH hard split mode.]

The Node B 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 Node B together with the value of the *DL TPC Pattern 01 Count* IE which the Node B has received in the Cell Setup procedure, 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 Node B 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 Node B Communication Context.]

[FDD – For all RLs having a common generation of the TPC commands in the DL with another RL, the Node B 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 Node B Communication Context.]

[FDD – The UL out-of-sync algorithm defined in [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:

If the RLs are successfully established, the Node B shall and respond with a RADIO LINK SETUP RESPONSE message.

After sending the RADIO LINK SETUP RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation on the Uu interface.

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

- [FDD - start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [16].]
- [TDD - start transmission on the new RL immediately as specified in [16].]

For each RL for which the *Delayed Activation* IE is included in the RADIO LINK SETUP REQUEST message, the Node B 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 [16], 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 [16].]

8.2.17.3 Unsuccessful Operation

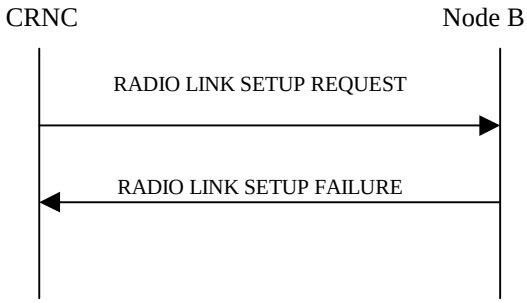

Figure 25: Radio Link Setup procedure: Unsuccessful Operation

If the establishment of at least one radio link is unsuccessful, the Node B shall respond with a RADIO LINK SETUP FAILURE message. The message contains the failure cause in the *Cause* IE.

[FDD – If some radio links were established successfully, the Node B shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message. In this case, the Node B shall include the *Communication Control Port Id* IE in the RADIO LINK SETUP FAILURE message.]

Typical cause values are as follows:

Radio Network Layer Cause

- Combining not supported
- Combining Resources not available
- Requested Tx Diversity Mode not supported
- Number of DL codes not supported
- Number of UL codes not supported
- UL SF not supported
- DL SF not supported
- Dedicated Transport Channel Type not supported
- Downlink Shared Channel Type not supported
- Uplink Shared Channel Type not supported
- CM not supported
- DPC mode change not supported
- Delayed Activation not supported

Transport Layer Cause

- Transport Resources Unavailable

Miscellaneous Cause

- O&M Intervention
- Control processing overload
- HW failure

8.2.17.4 Abnormal Conditions

[FDD – If the RADIO LINK SETUP REQUEST message contains the *Active Pattern Sequence Information* IE, but the *Transmission Gap Pattern Sequence Information* IE is not present, then the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

If more than one DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected" [TDD – or no DCH of a set of co-ordinated DCHs has the *QE-Selector* IE set to "selected"], the Node B shall regard the Radio Link Setup procedure as failed and shall respond with a RADIO LINK SETUP FAILURE message.

If the RADIO LINK SETUP REQUEST message includes a *DCH Information* IE with multiple *DCH Specific Info* IEs, and if the DCHs in the *DCH Information* IE do not have the same *Transmission Time Interval* IE in the *Semi-static Transport Format Information* IE, then the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.

If the RADIO LINK SETUP REQUEST message includes the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific DCH Information* IE included in the *RL Information* IE for a specific RL and the *Diversity Control Field* IE is set to "Must", the Node B shall regard the Radio Link Setup procedure as failed and respond with the RADIO LINK SETUP FAILURE message.

If the RADIO LINK SETUP REQUEST message contains the *Transport Layer Address* IE or the *Binding ID* IE, and not both are present for a transport bearer intended to be established, the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.

[FDD – If the RADIO LINK SETUP REQUEST message includes the *Length Of TFCI2* IE but the *TFCI Signalling Option* IE is set to "Normal", then the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD – If the RADIO LINK SETUP REQUEST message does not include the *Length Of TFCI2* IE but the *Split Type* IE is set to "Logical", then the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Split Type* IE set to the value "Hard" and the *Length Of TFCI2* IE set to the value "5", then the Node B shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

8.2.18 Physical Shared Channel Reconfiguration

8.2.18.1 General

This procedure is used to assign HS-DSCH related resources to the Node B.

[TDD - This procedure is also used for handling PDSCH Sets and PUSCH Sets in the Node B, i.e.

- Adding new PDSCH Sets and/or PUSCH Sets,
- Modifying these, and
- Deleting them.]

8.2.18.2 Successful Operation

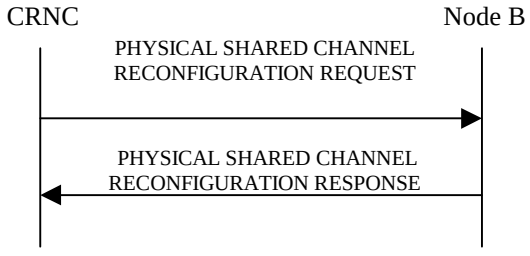

Figure 26: Physical Shared Channel Reconfiguration: Successful Operation

The procedure is initiated with a PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message sent from the CRNC to the Node B using the Node B Control Port.

If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes an *SFN* IE, the Node B shall activate the new configuration on that specified SFN.

HS-DSCH Resources

[FDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *HS-PDSCH and HS-SCCH Total Power* IE, the Node B shall not exceed this maximum transmission power on all HS-PDSCH and HS-SCCH codes in the cell. If a value has never been set or if the value of the *HS-PDSCH Total Power* IE is equal to or greater than the maximum transmission power of the cell the Node B may use all unused power for HS-PDSCH and HS-SCCH codes.]

[FDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *HS-PDSCH and HS-SCCH Scrambling Code* IE, the Node B shall use this as the scrambling code for all HS-PDSCHs and HS-SCCHs. If a value has never been set, the Node B shall use the primary scrambling code for all HS-PDSCH and HS-SCCH codes.]

[FDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *HS-PDSCH FDD Code Information* IE, the Node B shall:

- If the *HS-PDSCH FDD Code Information* IE contains no code, delete any existing HS-PDSCH resources from the cell.
- If the *HS-PDSCH FDD Code Information* IE contains one or more codes and HS-PDSCH resources are not currently configured in the cell, use this list as the range of codes for HS-PDSCH channels.
- If the *HS-PDSCH FDD Code Information* IE contains one or more codes and HS-PDSCH resources are currently configured in the cell, replace the current range of codes with this new range of codes for HS-PDSCH channels.]

[FDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *HS-SCCH FDD Code Information* IE, the Node B shall:

- If the *HS-SCCH FDD Code Information* IE contains no code, delete any existing HS-SCCH resources from the cell.
- If the *HS-SCCH FDD Code Information* IE contains one or more codes and HS-SCCH resources are not currently configured in the cell, use this list of codes as the list of codes for HS-SCCH channels.
- If the *HS-SCCH FDD Code Information* IE contains one or more codes and HS-SCCH resources are currently configured in the cell, replace the current list of codes with this new list of codes for HS-SCCH channels.]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *HS-SCCH Maximum Power* IE, the Node B shall not exceed this power for each HS-SCCH code.]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *HS-PDSCH TDD Information* IE, the Node B shall:

- If the *HS-PDSCH TDD Code Information* IE contains no code, delete any existing HS-PDSCH resources from the cell.
- If the *HS-PDSCH TDD Code Information* IE contains one or more codes and HS-PDSCH resources are not currently configured in the cell, use this list as the list of codes for HS-PDSCH channels.
- If the *HS-PDSCH TDD Code Information* IE contains one or more codes and HS-PDSCH resources are currently configured in the cell, replace the current list of codes with this new list of codes for HS-PDSCH channels.]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes *Add to HS-SCCH Resource Pool* IE, the Node B shall add this resource to the HS-SCCH resource pool to be used to assign HS-SCCH sets.]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any *Modify HS-SCCH Resource Pool* IEs and includes any of [3.84Mcps TDD - *TDD Channelisation Code* IE, *Midamble shift and burst type* IE, *Time Slot* IE], [1.28Mcps TDD - *TDD Channelisation Code LCR* IE, *Midamble shift LCR* IE, *Time Slot*

LCR IE], for either HS-SCCH or HS-SICH channels, the Node B shall apply these as the new values, otherwise the old values specified for this set are still applicable.]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any *Delete from HS-SCCH Resource Pool* IEs, the Node B shall delete these resources from the HS-SCCH resource pool.]

[**TDD - PDSCH/PUSCH Addition**]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be added, the Node B shall add these new sets to its PDSCH/PUSCH configuration.]

[TDD - PDSCH/PUSCH Modification]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be modified, and includes any of [3.84Mcps TDD - *TDD Channelisation Code* IE, *Midamble Shift And Burst Type* IE, *Time Slot* IE], [1.28Mcps TDD - *TDD Channelisation Code LCR* IE, *Midamble Shift LCR* IE, *Time Slot LCR* IE], *TDD Physical Channel Offset* IE, *Repetition Period* IE, *Repetition Length* IE, or *TFCI Presence* IE, the Node B shall apply these as the new values, otherwise the old values specified for this set are still applicable.]

[TDD - PDSCH/PUSCH Deletion]

[TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be deleted the Node B shall delete these sets from its PDSCH/PUSCH configuration.]

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

Response Message

HS-DSCH/HS-SCCH Resources

In the successful case involving HS-PDSCH or HS-SCCH resources, the Node B shall make these resources available to all the current and future HS-DSCH transport channels; and shall respond with PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE:

[TDD – PDSCH/PUSCH Addition/Modification/Deletion]

[TDD - In the successful case involving PDSCH/PUSCH addition, modification or deletion, the Node B shall add, modify and delete the PDSCH Sets and PUSCH Sets in the Common Transport Channel data base, as requested in the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message, and shall make these available to all the current and future DSCH and USCH transport channels. The Node B shall respond with the PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE message.]

8.2.18.3 Unsuccessful Operation

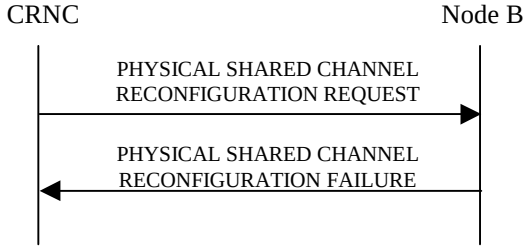

Figure 27: Physical Shared Channel Reconfiguration procedure: Unsuccessful Opreration

If the Node B is not able to support all parts of the configuration, it shall reject the configuration of all the channels in the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message. The *Cause* IE shall be set to an appropriate value.

If the configuration was unsuccessful, the Node B shall respond with the PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE message:

Typical cause values are as follows:

Radio Network Layer Cause

- Cell not available
- Node B Resources unavailable

Transport Layer Cause

- Transport Resources Unavailable

Miscellaneous Cause

- O&M Intervention
- Control processing overload
- HW failure

8.2.18.4 Abnormal Conditions

-

/* partly omitted */

8.3.1 Radio Link Addition

8.3.1.1 General

This procedure is used for establishing the necessary resources in the Node B for one or more additional RLs towards a UE when there is already a Node B Communication Context for this UE in the Node B.

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

8.3.1.2 Successful Operation

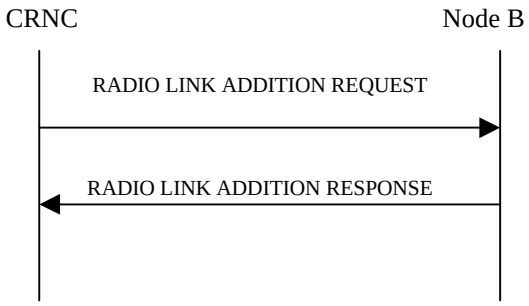

Figure: 28 Radio Link Addition procedure, Successful Operation

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the CRNC to the Node B using the Communication Control Port assigned to the concerned Node B Communication Context.

Upon reception, the Node B shall reserve the necessary resources and configure the new RL(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

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

Physical Channels Handling:

[TDD – If the *UL DPCH Information* IE is present, the Node B shall configure the new UL DPCH(s) according to the parameters given in the message.]

[TDD – If the *DL DPCH Information* IE is present, the Node B shall configure the new DL DPCH(s) according to the parameters given in the message.]

[FDD – Compressed Mode]:

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Compressed Mode Deactivation Flag* IE with value "Deactivate", the Node B shall not activate any compressed mode pattern in the new RLs. In all the other cases (Flag set to "Maintain Active" or not present), the ongoing compressed mode (if existing) shall be applied also to the added RLs.]

[FDD- If the RADIO LINK ADDITION REQUEST message contains the *Transmission Gap Pattern Sequence Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate scrambling code as indicated for each DL Channelisation Code for which the *Transmission Gap Pattern Sequence Code Information* IE is set to "Code Change".]

[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 ref. [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*".]

[TDD – CCTrCH Handling]:

[TDD – If the *UL CCTrCH Information* IE is present, the Node B shall configure the new UL CCTrCH(s) according to the parameters given in the message.]

[TDD – If the *DL CCTrCH Information* IE is present, the Node B shall configure the new DL CCTrCH(s) according to the parameters given in the message.]

Radio Link Handling:

Diversity Combination Control:

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

- If the *Diversity Control Field* IE is set to "May", the Node B shall decide for any of the alternatives.
- If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other - RL.
- If the *Diversity Control Field* IE is set to "Must not", the Node B shall not combine the RL with any other existing RL.

When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.

In the case of combining an RL with existing RL(s), the Node B shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that the RL is combined. In this case, the *RL ID* IE indicates one of the existing RLs that the new RL is combined with.

In the case of not combining an RL with existing RL(s), the Node B shall indicate with the Diversity Indication in the *RL Information Response* IE in the RADIO LINK ADDITION RESPONSE message that no

combining is done. In this case, the Node B shall include in the *DCH Information Response* IE both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH, [TDD – DSCH, USCH] of the RL in the RADIO LINK ADDITION RESPONSE message.

In the case of a set of co-ordinated DCHs, the *Binding ID* IE and the *Transport Layer Address* IE shall be included for only one of the DCHs in a set of coordinated DCHs.

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

[FDD – Transmit Diversity]:

[FDD – When the *Diversity Mode* IE is set to "*STTD*", "*Closedloop mode1*" or "*Closedloop mode2*", the Node B shall activate/deactivate the Transmit Diversity for each Radio Link in accordance with the *Transmit Diversity Indication* IE.]

[FDD – When the *Transmit Diversity Indicator* IE is present, the Node B shall activate/deactivate the Transmit Diversity for each new Radio Link in accordance with the *Transmit Diversity Indicator* IE and the already known diversity mode.]

DL Power Control:

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall apply the given power to the transmission on each DL DPCH of the RL when starting transmission until either UL synchronisation on the Uu interface is achieved for the RLS or Power Balancing is activated. If no *Initial DL Transmission Power* IE is included, the Node B shall use any transmission power level currently used on already existing RLs for this Node B Communication Context. No inner loop power control or 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) with DPC MODE currently configured for the relevant Node B Communication Context and the downlink power control procedure (see subclause 8.3.7).]

[TDD – If the RADIO LINK ADDITION REQUEST message includes the [3.84Mcps TDD - *Initial DL Transmission Power* IE] [1.28Mcps TDD – *DL Time Slot ISCP Info LCR* IE], the Node B shall determine the initial CCTrCH DL power for each CCTrCH by the following rule: If the *CCTrCH Initial DL Transmission Power* IE is included for that CCTrCH, then the Node B shall use that power for the initial CCTrCH DL power, otherwise the initial CCTrCH DL power is the *Initial DL Transmission Power* IE included in the *RL Information* IE. The Node B shall apply the given power to the transmission on each DL DPCH and on each Time Slot of the CCTrCH when starting transmission until the UL synchronisation on the Uu interface is achieved for the CCTrCH. If no *Initial DL Transmission Power* IE is included (even if *CCTrCH Initial DL Transmission Power* IEs are included), the Node B shall use any transmission power level currently used on already existing CCTrCHs for this Node B Communication Context. 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).]

If the RADIO LINK ADDITION REQUEST message includes the *Maximum DL Power* IE, the Node B shall store this value and not transmit with a higher power on any DL DPCH of the RL. If no *Maximum DL Power* IE is included, any Maximum DL power stored for already existing RLs for this Node B Communication Contextshall be applied. [FDD - During compressed mode, 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.]

If the RADIO LINK ADDITION REQUEST message includes the *Minimum DL Power* IE, the Node B shall store this value and never transmit with a lower power on any DL DPCH of the RL. If no *Minimum DL Power* IE is included, any Minimum DL power stored for already existing RLs for this Node B Communication Contextshall be applied.

[TDD – If the RADIO LINK ADDITION REQUEST message includes the *DL Time Slot ISCP Info* IE, the Node B shall use the indicated value when deciding the DL TX Power for each timeslot as specified in ref. [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged].

[FDD – If the power balancing is active with the Power Balancing Adjustment Type of the Node B Communication Context set to "Individual" in the existing RL(s) and the RADIO LINK ADDITION

REQUEST message includes the *DL Reference Power* IE, the Node B shall activate the power balancing and use the *DL Reference Power* IE for the power balancing procedure in the new RL(s), if activation of power balancing by the RADIO LINK ADDITION REQUEST message is supported, according to subclause 8.3.7.]

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

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

[1.28Mcps TDD - If the RADIO LINK ADDITION REQUEST message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

General:

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

[FDD – If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, the Node B shall activate SSDT, if supported, for the concerned new RL, with the indicated SSDT cell identity used for that RL.]

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

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

[FDD – Radio Link Set Handling]:

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

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

[FDD – After addition of the new RL(s), the UL out-of-sync algorithm defined in [10] shall, for each of the previously existing and newly 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:

If all requested RLs are successfully added, the Node B shall respond with a RADIO LINK ADDITION RESPONSE message.

After sending the RADIO LINK ADDITION RESPONSE message, the Node B shall continuously attempt to obtain UL synchronisation on the Uu interface.

For each RL for which the *Delayed Activation* IE is not included in the RADIO LINK ADDITION REQUEST message, the Node B shall:

- [FDD - start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [16].]
- [TDD - start transmission on the new RL immediately as specified in [16].]

For each RL for which the *Delayed Activation* IE is included in the RADIO LINK ADDITION REQUEST message, the Node B 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 [16], 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 [16].]

8.3.1.3 Unsuccessful Operation

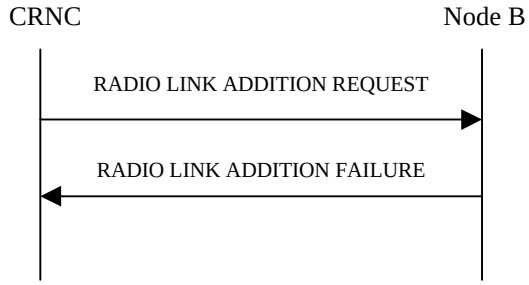

Figure 29: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one radio link is unsuccessful, the Node B shall respond with a RADIO LINK ADDITION FAILURE message. The message contains the failure cause in the *Cause* IE.

[FDD - If some RL(s) were established successfully, the Node B shall indicate this in the RADIO LINK ADDITION FAILURE message in the same way as in the RADIO LINK ADDITION RESPONSE message.]

[FDD – If the RADIO LINK ADDITION REQUEST contains a *C-ID* IE indicating that a Radio Link must be established on a Cell where DPC Mode change is not supported and DPC Mode can be changed for the relevant Node B Communication Context, the Node B shall consider the procedure as failed for the concerned Radio Link and shall respond with a RADIO LINK ADDITION FAILURE with the appropriate cause value ("DPC Mode change not supported").]

Typical cause values are as follows:

Radio Network Layer Cause

- Combining not supported
- Combining Resources not available
- Requested Tx Diversity Mode not supported
- UL SF not supported
- DL SF not supported
- Reconfiguration CFN not elapsed
- CM not supported
- [FDD – DPC Mode change not supported]
- Delayed Activation not supported

Transport Layer Cause

- Transport Resources Unavailable

Miscellaneous Cause

- O&M Intervention
- Control processing overload
- HW failure

8.3.1.4 Abnormal conditions

[FDD – If the RADIO LINK ADDITION REQUEST message contains the *Compressed Mode Deactivation Flag* IE with the value "Deactivate" when compressed mode is active for the existing RL(s), and at least one of the new RL is added in a cell that has the same UARFCN (both UL and DL) of at least one cell with an already existing RL, the Node B shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

[FDD – If the power balancing is active with the Power Balancing Adjustment Type of the Node B Communication Context set to "Individual" in the existing RL(s) and if the *DL Reference Power* IEs are included in the *RL Information* IE but the *DL Reference Power* IE is not present for each RL in the *RL Information* IE, the Node B shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message.]

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *DL Reference Power* IEs in the *RL Information* IE but the power balancing is not active in the existing RL(s) or the power balancing is active with the Power Balancing Adjustment Type of the Node B Communication Context set to "Common" in the existing RL(s), the Node B shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Power Balancing status not compatible".]

If the RADIO LINK ADDITION REQUEST message includes the *Transport Layer Address* IE and the *Binding ID* IE in the *RL Specific DCH Information* IE included in the *RL Information* IE for a specific RL and the *Diversity Control Field* IE is set to "Must", the Node B shall regard the Radio Link Addition procedure as failed and respond with the RADIO LINK ADDITION FAILURE message.

If the RADIO LINK ADDITION REQUEST message contains the *Transport Layer Address* IE or the *Binding ID* IE, and not both are present for a transport bearer intended to be established, the Node B shall reject the procedure using the RADIO LINK ADDITION FAILURE message.

8.3.2 Synchronised Radio Link Reconfiguration Preparation

8.3.2.1 General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of Radio Link(s) related to one Node B Communication Context.

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

8.3.2.2 Successful Operation

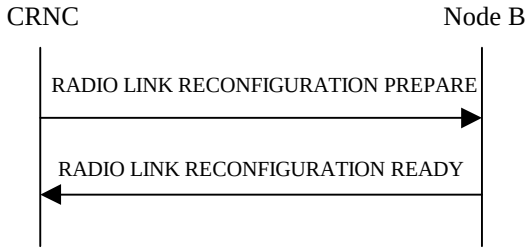

Figure 30: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the CRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the Node B. The message shall use the Communication Control Port assigned for this Node B Communication Context.

Upon reception, the Node B 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.

The Node B 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* IE then the Node B shall treat them each as follows:

- If the *DCHs to Modify* IE includes the *Frame Handling Priority* IE, the Node B 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 Node B once the new configuration has been activated.

- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the UL of a DCH, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the DL of a DCH, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs, the Node B shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The Node B 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 DCH which belongs to a set of co-ordinated DCHs, the Node B 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 DCH which belongs to a set of co-ordinated DCHs, the Node B 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 DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- [TDD – If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]

- [TDD – If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs to Add* IEs then the Node B shall treat them each as follows:

- If the *DCHs to Add* IE includes multiple *DCH Specific Info* IEs, the Node B shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The Node B 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. [16]. 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. [16].]

- 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. [16]. [FDD – If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE, ref. [16]. If all DCHs have the *QE-Selector* IE set to "non-selected", the Physical channel BER shall be used for the QE, ref. [16].]

- The Node B 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 Uu interface in congestion situations within the Node B once the new configuration has been activated.

- The Node B 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 Node B 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 Node B 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 Node B shall apply the *CCTrCH ID* IE (for the DL) in the Downlink of this DCH in the new configuration.]

- [TDD – The Node B shall apply the *CCTrCH ID* IE (for the UL) in the Uplink of this DCH in the new configuration.]

DCH Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *DCHs to Delete* IE, the Node B 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 Node B 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, then the Node B shall apply the parameters to the new configuration as follows:]

- [FDD – If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the Node B 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 Node B shall apply the value in the new configuration. The Node B 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 *UL SIR Target* IE, the Node B shall use the value for the UL inner loop power control when the new configuration is being used.]

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

- [FDD – The Node B shall use the *TFCS* IE for the UL (if present) when reserving resources for the uplink of the new configuration. The Node B 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 Node B shall set the new Uplink DPCCH Structure to the new configuration.]

- [FDD - If the *UL DPCH Information* IE includes the *Diversity Mode* IE, the Node B 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 Node B shall apply the values in the new configuration.]

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

- [FDD – The Node B shall use the *TFCS* IE for the DL (if it is present) when reserving resources for the downlink of the new configuration. The Node B shall apply the new TFCS in the Downlink of the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE or the *TFCI Presence* IE, the Node B shall use the information when building TFCIs in the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *DL DPCCH Slot Format* IE, the Node B shall set the new Downlink DPCCH Structure to the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *Multiplexing Position* IE, the Node B shall apply the indicated multiplexing type in the new configuration.]

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

- [FDD – If the *DL DPCH Information* IE includes the *PDSCH Code Mapping* IE, then the Node B shall apply the defined mapping between TFCI values and PDSCH channelisation codes.]

- [FDD – If the *DL DPCH Information* IE includes the *PDSCH RL ID* IE, then the Node B shall infer that the PDSCH for the specified user will be transmitted on the defined radio link.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information* IE, the Node B 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 Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

[TDD – UL/DL CCTrCH Modification]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH to Modify* or *DL CCTrCH to Modify* IE, then the Node B shall treat them each as follows:]

- [TDD – If the IE includes any of the *TFCS* IE, *TFCI coding* IE or *Puncture Limit* IE, the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]

- [TDD – If the IE includes any *UL DPCH To Add* IE or *DL DPCH To Add* IE, the Node B shall include this DPCH in the new configuration.]

- [TDD – If the IE includes any *UL DPCH To Delete* IE or *DL DPCH To Delete* IE, the Node B shall remove this DPCH in the new configuration.]

- [TDD – If the IE includes any *UL DPCH To Modify* IE or *DL DPCH To Modify* IE and includes any of the *Repetition Period* IE, *Repetition Length* IE or *TDD DPCH Offset* IE, or the message includes UL/DL Timeslot Information and includes any of the [3.84Mcps TDD - *Midamble Shift And Burst Type* IE, *Time Slot* IE], [1.28Mcps TDD - *Midamble Shift LCR* IE, *Time Slot LCR* IE], or *TFCI Presence* IE or the message includes UL/DL Code information and includes [3.84Mcps TDD - *TDD Channelisation Code* IE], [1.28Mcps TDD - *TDD Channelisation Code LCR* IE], the Node B shall apply these specified information elements as the new values, otherwise the old values specified for this DPCH configuration are still applicable.]

- [1.28Mcps TDD – If the *UL CCTrCH To Modify* IE includes the *UL SIR Target* IE, the Node B shall use the value for the UL inner loop power control according [19] and [21] 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* IE or *DL CCTrCH To Add* IE, the Node B shall include this CCTrCH in the new configuration.]

[TDD – If the *UL/DL CCTrCH To Add* IE includes any *UL/DL DPCH Information* IE, the Node B shall reserve necessary resources for the new configuration of the UL/DL DPCH(s) according to the parameters given in the message.]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes a *DL CCTrCH To Add* IE, the Node B 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 Node B 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 [19] and [21] in the new configuration.]

[TDD – UL/DL CCTrCH Deletion]

[TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes any UL or DL CCTrCH to be deleted , the Node B shall remove this CCTrCH in the new configuration.]

DL Power Control:

- [FDD - If the *RL Information* IE includes the *DL Reference Power* IEs and the power balancing is active, the Node B 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 8.3.7, 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 Node B, the Node B 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* IE, then the Node B 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.

The Node B shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DSCH.

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *TFCI2 Bearer Information* IE, then the Node B shall support the establishment of a transport bearer on which the DSCH TFCI Signaling control frames shall be received if one does not already exist or shall apply the new values if such a bearer does already exist for this Node B Communication Context. The *Binding ID* IE and *Transport Layer Address* IE of any new bearer to be set up for this purpose shall be returned in the RADIO LINK RECONFIGURATION READY message. If the RADIO LINK RECONFIGURATION PREPARE message specifies that the TFCI2 transport bearer is to be deleted, then the Node B shall release the resources associated with that bearer in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *TFCI2 Bearer Request Indicator* IE in the *TFCI2 Bearer Information* IE with the value "New Bearer Requested", the Node B shall, if supported, establish a new transport bearer replacing the existing transport bearer on which the DSCH TFCI Signaling control frames shall be received. The *Binding ID* IE and *Transport Layer Address* IE of a new bearer to be set up for this purpose shall be returned in the RADIO LINK RECONFIGURATION READY message.]

[FDD – If the *TFCI Signalling Mode* IE within the RADIO LINK RECONFIGURATION PREPARE message indicates that there shall be a hard split on the TFCI field but a TFCI2 transport bearer has not already been set up and *TFCI2 Bearer Information* IE is not included in the message, then the Node B shall transmit the TFCI2 field with zero power in the new configuration.]

[FDD – If the *TFCI Signalling Mode* IE within the RADIO LINK RECONFIGURATION PREPARE message indicates that there shall be a hard split on the TFCI and the *TFCI2 Bearer Information* IE is included in the message, then the Node B shall transmit the TFCI2 field with zero power until Synchronisation is achieved on the TFCI2 transport bearer and the first valid DSCH TFCI Signalling control frame is received on this bearer in the new configuration (see ref. [24]).]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *Length Of TFCI2* IE, then the Node B shall apply the length of TFCI (field 2) indicated in the message 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 Node B shall assume the length of the TFCI (field 2) is 5 bits in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *DSCH Common Information* IE, the Node B shall treat it as follows:]

- [FDD - If the *Enhanced DSCH PC Indicator* IE is included and set to "Enhanced DSCH PC Active in the UE ", the Node B 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* IE 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 power control in DSCH hard split mode is supported, the primary/secondary status determination in the enhanced DSCH power control is also applied to the TFCI power control in DSCH hard split mode.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Enhanced DSCH PC Indicator* IE set to "Enhanced DSCH PC not Active in the UE", the Node B shall deactivate enhanced DSCH power control in the new configuration.]

[TDD – USCH Addition/Modification/Deletion:]

- [TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes USCH information for the USCHs to be added/modified/deleted then the Node B 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.]

- [TDD – The Node B shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each USCH.]

RL Information:

If the RADIO LINK RECONFIGURATION PREPARE message includes the *RL Information* IE, the Node B shall treat it as follows:

- [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 *RL Information* IE includes the *SSDT Indication* IE set to "SSDT Active in the UE", the Node B may activate SSDT using the *SSDT Cell Identity* 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 Node B 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 Node B shall deactivate SSDT in the new configuration.]

- [FDD – If the *RL Information* IE includes a *DL Code Information* IE, the Node B shall apply the values in the new configuration.]

- [FDD – If the *RL Information* IE contains the *Transmission Gap Pattern Sequence Code Information* IE in the *DL Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]

- If the *RL Information* IE includes the *Maximum DL Power* and/or the *Minimum DL Power* IEs, the Node B shall apply the values in the new configuration. [FDD - During compressed mode, 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 *RL Information* IE includes the *Initial DL Transmission Power* IE, the Node B shall determine the initial CCTrCH DL power for each CCTrCH by the following rule: If the *CCTrCH Initial DL Transmission Power* IE is included for that CCTrCH, then the Node B shall use that power for the initial CCTrCH DL power,

otherwise the initial CCTrCH DL power is the *Initial DL Transmission Power* IE included in the *RL Information* IE. The Node B shall apply the determined initial CCTrCH DL power to the transmission on each DPCH of the CCTrCH when starting transmission on a new CCTrCH until the UL synchronisation on the Uu interface is achieved for the CCTrCH. If no *Initial DL Transmission Power* IE is included with a new CCTrCH (even if *CCTrCH Initial DL Transmission Power* IEs are included), the Node B shall use any transmission power level currently used on already existing CCTrCHs when starting transmission for a new CCTrCH. 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 *RL Information* IE includes the *DL DPCH Timing Adjustment* IE, the Node B shall adjust the timing of the radio link accordingly in the new configuration.]

- [1.28Mcps TDD – If the *RL Information* IE message contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

[TDD - PDSCH RL ID]

- [TDD – If the RADIO LINK RECONFIGURATION PREPARE message includes the *PDSCH RL ID* IE then in the new configuration the Node B shall use the PDSCH and/or PUSCH in this radio link.]

Signalling bearer rearrangement:

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Signalling Bearer Request Indicator* IE the Node B shall, if supported , allocate a new Communication Control Port for the control of the Node B Communication Context and include the *Target Communication Control Port ID* IE in the RADIO LINK RECONFIGURATION READY message.

HS-DSCH Addition/Modification/Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any *HS-DSCH To Add* IE or *HS-DSCH To Modify* IE or *HS-DSCH To Delete* IE, then the Node B shall use this information to add/modify/delete the indicated HS-DSCH channel to/from the radio link.

If the RADIO LINK RECONFIGURATION PREPARE message includes an *HS-PDSCH RL ID* IE, then the Node B shall configure the HS-PDSCH in the radio link indicated by this IE, while removing any existing HS-PDSCH resources from other radio links associated with the Node B Communication Context.

If the RADIO LINK RECONFIGURATION PREPARE message includes an *HS-DSCH-RNTI* IE, then the Node B shall use the HS-DSCH-RNTI for the Node B Communication Context.

If the RADIO LINK CONFIGURATION PREPARE message includes an *HS-DSCH To Delet*e IE requesting the deletion of certain HS-DSCH resources for the Node B Communication Context, the Node B shall remove the indicated HS-DSCH in the new configuration.

The Node B shall include the *HS-DSCH Initial Capacity Allocation* IE in the RADIO LINK RECONFIGURATION READY message for each MAC-d flow, if the Node B allows the CRNC to start transmission of MAC-d PDUs before the Node B has allocated capacity on user plane as described in [24].

General

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Layer Address* IE and *Binding ID* IEs 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 Node B may use the transport layer address and the binding identifier received from the CRNC 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.

If the requested modifications are allowed by the Node B and the Node B has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the CRNC 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.

In the RADIO LINK RECONFIGURATION READY message, the Node B shall include the *RL Information Response* IE for each affected Radio Link.

The Node B 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 case of a DCH requiring a new transport bearer on Iub, the *Transport Layer Address* IE and the *Binding ID* IE shall be included in the IE *DCH Information Response* IE.

In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iub 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 DCH in the set of co-ordinated DCHs.

In the case of a Radio Link being combined with another Radio Link within the Node B,the *RL Information Response* IE shall be included only for one of the combined RLs. 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.

/* Partly omitted */

8.3.5 Unsynchronised Radio Link Reconfiguration

8.3.5.1 General

The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a Node B.

The Unsynchronised Radio Link Reconfiguration procedure is used when there is no need to synchronise the time of the switching from the old to the new configuration in one Node B used for a UE-UTRAN connection with any other Node B also used for the UE–UTRAN connection.

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

8.3.5.2 Successful Operation

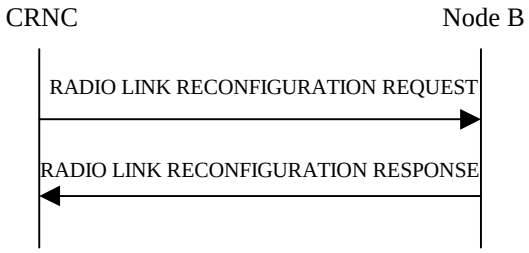

Figure 34: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the CRNC by sending the RADIO LINK RECONFIGURATION REQUEST message to the Node B. The message shall use the Communication Control Port assigned for this Node B Communication Context.

Upon reception, the Node B shall modify the 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.

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

DCH Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCHs To Modify* IE then the Node B shall treat them each as follows:

- If the *DCHs To Modify* IE includes the *Frame Handling Priority* IE, the Node B 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 Uu interface in congestion situations within the Node B once the new configuration has been activated.

- If the *DCHs To Modify* IE includes the *Transport Format Set* IE for the UL, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

- If the *DCHs To Modify* IE includes the *Transport Format Set* IE for the DL, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

- If the *DCHs To Modify* IE includes multiple *DCH Specific Info* IEs, then the Node B shall treat the DCHs in the *DCHs To Modify* IE as a set of co-ordinated DCHs. The Node B 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, the Node B 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, the Node B 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, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

- [TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]

- [TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

DCH Addition:

If the RADIO LINK RECONFIGURATION REQUEST message includes any *DCH To Add* IE, the Node B shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCHs in the new configuration. In particular:

- If a *DCHs To Add* IE includes multiple *DCH Specific Info* IEs for a DCH to be added, the Node B shall treat the DCHs in the *DCHs To Add* IE as a set of co-ordinated DCHs. The Node B 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 Node B shall use the Transport channel BER from that DCHas 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 [16]. 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. [16].]

- For a set of co-ordinated DCHs, the Node B shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" as the QE in the UL data frames [16]. [FDD – If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE [16]. If all DCHs have the *QE-Selector* IE set to "non-selected", the Physical channel BER shall be used for the QE [16].]

- The Node B 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 Uu interface in congestion situations within the Node B once the new configuration has been activated.

- The Node B 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 Node B 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 Node B 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 – If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the DL of a DCH to be added, the Node B shall apply the new CCTrCH ID in the downlink of this DCH in the new configuration.]

- [TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the UL of a DCH to be added, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

DCH Deletion:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be deleted from the Radio Link(s), the Node B shall not include this DCH in the new configuration.

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

[FDD - Physical Channel Modification:]

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

- [FDD – If the *UL DPCH Information* IE includes the *TFCS* IE for the UL, the Node B shall apply the new TFCS in the Uplink of the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes a *DL DPCH Information* IE, then the Node B shall apply the parameters to the new configuration as follows:]

- [FDD – If the *DL DPCH Information* IE includes on the *TFCS* IE for the DL, the Node B shall apply the new TFCS in the Downlink of the new configuration.]

- [FDD – If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE, the Node B shall use the information when building TFCIs in the new configuration.

    - [FDD – If the *Length Of TFCI2* IE is included, then the Node B shall apply the length of TFCI (field 2) indicated in the message in the new configuration.]

    - [FDD – If the *Length Of TFCI2* IE is not included and the *Split Type* IE is present with the value "Hard", then the Node B shall assume the value of the TFCI (field 2) is 5 bits in the new configuration.]

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

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the Node B 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 Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

[TDD – UL/DL CCTrCH Modification]

[TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH To Modify* IE or *DL CCTrCH To Modify* IE in the Radio Link(s), the Node B shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message.]

[TDD – If the *UL/DL CCTrCH To Modify* IE includes *TFCS* IE and/or *Puncture Limit* IE, the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]

[TDD – UL/DL CCTrCH Deletion]

[TDD – If the RADIO LINK RECONFIGURATION REQUEST message includes any *UL CCTrCH To Delete* IE or *DL CCTrCH To Delete* IE, the Node B shall not include this CCTrCH in the new configuration.]

DL Power Control:

- [FDD – If the *Radio Link Information* IE includes the *DL Reference Power* IE and the power balancing is active, the Node B 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 REQUEST message is supported, using the *DL Reference Power* IE in the RADIO LINK RECONFIGURATION REQUEST message. The updated reference power shall be used from the next adjustment period.]

[FDD – If updating of power balancing parameters by the RADIO LINK RECONFIGURATION REQUEST message is supported by the Node B, the Node B shall include the *DL Power Balancing Updated Indicator* IE in the *RL Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message.]

RL Information:

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RL Information* IE, the Node B shall treat it as follows:

- If the *RL Information* IE includes the *Maximum DL Power* IE, the Node B shall apply this value to the new configuration and not transmit with a higher power on any Downlink DPCH of the Radio Link once the new configuration is being used. [FDD - During compressed mode, 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.]

- If the *RL Information* IE includes the *Minimum DL Power* IE, the Node B shall apply this value to the new configuration and never transmit with a lower power on any Downlink Channelisation Code of the Radio Link once the new configuration is being used.

- [FDD – If the *RL Information* IE contains the *Transmission Gap Pattern Sequence Code Information* IE in the *DL Code Information* IE for any of the allocated DL Channelisation Codes, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]

- [1.28Mcps TDD – If the *RL Information* IE contains the *Uplink Synchronisation Parameters LCR* IE, the Node B shall use the indicated values of *Uplink synchronisation stepsize* IE and *Uplink synchronisation frequency* IE when evaluating the timing of the UL synchronisation.]

Signalling Bearer Re-arrangement:

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Signalling Bearer Request Indicator* IE, the Node B shall, if supported, allocate a new Communication Control Port for the control of the Node B Communication Context and include the *Target Communication Control Port ID* IE in the RADIO LINK RECONFIGURATION RESPONSE message.

General

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RL Specific DCH Information* IE, the Node B may use the transport layer address and the binding identifier received from the CRNC when establishing a transport bearer for any Transport Channel being added or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

If the requested modifications are allowed by the Node B, the Node B has successfully allocated the required resources, and changed to the new configuration, it shall respond to the CRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

In the RADIO LINK RECONFIGURATION RESPONSE message, the Node B shall include the *RL Information Response* IE for each affected Radio Link.

The Node B shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE for any Transport Channel being added or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. The detailed frame protocol handling during transport bearer replacement is described in [16], subclause 5.10.1.

In the case of a set of co-ordinated DCHs requiring a new transport bearer on the Iub 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 DCH in the set of coordinated DCHs.

In the case of a Radio Link being combined with another Radio Link within the Node B, the *RL Information Response* IE shall be included only for one of the combined Radio Links. 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.

In the case of a signalling bearer re-arrangement, the new Communication Control Port shall be used once the Node B has sent the RADIO LINK RECONFIGURATION RESPONSE message via the old Communication Control Port.

9.1.36 RADIO LINK SETUP REQUEST

9.1.36.2 TDD message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCCC" shall not be used.	YES	reject
UL CCTrCH Information		*0..<maxnoCCTrCH>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>UL DPCH Information		*0..1*		Applicable to 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH Information LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
>UL SIR Target	O		UL SIR 9.2.1.67A	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	reject
DL CCTrCH Information		*0..<maxnoCCTrCH>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>TDD TPC DL Step Size	M		9.2.3.21		–	
>TPC CCTrCH List		*0..<maxnoCCTrCH>*		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH information		*0..1*		Applicable to 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	

>DL DPCH information LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
>>TSTD Indicator	M		9.2.1.64		–	
>CCTrCH Initial DL Transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	YES	ignore
DCH Information	O		DCH TDD Information 9.2.3.4C		YES	reject
DSCH Information	O		DSCH TDD Information 9.2.3.5A		YES	reject
USCH Information	O		9.2.3.28		YES	reject
RL Information		*1*			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Special Burst Scheduling	M		9.2.3.18A		–	
>Initial DL Transmission Power	M		DL Power 9.2.1.21	Initial power on DPCH	–	
>Maximum DL Power	M		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum DL Power	M		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>DL Time Slot ISCP Info	O		9.2.3.4F	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.40A	Applicable to 1.28Mcps TDD only	YES	reject
>RL Specific DCH Information	O		9.2.1.53G		YES	ignore
>Delayed Activation	O		9.2.1.24C		YES	reject
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.x		-	
>>Uplink Synchronisation Frequency	M		9.2.3.y		-	
HS-DSCH Information	O		HS-DSCH TDD Information 9.2.3.5F		YES	reject
HS-DSCH-RNTI	O		9.2.1.31J		YES	reject
HS-PDSCH RL ID	C-InfoHSDSCH		RL ID 9.2.1.53		YES	reject
PDSCH-RL-ID	O		RL ID 9.2.1.53		YES	ignore

Range Bound	Explanation
maxnoCCTrCH	Number of CCTrCHs for one UE

/* partly omitted */

9.1.39 RADIO LINK ADDITION REQUEST

/* partly omitted */

9.1.39.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
UL CCTrCH Information		*0..<maxnoCCTrCH>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>UL DPCH Information		*0..1*		Applicable to 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH Information LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
DL CCTrCH Information		*0..<maxnoCCTrCH>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>DL DPCH information		*0..1*		Applicable to 3.84Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
>DL DPCH information LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	notify
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
>CCTrCH Initial DL Transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	YES	ignore
RL Information		*1*			YES	reject
>RL ID	M		9.2.1.53		–	
>C-ID	M		9.2.1.9		–	
>Frame Offset	M		9.2.1.31		–	
>Diversity Control Field	M		9.2.1.25		–	
>Initial DL Transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	–	
>Maximum DL Power	O		DL Power 9.2.1.21	Maximum allowed power	–	

				on DPCH		
>Minimum DL Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>DL Time Slot ISCP Info	O		9.2.3.4F	Applicable to 3.84Mcps TDD only	–	
>DL Time Slot ISCP Info LCR	O		9.2.3.40A	Applicable to 1.28Mcps TDD only	YES	reject
>RL Specific DCH Information	O		9.2.1.53G		YES	ignore
>Delayed Activation	O		9.2.1.24C		YES	reject
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.x		-	
>>Uplink Synchronisation Sreguency	M		9.2.3.y		-	

Range Bound	Explanation
maxnoCCTrCH	Number of CCTrCH for one UE

/* partly omitted */

9.1.42 RADIO LINK RECONFIGURATION PREPARE

/* partly omitted */

9.1.42.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
UL CCTrCH To Add		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>UL DPCH Information		*0..1*		Applicable to 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH Information LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
>UL SIR Target	O		UL SIR 9.2.1.67A	Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD	YES	reject
UL CCTrCH To Modify		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>TFCI Coding	O		9.2.3.22		–	
>Puncture Limit	O		9.2.1.50		–	
>UL SIR Target	O		UL SIR 9.2.1.67A	Applicable to 1.28Mcps TDD only	YES	reject
>UL DPCH To Add		*0..1*		Applicable to 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information	M		9.2.3.26C		–	
>UL DPCH To Modify		*0..1*			YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	

>>UL Timeslot Information		*0..<maxnoofULts>*		Applicable to 3.84Mcps TDD only	–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>UL Code Information		*0..<maxnoofDPCHs>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>>UL Timeslot Information LCR		*0..<maxnoofULtsLCR>*		Applicable to 1.28Mcps TDD only	GLOBAL	reject
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble Shift LCR	O		9.2.3.7A			
>>>TFCI Presence	O		9.2.1.57		–	
>>>UL Code Information LCR		*0..<maxnoOfDPCHLCR>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code LCR	O		9.2.3.19a		–	
>UL DPCH To Delete		*0..<maxnoofDPCHs>*			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
>UL DPCH To Add LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>UL Timeslot Information LCR	M		9.2.3.26E		–	
UL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DL CCTrCH To Add		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	M		9.2.1.58		–	
>TFCI Coding	M		9.2.3.22		–	
>Puncture Limit	M		9.2.1.50		–	
>TPC CCTrCH List		*0..<maxnoofCCTrCHs>*		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH Information		*0..1*		Applicable to 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
>DL DPCH Information		*0..1*		Applicable to 1.28Mcps TDD	YES	reject

LCR				only		
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	
>CCTrCH Initial DL Transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	YES	ignore

DL CCTrCH To Modify		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3.		–	
>TFCS	O		9.2.1.58		–	
>TFCI Coding	O		9.2.3.22		–	
>Puncture Limit	O		9.2.1.50		–	
>TPC CCTrCH List		*0..<maxnoofCCTrCHs>*		List of uplink CCTrCH which provide TPC	–	
>>TPC CCTrCH ID	M		CCTrCH ID 9.2.3.3		–	
>DL DPCH To Add		*0..1*		Applicable to 3.84Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information	M		9.2.3.4E		–	
>DL DPCH To Modify		*0..1*			YES	reject
>>Repetition Period	O		9.2.3.16		–	
>>Repetition Length	O		9.2.3.15		–	
>>TDD DPCH Offset	O		9.2.3.19A		–	
>>DL Timeslot Information		*0..<maxnoofDLts>*		Applicable to 3.84Mcps TDD only	–	
>>>Time Slot	M		9.2.3.23		–	
>>>Midamble Shift And Burst Type	O		9.2.3.7		–	
>>>TFCI Presence	O		9.2.1.57		–	
>>>DL Code Information		*0..<maxnoofDPCHs>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code	O		9.2.3.19		–	
>>DL Timeslot Information LCR		*0..<maxnoofDLtsLCR>*		Applicable to 1.28Mcps TDD only	GLOBAL	reject
>>>Time Slot LCR	M		9.2.3.24A		–	
>>>Midamble Shift LCR	O		9.2.3.7A			
>>>TFCI Presence	O		9.2.1.57		–	
>>>DL Code Information LCR		*0..<maxnoofDPCHsLCR>*			–	
>>>>DPCH ID	M		9.2.3.5		–	
>>>>TDD Channelisation Code LCR	O		9.2.3.19a		–	
>DL DPCH To Delete		*0..<maxnoofDPCHs>*			GLOBAL	reject
>>DPCH ID	M		9.2.3.5		–	
>DL DPCH To Add LCR		*0..1*		Applicable to 1.28Mcps TDD only	YES	reject
>>Repetition Period	M		9.2.3.16		–	
>>Repetition Length	M		9.2.3.15		–	
>>TDD DPCH Offset	M		9.2.3.19A		–	
>>DL Timeslot Information LCR	M		9.2.3.4O		–	

DL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			GLOBAL	reject
>CCTrCH ID	M		9.2.3.3		–	
DCHs To Modify	O		DCHs TDD To Modify 9.2.3.4D		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.4C		YES	reject
DCHs To Delete		*0..<maxnoofDCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
DSCH To Modify		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
>CCTrCH ID	O		9.2.3.3	DL CCTrCH in which the DSCH is mapped	–	
>Transport Format Set	O		9.2.1.59		–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>Frame Handling Priority	O		9.2.1.30		–	
>ToAWS	O		9.2.1.61		–	
>ToAWE	O		9.2.1.60		–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
>Binding ID	O		9.2.1.4	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
DSCH To Add	O		DSCH TDD Information 9.2.3.5A		YES	reject
DSCH To Delete		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DSCH ID	M		9.2.1.27		–	
USCH To Modify		*0..<maxnoofUSCHs>*			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	
>Transport Format Set	O		9.2.1.59		–	
>Allocation/Retention Priority	O		9.2.1.1A		–	
>CCTrCH ID	O		9.2.3.2	UL CCTrCH in which the USCH is mapped	–	
>Transport Bearer Request Indicator	M		9.2.1.62A		–	
>Binding ID	O		9.2.1.4	Shall be ignored if bearer establishment with ALCAP.	YES	ignore

>Transport Layer Address	O		9.2.1.63	Shall be ignored if bearer establishment with ALCAP.	YES	ignore
USCH To Add	O		USCH Information 9.2.3.28		YES	reject
USCH To Delete		*0..<maxnoofUSCHs>*			GLOBAL	reject
>USCH ID	M		9.2.3.27		–	
RL Information		*0..1*			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum Downlink Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>Initial DL Transmission Power	O		DL Power 9.2.1.21	Initial power on DPCH	YES	ignore
>RL Specific DCH Information	O		9.2.1.53G		YES	ignore
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.x		-	
>>Uplink Synchronisation Frequency	M		9.2.3.y		-	
Signalling Bearer Request Indicator	O		9.2.1.55A		YES	reject
HS-DSCH To Modify	O		9.2.1.31H		YES	reject
HS-DSCH To Add	O		HS-DSCH TDD Information 9.2.3.5F		YES	reject
HS-DSCH To Delete		*0..<maxnoofMACdFlows>*			GLOBAL	reject
>HS-DSCH MAC-D flow ID	M		9.2.1.31I		–	
HS-DSCH-RNTI	O		9.2.1.31J		YES	reject
HS-PDSCH RL ID	O		RL ID 9.2.1.53		YES	reject
PDSCH-RL-ID	O		RL ID 9.2.1.53		YES	ignore

Range Bound	Explanation
maxnoofDCHs	Maximum number of DCHs for a UE
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE
maxnoofDPCHs	Maximum number of DPCHs in one CCTrCH for 3.84Mcps TDD
maxnoofDPCHsLCR	Maximum number of DPCHs in one CCTrCH for 1.28Mcps TDD
maxnoofDSCHs	Maximum number of DSCHs for one UE
maxnoofUSCHs	Maximum number of USCHs for one UE
maxnoofDLts	Maximum number of Downlink time slots per Radio Link for 3.84Mcps TDD
maxnoofDLtsLCR	Maximum number of Downlink time slots per Radio Link for 1.28Mcps TDD
maxnoofULts	Maximum number of Uplink time slots per Radio Link for 3.84Mcps TDD
maxnoofULtsLCR	Maximum number of Uplink time slots per Radio Link for 1.28Mcps TDD
maxnoofMACdFlows	Maximum number of HS-DSCH MAC-d flows

/* Partly omitted */

9.1.47 RADIO LINK RECONFIGURATION REQUEST

/* Partly omitted */

9.1.47.2 TDD Message

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
Transaction ID	M		9.2.1.62		–	
Node B Communication Context ID	M		9.2.1.48	The reserved value "All NBCC" shall not be used.	YES	reject
UL CCTrCH To Modify		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
UL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
DL CCTrCH To Modify		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
>TFCS	O		9.2.1.58		–	
>Puncture Limit	O		9.2.1.50		–	
DL CCTrCH To Delete		*0..<maxnoofCCTrCHs>*			EACH	notify
>CCTrCH ID	M		9.2.3.3		–	
DCHs To Modify	O		DCHs TDD To Modify 9.2.3.4D		YES	reject
DCHs To Add	O		DCH TDD Information 9.2.3.4C		YES	reject
DCHs To Delete		*0..<maxnoofDSCHs>*			GLOBAL	reject
>DCH ID	M		9.2.1.20		–	
RL Information		*0..1*			YES	reject
>RL ID	M		9.2.1.53		–	
>Maximum Downlink Power	O		DL Power 9.2.1.21	Maximum allowed power on DPCH	–	
>Minimum Downlink Power	O		DL Power 9.2.1.21	Minimum allowed power on DPCH	–	
>RL Specific DCH Information	O		9.2.1.53G		YES	ignore
>UL Synchronisation Parameters LCR		*0..1*		Mandatory for 1.28Mcps TDD. Not Applicable to 3.84Mcps TDD.	YES	ignore
>>Uplink Synchronisation Step Size	M		9.2.3.x		-	
>>Uplink Synchronisation Frequency	M		9.2.3.y		-	
Signalling Bearer Request Indicator	O		9.2.1.55A		YES	reject

Range Bound	Explanation
maxnoofCCTrCHs	Maximum number of CCTrCHs for a UE

/*Partly omitted*/

9.2.3.x Uplink Synchronisation Step Size

The *UL Synchronisation Step Size* IE specifies the step size to be used for the adjustment of the uplink transmission timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink synchronisation step size			INTEGER (1..8)	Unit: 1/8 chip, step: 1.

9.2.3.y Uplink Synchronisation Frequency

The *UL Synchronisation Frequency* IE specifies the frequency of the adjustment of the uplink transmission timing.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uplink synchronisation frequency			INTEGER (1..8)	Unit: subframe, step: 1

/* partly omitted */

9.3.3 PDU Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    Active-Pattern-Sequence-Information,
    AddorDeleteIndicator,
    AICH-Power,
    AICH-TransmissionTiming,
    AllocationRetentionPriority,
    APPreambleSignature,
    APSubChannelNumber,
    AvailabilityStatus,
    BCCH-ModificationTime,
    BindingID,
    BlockingPriorityIndicator,
    SCTD-Indicator,
    Cause,
    CCTrCH-ID,
    CDSubChannelNumbers,
    CellParameterID,
    CellSyncBurstCode,
    CellSyncBurstCodeShift,
    CellSyncBurstRepetitionPeriod,
    CellSyncBurstSIR,
    CellSyncBurstTiming,
    CellSyncBurstTimingThreshold,
    CFN,
    Channel-Assignment-Indication,
    ChipOffset,
    C-ID,
    Closedlooptimingadjustmentmode,
    CommonChannelsCapacityConsumptionLaw,
```

```
    Compressed-Mode-Deactivation-Flag,
    CommonMeasurementAccuracy,
    CommonMeasurementType,
    CommonMeasurementValue,
    CommonMeasurementValueInformation,
    CommonPhysicalChannelID,
    Common-PhysicalChannel-Status-Information,
    Common-TransportChannel-Status-Information,
    CommonTransportChannelID,
    CommonTransportChannel-InformationResponse,
    CommunicationControlPortID,
    ConfigurationGenerationID,
    ConstantValue,
    CriticalityDiagnostics,
    CPCH-Allowed-Total-Rate,
    CPCHScramblingCodeNumber,
    CPCH-UL-DPCCH-SlotFormat,
    CRNC-CommunicationContextID,
    CSBMeasurementID,
    CSBTransmissionID,
    DCH-FDD-Information,
    DCH-InformationResponse,
    DCH-ID,
    FDD-DCHs-to-Modify,
    TDD-DCHs-to-Modify,
    DCH-TDD-Information,
    DedicatedChannelsCapacityConsumptionLaw,
    DedicatedMeasurementType,
    DedicatedMeasurementValue,
    DedicatedMeasurementValueInformation,
    DelayedActivation,
    DelayedActivationUpdate,
    DiversityControlField,
    DiversityMode,
    DL-DPCH-SlotFormat,
    DL-DPCH-TimingAdjustment,
    DL-or-Global-CapacityCredit,
    DL-Power,
    DL-PowerBalancing-Information,
    DL-PowerBalancing-ActivationIndicator,
    DLPowerAveragingWindowSize,
    DL-PowerBalancing-UpdatedIndicator,
    DL-ScramblingCode,
    DL-TimeslotISCP,
    DL-Timeslot-Information,
    DL-TimeslotLCR-Information,
    DL-TimeslotISCPInfo,
    DL-TimeslotISCPInfoLCR,
    DL-TPC-Pattern01Count,
    DPC-Mode,
    DPCH-ID,
    DSCH-ID,
    DSCH-FDD-Common-Information,
```

```
    DSCH-FDD-Information,
    DSCH-InformationResponse,
    DSCH-TDD-Information,
    DwPCH-Power,
    End-Of-Audit-Sequence-Indicator,
    EnhancedDSCHPC,
    EnhancedDSCHPCCounter,
    EnhancedDSCHPCIndicator,
    EnhancedDSCHPCWnd,
    EnhancedDSCHPowerOffset,
    FDD-DL-ChannelisationCodeNumber,
    FDD-DL-CodeInformation,
    FDD-S-CCPCH-Offset,
    FDD-TPC-DownlinkStepSize,
    FirstRLS-Indicator,
    FNReportingIndicator,
    FPACH-Power,
    FrameAdjustmentValue,
    FrameHandlingPriority,
    FrameOffset,
    HS-PDSCH-FDD-Code-Information,
    HS-SCCH-ID,
    HS-SCCH-FDD-Code-Information,
    IB-OC-ID,
    IB-SG-DATA,
    IB-SG-POS,
    IB-SG-REP,
    IB-Type,
    InformationExchangeID,
    InformationReportCharacteristics,
    InformationType,
    InnerLoopDLPCStatus,
    IPDL-FDD-Parameters,
    IPDL-TDD-Parameters,
    IPDL-Indicator,
    IPDL-TDD-Parameters-LCR,
    LimitedPowerIncrease,
    Local-Cell-ID,
    MaximumDL-PowerCapability,
    Maximum-PDSCH-Power,
    MaximumTransmissionPower,
    Max-Number-of-PCPCHes,
    MaxNrOfUL-DPDCHs,
    MaxPRACH-MidambleShifts,
    MeasurementFilterCoefficient,
    MeasurementID,
    MidambleAllocationMode,
    MidambleShiftAndBurstType,
    MidambleShiftLCR,
    MinimumDL-PowerCapability,
    MinSpreadingFactor,
    MinUL-ChannelisationCodeLength,
    MultiplexingPosition,
```

```
    NEOT,
    NCyclesPerSFNperiod,
    NFmax,
    NRepetitionsPerCyclePeriod,
    N-INSYNC-IND,
    N-OUTSYNC-IND,
    NeighbouringCellMeasurementInformation,
    NeighbouringFDDCellMeasurementInformation,
    NeighbouringTDDCellMeasurementInformation,
    NodeB-CommunicationContextID,
    NStartMessage,
    NSubCyclesPerCyclePeriod,
    PagingIndicatorLength,
    PayloadCRC-PresenceIndicator,
    PCCPCH-Power,
    PCP-Length,
    PDSCH-CodeMapping,
    PDSCHSet-ID,
    PDSCH-ID,
    PICH-Mode,
    PICH-Power,
    PowerAdjustmentType,
    PowerOffset,
    PowerRaiseLimit,
    PRACH-Midamble,
    PreambleSignatures,
    PreambleThreshold,
    PredictedSFNSFNDeviationLimit,
    PredictedTUTRANGPSDeviationLimit,
    PrimaryCPICH-Power,
    PrimaryScramblingCode,
    PropagationDelay,
    SCH-TimeSlot,
    PunctureLimit,
    PUSCHSet-ID,
    PUSCH-ID,
    QE-Selector,
    Qth-Parameter,
    RACH-SlotFormat,
    RACH-SubChannelNumbers,
    ReferenceClockAvailability,
    ReferenceSFNoffset,
    RepetitionLength,
    RepetitionPeriod,
    ReportCharacteristics,
    RequestedDataValue,
    RequestedDataValueInformation,
    ResourceOperationalState,
    RL-Set-ID,
    RL-ID,
    RL-Specific-DCH-Info,
    Received-total-wide-band-power-Value,
    AdjustmentPeriod,
```

```
    ScaledAdjustmentRatio,
    MaxAdjustmentStep,
    RNC-ID,
    ScramblingCodeNumber,
    SecondaryCCPCH-SlotFormat,
    Segment-Type,
    S-FieldLength,
    SFN,
    SFNSFNChangeLimit,
    SFNSFNDriftRate,
    SFNSFNDriftRateQuality,
    SFNSFNQuality,
    ShutdownTimer,
    SIB-Originator,
    SpecialBurstScheduling,
    SignallingBearerRequestIndicator,
    SSDT-Cell-Identity,
    SSDT-CellID-Length,
    SSDT-Indication,
    Start-Of-Audit-Sequence-Indicator,
    STTD-Indicator,
    SSDT-SupportIndicator,
    SyncCase,
    SYNCDlCodeId,
    SyncFrameNumber,
    SynchronisationReportCharacteristics,
    SynchronisationReportType,
    T-Cell,
    T-RLFAILURE,
    TDD-ChannelisationCode,
    TDD-ChannelisationCodeLCR,
    TDD-DL-Code-LCR-Information,
    TDD-DPCHOffset,
    TDD-TPC-DownlinkStepSize,
    TDD-PhysicalChannelOffset,
    TDD-UL-Code-LCR-Information,
    TFCI2-BearerInformationResponse,
    TFCI2BearerRequestIndicator,
    TFCI-Coding,
    TFCI-Presence,
    TFCI-SignallingMode,
    TFCS,
    TimeSlot,
    TimeSlotLCR,
    TimeSlotDirection,
    TimeSlotStatus,
    TimingAdjustmentValue,
    TimingAdvanceApplied,
    ToAWE,
    ToAWS,
    TransmissionDiversityApplied,
    TransmitDiversityIndicator,
```

```
    TransmissionGapPatternSequenceCodeInformation,
    Transmission-Gap-Pattern-Sequence-Information,
    TransportBearerRequestIndicator,
    TransportFormatSet,
    TransportLayerAddress,
    TSTD-Indicator,
    TUTRANGPS,
    TUTRANGPSChangeLimit,
    TUTRANGPSDriftRate,
    TUTRANGPSDriftRateQuality,
    TUTRANGPSQuality,
    UARFCN,
    UC-Id,
    USCH-Information,
    USCH-InformationResponse,
    UL-CapacityCredit,
    UL-DPCCH-SlotFormat,
    UL-SIR,
    UL-FP-Mode,
    UL-PhysCH-SF-Variation,
    UL-ScramblingCode,
    UL-Timeslot-Information,
    UL-TimeslotLCR-Information,
    UL-TimeSlot-ISCP-Info,
    UL-TimeSlot-ISCP-LCR-Info,
    UL-TimeslotISCP-Value,
    UL-TimeslotISCP-Value-IncrDecrThres,
    USCH-ID,
    HSDSCH-FDD-Information,
    HSDSCH-FDD-Information-Response,
    HSDSCH-Information-to-Modify,
    HSDSCH-MACdFlow-ID,
    HSDSCH-RNTI,
    HSDSCH-TDD-Information,
    HSDSCH-TDD-Information-Response,
    PrimaryCCPCH-RSCP,
    UL-Synchronisation-Parameters-LCR
FROM NBAP-IEs
```

/* partly omitted */

```
    id-RL-InformationResponse-LCR-RL-AdditionRspTDD,
    id-IPDLParameter-Information-LCR-Cell-SetupRqstTDD,
    id-IPDLParameter-Information-LCR-Cell-ReconfRqstTDD,
    id-HS-PDSCH-HS-SCCH-MaxPower-PSCH-ReconfRqst,
    id-HS-PDSCH-HS-SCCH-ScramblingCode-PSCH-ReconfRqst,
    id-HS-PDSCH-FDD-Code-Information-PSCH-ReconfRqst,
    id-HS-SCCH-FDD-Code-Information-PSCH-ReconfRqst,
    id-HS-PDSCH-TDD-Information-PSCH-ReconfRqst,
    id-Add-To-HS-SCCH-Resource-Pool-PSCH-ReconfRqst,
```

```
    id-Modify-HS-SCCH-Resource-Pool-PSCH-ReconfRqst,
    id-Delete-From-HS-SCCH-Resource-Pool-PSCH-ReconfRqst,
    id-SYNCDlCodeId-TransInitLCR-CellSyncInitiationRqstTDD,
    id-SYNCDlCodeId-MeasureInitLCR-CellSyncInitiationRqstTDD,
    id-SYNCDlCodeIdTransReconfInfoLCR-CellSyncReconfRqstTDD,
    id-SYNCDlCodeIdMeasReconfigurationLCR-CellSyncReconfRqstTDD,
    id-SYNCDlCodeIdMeasInfoList-CellSyncReconfRqstTDD,
    id-SyncDLCodeIdsMeasInfoList-CellSyncReprtTDD,
    id-NSubCyclesPerCyclePeriod-CellSyncReconfRqstTDD,
    id-DwPCH-Power,
    id-AccumulatedClockupdate-CellSyncReprtTDD,
    id-HSDSCH-FDD-Information,
    id-HSDSCH-FDD-Information-Response,
    id-HSDSCH-FDD-Information-to-Add,
    id-HSDSCH-FDD-Information-to-Delete,
    id-HSDSCH-Information-to-Modify,
    id-HSDSCH-RearrangeList-Bearer-RearrangeInd,
    id-HSDSCH-RNTI,
    id-HSDSCH-TDD-Information,
    id-HSDSCH-TDD-Information-Response,
    id-HSDSCH-TDD-Information-Response-LCR,
    id-HSDSCH-TDD-Information-to-Add,
    id-HSDSCH-TDD-Information-to-Delete,
    id-HSPDSCH-RL-ID,
    id-PrimCCPCH-RSCP-DL-PC-RqstTDD,
    id-UL-Synchronisation-Parameters-LCR,

    maxNrOfCCTrCHs,
    maxNrOfCellSyncBursts,
    maxNrOfCodes,
    maxNrOfCPCHs,
    maxNrOfDCHs,
    maxNrOfDLTSs,
    maxNrOfDLTSLCRs,
    maxNrOfDPCHs,
    maxNrOfDSCHs,
    maxNrOfFACHs,
    maxNrOfRLs,
    maxNrOfRLs-1,
    maxNrOfRLs-2,
    maxNrOfRLSets,
    maxNrOfPCPCHs,
    maxNrOfPDSCHs,
    maxNrOfPUSCHs,
    maxNrOfPRACHLCRs,
    maxNrOfPDSCHSets,
    maxNrOfPUSCHSets,
    maxNrOfReceptsPerSyncFrame,
    maxNrOfSCCPCHs,
    maxNrOfSCCPCHLCRs,
    maxNrOfULTSs,
    maxNrOfULTSLCRs,
    maxNrOfUSCHs,
```

```
    maxAPSigNum,
    maxCPCHCell,
    maxFACHCell,
    maxFPACHCell,
    maxNoofLen,
    maxRACHCell,
    maxPCPCHCell,
    maxPRACHCell,
    maxSCCPCHCell,
    maxSCPICHCell,
    maxCellinNodeB,
    maxCCPinNodeB,
    maxCommunicationContext,
    maxLocalCellinNodeB,
    maxNrOfSlotFormatsPRACH,
    maxIB,
    maxIBSEG,
    maxNrOfHSSCCHs,
    maxNrOfSyncFramesLCR,
    maxNrOfReceptionsperSyncFrameLCR,
    maxNrOfSyncDLCodesLCR,
    maxNrOfMACdFlows
FROM NBAP-Constants;
```

/* Partly omitted */

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK SETUP REQUEST TDD
--
-- **************************************************************

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

RadioLinkSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID                      CRITICALITY reject          TYPE                    CRNC-CommunicationContextID
                PRESENCE    mandatory   }|
    { ID    id-UL-CCTrCH-InformationList-RL-SetupRqstTDD        CRITICALITY notify          TYPE                    UL-CCTrCH-InformationList-RL-
SetupRqstTDD        PRESENCE    optional    }|
    { ID    id-DL-CCTrCH-InformationList-RL-SetupRqstTDD        CRITICALITY notify          TYPE                    DL-CCTrCH-InformationList-RL-
SetupRqstTDD        PRESENCE    optional    }|
    { ID    id-DCH-TDD-Information              CRITICALITY reject          TYPE    DCH-TDD-Information                     PRESENCE optional }|
    { ID    id-DSCH-TDD-Information             CRITICALITY reject          TYPE    DSCH-TDD-Information                PRESENCE optional }|
```

```
    { ID    id-USCH-Information            CRITICALITY reject          TYPE    USCH-Information                      PRESENCE optional }|
    { ID    id-RL-Information-RL-SetupRqstTDD                  CRITICALITY reject          TYPE                  RL-Information-RL-SetupRqstTDD
                PRESENCE    mandatory   },
    ...
}

RadioLinkSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-HSDSCH-TDD-Information          CRITICALITY reject      EXTENSION HSDSCH-TDD-Information              PRESENCE optional }|
    { ID id-HSDSCH-RNTI                     CRITICALITY reject      EXTENSION HSDSCH-RNTI                         PRESENCE optional }|
    { ID id-HSPDSCH-RL-ID                   CRITICALITY reject      EXTENSION RL-ID                               PRESENCE conditional }|
    { ID id-PDSCH-RL-ID                     CRITICALITY ignore      EXTENSION RL-ID                               PRESENCE optional },
    ...
}

UL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfCCTrCHs)) OF
    ProtocolIE-Single-Container{{ UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD }}

UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD        CRITICALITY     notify          TYPE                UL-CCTrCH-InformationItem-RL-
SetupRqstTDD        PRESENCE    mandatory}
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    tFCS                                    TFCS,
    tFCI-Coding                             TFCI-Coding,
    punctureLimit                           PunctureLimit,
    uL-DPCH-Information                     UL-DPCH-Information-RL-SetupRqstTDD     OPTIONAL,   -- Applicable to 3.84Mcps TDD only
    iE-Extensions                           ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-LCR-Information-RL-SetupRqstTDD CRITICALITY notify      EXTENSION   UL-DPCH-LCR-Information-RL-SetupRqstTDD   PRESENCE optional
    }|  -- Applicable to 1.28Mcps TDD only
    { ID id-UL-SIRTarget        CRITICALITY reject      EXTENSION       UL-SIR      PRESENCE optional               },
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD.
    ...
}

UL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ UL-DPCH-InformationIE-RL-SetupRqstTDD }}

UL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationList-RL-SetupRqstTDD     CRITICALITY notify  TYPE UL-DPCH-InformationItem-RL-SetupRqstTDD    PRESENCE mandatory   }
}

UL-DPCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-Information                 UL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
```

```
}

UL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-LCR-Information-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-TimeslotLCR-Information              UL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container{{ DL-CCTrCH-InformationItemIE-RL-
SetupRqstTDD }}

DL-CCTrCH-InformationItemIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD            CRITICALITY     notify                          TYPE  DL-CCTrCH-InformationItem-
RL-SetupRqstTDD     PRESENCE    mandatory}
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    tFCS                                    TFCS,
    tFCI-Coding                             TFCI-Coding,
    punctureLimit                           PunctureLimit,
    tdd-TPC-DownlinkStepSize                TDD-TPC-DownlinkStepSize,
    cCTrCH-TPCList                          CCTrCH-TPCList-RL-SetupRqstTDD          OPTIONAL,
    dL-DPCH-Information                     DL-DPCH-Information-RL-SetupRqstTDD     OPTIONAL,   -- Applicable to 3.84Mcps TDD only
    iE-Extensions                           ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-LCR-Information-RL-SetupRqstTDD CRITICALITY notify      EXTENSION   DL-DPCH-LCR-Information-RL-SetupRqstTDD   PRESENCE optional
    }|  -- Applicable to 1.28Mcps TDD only
    { ID id-CCTrCH-Initial-DL-Power-RL-SetupRqstTDD     CRITICALITY ignore      EXTENSION DL-Power                      PRESENCE optional },
    ...
}

CCTrCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCItem-RL-SetupRqstTDD

CCTrCH-TPCItem-RL-SetupRqstTDD   ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}
```

```
CCTrCH-TPCItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupRqstTDD ::= ProtocolIE-Single-Container{{ DL-DPCH-InformationIE-RL-SetupRqstTDD }}

DL-DPCH-InformationIE-RL-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationList-RL-SetupRqstTDD     CRITICALITY notify  TYPE DL-DPCH-InformationItem-RL-SetupRqstTDD    PRESENCE mandatory   }
}

DL-DPCH-InformationItem-RL-SetupRqstTDD  ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-Timeslot-Information             DL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-LCR-Information-RL-SetupRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-TimeslotLCR-Information              DL-TimeslotLCR-Information,
    tstdIndicator                           TSTD-Indicator,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    c-ID                                    C-ID,
    frameOffset                             FrameOffset,
    specialBurstScheduling                  SpecialBurstScheduling,
    initialDL-transmissionPower             DL-Power,
    maximumDL-power                         DL-Power,
    minimumDL-power                         DL-Power,
    dL-TimeSlotISCPInfo                     DL-TimeslotISCPInfo OPTIONAL,   -- Applicable to 3.84Mcps TDD only
    iE-Extensions                           ProtocolExtensionContainer { { RL-Information-RL-SetupRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

RL-Information-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD   CRITICALITY reject      EXTENSION   DL-TimeslotISCPInfoLCR    PRESENCE optional }|
```

```
    -- Applicable to 1.28Mcps TDD only
    { ID id-RL-Specific-DCH-Info    CRITICALITY ignore      EXTENSION   RL-Specific-DCH-Info    PRESENCE            optional }|
    { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional }|
    { ID    id-UL-Synchronisation-Parameters-LCR            CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- **************************************************************

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

RadioLinkAdditionRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                         CRITICALITY     reject                          TYPE  NodeB-
CommunicationContextID                      PRESENCE    mandatory   }|
    { ID    id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD         CRITICALITY     reject                          TYPE  UL-CCTrCH-InformationList-
RL-AdditionRqstTDD          PRESENCE    optional    }|
    { ID    id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD         CRITICALITY     reject                          TYPE  DL-CCTrCH-InformationList-
RL-AdditionRqstTDD          PRESENCE    optional    }|
    { ID    id-RL-Information-RL-AdditionRqstTDD                    CRITICALITY     reject                          TYPE  RL-Information-RL-
AdditionRqstTDD                PRESENCE    mandatory   },
    ...
}

RadioLinkAdditionRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-AdditionRqstTDD

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    uL-DPCH-Information                     UL-DPCH-InformationList-RL-AdditionRqstTDD      OPTIONAL, -- Applicable to 3.84cps TDD only
    iE-Extensions                           ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    { ID    id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD           CRITICALITY     notify                          EXTENSION   UL-DPCH-
InformationItem-LCR-RL-AdditionRqstTDD          PRESENCE    optional }, -- Applicable to 1.28cps TDD only
    ...
}

UL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

UL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-UL-DPCH-InformationItem-RL-AdditionRqstTDD           CRITICALITY     notify                          TYPE  UL-DPCH-InformationItem-RL-
AdditionRqstTDD         PRESENCE    optional}   -- For 3.84Mcps TDD only
}

UL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-Information             UL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-AdditionRqstTDD

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    dL-DPCH-Information                     DL-DPCH-InformationList-RL-AdditionRqstTDD      OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }   OPTIONAL,
    ...
}

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD           CRITICALITY     notify                          EXTENSION   DL-DPCH-
InformationItem-LCR-RL-AdditionRqstTDD          PRESENCE    optional }| -- Applicable to 1.28Mcps TDD only
    { ID id-CCTrCH-Initial-DL-Power-RL-AdditionRqstTDD      CRITICALITY ignore      EXTENSION DL-Power              PRESENCE optional },
    ...
}

DL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

DL-DPCH-InformationItemIE-RL-AdditionRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DL-DPCH-InformationItem-RL-AdditionRqstTDD           CRITICALITY     notify                          TYPE  DL-DPCH-InformationItem-RL-
AdditionRqstTDD         PRESENCE    mandatory}  -- Applicable to 3.84Mcps TDD only
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-Timeslot-Information             DL-Timeslot-Information,
```

```
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs} }        OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    c-ID                                    C-ID,
    frameOffset                             FrameOffset,
    diversityControlField                   DiversityControlField,
    initial-DL-Transmission-Power           DL-Power            OPTIONAL,
    maximumDL-Power                         DL-Power            OPTIONAL,
    minimumDL-Power                         DL-Power            OPTIONAL,
    dL-TimeSlotISCPInfo                     DL-TimeslotISCPInfo OPTIONAL,   -- Applicable to 3.84Mcps TDD only
    iE-Extensions                           ProtocolExtensionContainer { { RL-information-RL-AdditionRqstTDD-ExtIEs} }        OPTIONAL,
    ...
 }

RL-information-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID    id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD          CRITICALITY     reject                          EXTENSION   DL-
TimeslotISCPInfoLCR         PRESENCE    optional }| -- Applicable to 1.28Mcps TDD only
    { ID    id-RL-Specific-DCH-Info     CRITICALITY ignore      EXTENSION   RL-Specific-DCH-Info                    PRESENCE    optional }|
    { ID id-DelayedActivation CRITICALITY reject EXTENSION DelayedActivation PRESENCE optional }|
    { ID    id-UL-Synchronisation-Parameters-LCR            CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
    ...
}

UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-TimeslotLCR-Information              UL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-TimeslotLCR-Information              DL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs} }     OPTIONAL,
    ...
}
```

```
DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- **************************************************************

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

RadioLinkReconfigurationPrepareTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                         CRITICALITY     reject      TYPE                NodeB-CommunicationContextID
                PRESENCE    mandatory   }|
    { ID    id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD            CRITICALITY     reject                      TYPE  UL-CCTrCH-
InformationAddList-RL-ReconfPrepTDD         PRESENCE    optional        } |
    { ID    id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD         CRITICALITY     reject                      TYPE  UL-CCTrCH-
InformationModifyList-RL-ReconfPrepTDD          PRESENCE    optional        } |
    { ID    id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD         CRITICALITY     reject                      TYPE  UL-CCTrCH-
InformationDeleteList-RL-ReconfPrepTDD          PRESENCE    optional        } |
    { ID    id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD            CRITICALITY     reject                      TYPE  DL-CCTrCH-
InformationAddList-RL-ReconfPrepTDD         PRESENCE    optional        } |
    { ID    id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD         CRITICALITY     reject                      TYPE  DL-CCTrCH-
InformationModifyList-RL-ReconfPrepTDD          PRESENCE    optional        } |
    { ID    id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD         CRITICALITY     reject                      TYPE  DL-CCTrCH-
InformationDeleteList-RL-ReconfPrepTDD          PRESENCE    optional        } |
    { ID    id-TDD-DCHs-to-Modify                       CRITICALITY     reject      TYPE    TDD-DCHs-to-Modify                  PRESENCE optional
    } |
    { ID    id-DCHs-to-Add-TDD                          CRITICALITY     reject      TYPE    DCH-TDD-Information                 PRESENCE optional
    } |
    { ID    id-DCH-DeleteList-RL-ReconfPrepTDD                      CRITICALITY     reject      TYPE                DCH-DeleteList-RL-ReconfPrepTDD
                PRESENCE    optional        } |
    { ID    id-DSCH-Information-ModifyList-RL-ReconfPrepTDD         CRITICALITY     reject      TYPE                DSCH-Information-ModifyList-RL-
ReconfPrepTDD       PRESENCE    optional        } |
    { ID    id-DSCHs-to-Add-TDD         CRITICALITY     reject      TYPE    DSCH-TDD-Information                        PRESENCE    optional    } |
    { ID    id-DSCH-Information-DeleteList-RL-ReconfPrepTDD          CRITICALITY     reject      TYPE                DSCH-Information-DeleteList-RL-
ReconfPrepTDD       PRESENCE    optional        } |
    { ID    id-USCH-Information-ModifyList-RL-ReconfPrepTDD         CRITICALITY     reject      TYPE                USCH-Information-ModifyList-RL-
ReconfPrepTDD       PRESENCE    optional        } |
    { ID    id-USCH-Information-Add         CRITICALITY     reject      TYPE    USCH-Information                        PRESENCE    optional    } |
    { ID    id-USCH-Information-DeleteList-RL-ReconfPrepTDD          CRITICALITY     reject      TYPE                USCH-Information-DeleteList-RL-
ReconfPrepTDD       PRESENCE    optional        } |
    { ID    id-RL-Information-RL-ReconfPrepTDD                       CRITICALITY     reject      TYPE                RL-Information-RL-ReconfPrepTDD
                PRESENCE    optional        },
```

```
    ...
}

RadioLinkReconfigurationPrepareTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-SignallingBearerRequestIndicator    CRITICALITY reject  EXTENSION   SignallingBearerRequestIndicator              PRESENCE optional }|
    { ID    id-HSDSCH-Information-to-Modify         CRITICALITY reject      EXTENSION HSDSCH-Information-to-Modify          PRESENCE optional }|
    { ID    id-HSDSCH-TDD-Information-to-Add        CRITICALITY reject      EXTENSION HSDSCH-TDD-Information                PRESENCE optional }|
    { ID    id-HSDSCH-TDD-Information-to-Delete     CRITICALITY reject      EXTENSION HSDSCH-DeleteList-RL-ReconfPrepTDD    PRESENCE optional }|
    { ID    id-HSDSCH-RNTI                          CRITICALITY reject      EXTENSION HSDSCH-RNTI                           PRESENCE optional }|
    { ID    id-HSPDSCH-RL-ID                        CRITICALITY reject      EXTENSION RL-ID                                 PRESENCE optional }|
    { ID    id-PDSCH-RL-ID                          CRITICALITY ignore      EXTENSION RL-ID                                 PRESENCE optional },
    ...
}

UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    tFCS                                        TFCS,
    tFCI-Coding                                 TFCI-Coding,
    punctureLimit                               PunctureLimit,
    ul-DPCH-InformationList                     UL-DPCH-InformationAddList-RL-ReconfPrepTDD OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD   CRITICALITY reject      EXTENSION UL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD
    PRESENCE optional }|    -- Applicable to 1.28Mcps TDD only
    { ID id-UL-SIRTarget        CRITICALITY reject      EXTENSION       UL-SIR      PRESENCE optional               },
    -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD.
    ...
}

UL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE UL-DPCH-InformationAddItem-RL-ReconfPrepTDD    PRESENCE
mandatory }
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-Information                 UL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
UL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-InformationLCR              UL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    tFCS                                        TFCS                                                                    OPTIONAL,
    tFCI-Coding                                 TFCI-Coding                                                             OPTIONAL,
    punctureLimit                               PunctureLimit                                                           OPTIONAL,
    ul-DPCH-InformationAddList                  UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD                    OPTIONAL,
    ul-DPCH-InformationModifyList               UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD               OPTIONAL,
    ul-DPCH-InformationDeleteList               UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD               OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-DPCH-LCR-InformationModify-AddList    CRITICALITY reject     EXTENSION    UL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD
    PRESENCE optional }|    -- Applicable to 1.28Mcps TDD only
    { ID id-UL-SIRTarget        CRITICALITY reject      EXTENSION       UL-SIR      PRESENCE optional               },
    -- Applicable to 1.28Mcps TDD only.
    ...
}

UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD   CRITICALITY reject       TYPE UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD
    PRESENCE mandatory }
}

UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-Information            UL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}
```

```
UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    uL-Timeslot-InformationLCR              UL-TimeslotLCR-Information,
    iE-Extensions                               ProtocolExtensionContainer { { UL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD   CRITICALITY reject        TYPE UL-DPCH-InformationModify-ModifyItem-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod    OPTIONAL,
    repetitionLength                        RepetitionLength    OPTIONAL,
    tdd-DPCHOffset                          TDD-DPCHOffset      OPTIONAL,
    uL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD              UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD      OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD     CRITICALITY reject      EXTENSION   UL-TimeslotLCR-InformationModify-ModifyList-RL-
ReconfPrepTDD       PRESENCE optional },    -- Applicable to 1.28Mcps TDD only
    ...
}

UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD   -- Applicable to 3.84Mcps TDD only

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlot                                TimeSlot,
    midambleShiftAndBurstType               MidambleShiftAndBurstType       OPTIONAL,
    tFCI-Presence                           TFCI-Presence       OPTIONAL,
    uL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD               UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD     OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
```

```
}

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
    tdd-ChannelisationCode                  TDD-ChannelisationCode      OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-TimeslotLCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSLCRs)) OF UL-Timeslot-LCR-InformationModify-
ModifyItem-RL-ReconfPrepTDD -- Applicable to 1.28Mcps TDD only

UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlotLCR                             TimeSlotLCR,
    midambleShiftLCR            MidambleShiftLCR        OPTIONAL,
    tFCI-Presence                           TFCI-Presence       OPTIONAL,
    uL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLCR                UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLCR    OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDDLCR ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLCR ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
    tdd-ChannelisationCodeLCR               TDD-ChannelisationCodeLCR       OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLCR-ExtIEs} }
    OPTIONAL,
    ...
}

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDDLCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD }}
```

```
UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD   CRITICALITY reject        TYPE UL-DPCH-InformationModify-DeleteListIE-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    tFCS                                        TFCS,
    tFCI-Coding                                 TFCI-Coding,
    punctureLimit                               PunctureLimit,
    cCTrCH-TPCList                              CCTrCH-TPCAddList-RL-ReconfPrepTDD                      OPTIONAL,
    dl-DPCH-InformationList                     DL-DPCH-InformationAddList-RL-ReconfPrepTDD             OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD   CRITICALITY reject       EXTENSION                       DL-DPCH-LCR-
InformationAddList-RL-ReconfPrepTDD     PRESENCE optional }|    -- Applicable to 1.28Mcps TDD only
    { ID id-CCTrCH-Initial-DL-Power-RL-ReconfPrepTDD        CRITICALITY ignore      EXTENSION DL-Power              PRESENCE optional },
    ...
}
```

```
CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD      -- Applicable to 3.84Mcps TDD
only

CCTrCH-TPCAddItem-RL-ReconfPrepTDD   ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD   CRITICALITY reject      TYPE DL-DPCH-InformationAddItem-RL-ReconfPrepTDD    PRESENCE
mandatory }
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-Timeslot-Information                 DL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-Timeslot-InformationLCR              DL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                                 CCTrCH-ID,
    tFCS                                      TFCS                                                                  OPTIONAL,
    tFCI-Coding                               TFCI-Coding                                                           OPTIONAL,
```

```
    punctureLimit                                   PunctureLimit                                                   OPTIONAL,
    cCTrCH-TPCList                                  CCTrCH-TPCModifyList-RL-ReconfPrepTDD                           OPTIONAL,
    dl-DPCH-InformationAddList                      DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD            OPTIONAL,
    dl-DPCH-InformationModifyList                   DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD       OPTIONAL,
    dl-DPCH-InformationDeleteList                   DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD       OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD CRITICALITY reject       EXTENSION              DL-DPCH-LCR-InformationModify-
AddList-RL-ReconfPrepTDD        PRESENCE optional },
    ...
}

CCTrCH-TPCModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCModifyItem-RL-ReconfPrepTDD

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    cCTrCH-ID                               CCTrCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs} }     OPTIONAL,
    ...
}

CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}
-- Applicable to 3.84Mcps TDD only

DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD   CRITICALITY reject       TYPE DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD
    PRESENCE mandatory }
}

DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
    dL-Timeslot-Information                 DL-Timeslot-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod,
    repetitionLength                        RepetitionLength,
    tdd-DPCHOffset                          TDD-DPCHOffset,
```

```
    dL-Timeslot-InformationLCR              DL-TimeslotLCR-Information,
    iE-Extensions                           ProtocolExtensionContainer { { DL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-LCR-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD   CRITICALITY reject        TYPE DL-DPCH-InformationModify-ModifyItem-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod                        RepetitionPeriod            OPTIONAL,
    repetitionLength                        RepetitionLength            OPTIONAL,
    tdd-DPCHOffset                          TDD-DPCHOffset              OPTIONAL,
    dL-Timeslot-InformationAddModify-ModifyList-RL-ReconfPrepTDD        DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD       OPTIONAL,
    iE-Extensions                               ProtocolExtensionContainer { { DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD   CRITICALITY reject                          EXTENSION       DL-Timeslot-
LCR-InformationModify-ModifyList-RL-ReconfPrepTDD       PRESENCE optional },
    ...
}

DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    timeSlot                                TimeSlot,
    midambleShiftAndBurstType               MidambleShiftAndBurstType           OPTIONAL,
    tFCI-Presence                           TFCI-Presence           OPTIONAL,
    dL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD               DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD        OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
```

```
    tdd-ChannelisationCode                  TDD-ChannelisationCode      OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSLCRs)) OF DL-Timeslot-InformationModify-ModifyItem-
RL-ReconfPrepTDD

DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    timeSlotLCR                             TimeSlotLCR,
    midambleShiftLCR            MidambleShiftLCR            OPTIONAL,
    tFCI-Presence                           TFCI-Presence           OPTIONAL,
    dL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD              DL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD      OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Timeslot-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-Code-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-
ReconfPrepTDD

DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD    ::= SEQUENCE {
    dPCH-ID                                 DPCH-ID,
    tdd-ChannelisationCodeLCR               TDD-ChannelisationCodeLCR       OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-Code-LCR-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD }}

DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD   CRITICALITY reject        TYPE DL-DPCH-InformationModify-DeleteListIE-RL-
ReconfPrepTDD       PRESENCE mandatory }
}

DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                                     DPCH-ID,
```

```
    iE-Extensions                               ProtocolExtensionContainer { { DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID                                   CCTrCH-ID,
    iE-Extensions                               ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepTDD

DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID                                      DCH-ID,
    iE-Extensions                               ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-ModifyItem-RL-ReconfPrepTDD

DSCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                                     DSCH-ID,
    cCTrCH-ID                                   CCTrCH-ID               OPTIONAL,
    transportFormatSet                          TransportFormatSet      OPTIONAL,
    allocationRetentionPriority                 AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority                       FrameHandlingPriority   OPTIONAL,
    toAWS                                       ToAWS                   OPTIONAL,
    toAWE                                       ToAWE                   OPTIONAL,
    transportBearerRequestIndicator             TransportBearerRequestIndicator,
    iE-Extensions                               ProtocolExtensionContainer { { DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
 }

DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-bindingID                       CRITICALITY ignore      EXTENSION   BindingID       PRESENCE           optional }|
    { ID id-transportlayeraddress           CRITICALITY ignore      EXTENSION   TransportLayerAddress                PRESENCE    optional },
    ...
```

```
}

DSCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-DeleteItem-RL-ReconfPrepTDD

DSCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                                 DSCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
}

DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-ModifyItem-RL-ReconfPrepTDD

USCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                                 USCH-ID,
    transportFormatSet                      TransportFormatSet      OPTIONAL,
    allocationRetentionPriority             AllocationRetentionPriority OPTIONAL,
    cCTrCH-ID                               CCTrCH-ID               OPTIONAL,
    transportBearerRequestIndicator         TransportBearerRequestIndicator,
    iE-Extensions                           ProtocolExtensionContainer { { USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
}

USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-bindingID                       CRITICALITY ignore      EXTENSION   BindingID       PRESENCE            optional }|
    { ID id-transportlayeraddress           CRITICALITY ignore      EXTENSION   TransportLayerAddress               PRESENCE    optional },
    ...
}

USCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-DeleteItem-RL-ReconfPrepTDD

USCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                                 USCH-ID,
    iE-Extensions                           ProtocolExtensionContainer { { USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...

}

USCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    rL-ID                                   RL-ID,
    maxDL-Power                             DL-Power            OPTIONAL,
    minDL-Power                             DL-Power            OPTIONAL,
    iE-Extensions                           ProtocolExtensionContainer { { RL-Information-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}
```

```
RL-Information-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-InitDL-Power        CRITICALITY ignore      EXTENSION DL-Power      PRESENCE optional                   }|
    { ID id-RL-Specific-DCH-Info        CRITICALITY ignore      EXTENSION   RL-Specific-DCH-Info                    PRESENCE    optional }|
        { ID    id-UL-Synchronisation-Parameters-LCR            CRITICALITY ignore      EXTENSION                   UL-Synchronisation-Parameters-LCR
        PRESENCE    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
...
}

HSDSCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfMACdFlows)) OF HSDSCH-DeleteItem-RL-ReconfPrepTDD

HSDSCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    hsDSCH-MACdFlow-ID                              HSDSCH-MACdFlow-ID,
    iE-Extensions                                   ProtocolExtensionContainer { { HSDSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }   OPTIONAL,
    ...
}

HSDSCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

/* partly omitted */

```
-- **************************************************************
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- **************************************************************

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

RadioLinkReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID                         CRITICALITY     reject                          TYPE  NodeB-
CommunicationContextID                  PRESENCE    mandatory   } |
    { ID    id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  UL-CCTrCH-
InformationModifyList-RL-ReconfRqstTDD      PRESENCE    optional    } |
    { ID    id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  UL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD      PRESENCE    optional    } |
    { ID    id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  DL-CCTrCH-
InformationModifyList-RL-ReconfRqstTDD      PRESENCE    optional    } |
    { ID    id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  DL-CCTrCH-
InformationDeleteList-RL-ReconfRqstTDD      PRESENCE    optional    } |
    { ID    id-TDD-DCHs-to-Modify                       CRITICALITY     reject          TYPE    TDD-DCHs-to-Modify              PRESENCE optional } |
        { ID    id-DCHs-to-Add-TDD                          CRITICALITY     reject          TYPE                    DCH-TDD-Information
    PRESENCE    optional    } |
    { ID    id-DCH-DeleteList-RL-ReconfRqstTDD                      CRITICALITY     reject                          TYPE  DCH-DeleteList-RL-
ReconfRqstTDD                   PRESENCE    optional    } |
```

```
    { ID    id-RL-Information-RL-ReconfRqstTDD                CRITICALITY     reject          TYPE                RL-Information-RL-ReconfRqstTDD
            PRESENCE    optional    },
    ...
}

RadioLinkReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-SignallingBearerRequestIndicator    CRITICALITY reject  EXTENSION   SignallingBearerRequestIndicator               PRESENCE optional },
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  UL-CCTrCH-
InformationModifyItem-RL-ReconfRqstTDD      PRESENCE    mandatory}
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                       CCTrCH-ID,
    tFCS                                            TFCS            OPTIONAL,
    punctureLimit                                   PunctureLimit   OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  UL-CCTrCH-
InformationDeleteItem-RL-ReconfRqstTDD      PRESENCE    mandatory}
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                       CCTrCH-ID,
    iE-Extensions                                   ProtocolExtensionContainer { { UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}
```

```
DL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  DL-CCTrCH-
InformationModifyItem-RL-ReconfRqstTDD      PRESENCE    mandatory}
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                       CCTrCH-ID,
    tFCS                                            TFCS            OPTIONAL,
    punctureLimit                                   PunctureLimit   OPTIONAL,
    iE-Extensions                                   ProtocolExtensionContainer { { DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

DL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID    id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD         CRITICALITY     notify                          TYPE  DL-CCTrCH-
InformationDeleteItem-RL-ReconfRqstTDD      PRESENCE    mandatory}
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                                       CCTrCH-ID,
    iE-Extensions                                   ProtocolExtensionContainer { { DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} }
    OPTIONAL,
    ...
}

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                                          DCH-ID,
    iE-Extensions                                   ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} }      OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    rL-ID                                       RL-ID,
    maxDL-Power                                 DL-Power        OPTIONAL,
    minDL-Power                                 DL-Power        OPTIONAL,
```

```
    iE-Extensions                       ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstTDD-ExtIEs} }      OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    { ID id-RL-Specific-DCH-Info        CRITICALITY ignore      EXTENSION   RL-Specific-DCH-Info                    PRESENCE    optional }|
    { ID    id-UL-Synchronisation-Parameters-LCR            CRITICALITY ignore      EXTENSION   UL-Synchronisation-Parameters-LCR    PRESENCE
    optional    },  -- Mandatory for 1.28Mcps TDD, Not Applicable to 3.84Mcps TDD
...
}
```

/* partly omitted */

9.3.4 Information Element Definitions

/* partly omitted */

```
-- ========================================
--  U
-- ========================================

/* partly omitted */


UL-Synchronisation-Parameters-LCR ::= SEQUENCE {
    uL-Synchronisation-StepSize         UL-Synchronisation-StepSize,
    uL-Synchronisation-Frequency            UL-Synchronisation-Frequency,
    iE-Extensions                   ProtocolExtensionContainer { { UL-Synchronisation-Parameters-LCR-ExtIEs } }       OPTIONAL,
    ...
}

UL-Synchronisation-Parameters-LCR-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Synchronisation-StepSize ::= INTEGER (1..8)

UL-Synchronisation-Frequency ::= INTEGER (1..8)


-- ========================================
--  V
-- ========================================
```

/* partly omitted */

9.3.6 Constant Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=
```

/* partly omitted */

```
-- **************************************************************
--
-- IEs
--
-- **************************************************************

id-AICH-Information                                          ProtocolIE-ID ::= 0
id-AICH-InformationItem-ResourceStatusInd                    ProtocolIE-ID ::= 1
id-BCH-Information                                           ProtocolIE-ID ::= 7
id-BCH-InformationItem-ResourceStatusInd                     ProtocolIE-ID ::= 8
id-BCCH-ModificationTime                                     ProtocolIE-ID ::= 9
id-BlockingPriorityIndicator                                 ProtocolIE-ID ::= 10
id-Cause                                                     ProtocolIE-ID ::= 13
id-CCP-InformationItem-AuditRsp                              ProtocolIE-ID ::= 14
id-CCP-InformationList-AuditRsp                              ProtocolIE-ID ::= 15
id-CCP-InformationItem-ResourceStatusInd                     ProtocolIE-ID ::= 16
id-Cell-InformationItem-AuditRsp                             ProtocolIE-ID ::= 17
id-Cell-InformationItem-ResourceStatusInd                    ProtocolIE-ID ::= 18
id-Cell-InformationList-AuditRsp                             ProtocolIE-ID ::= 19
id-CellParameterID                                           ProtocolIE-ID ::= 23
id-CFN                                                       ProtocolIE-ID ::= 24
id-C-ID                                                      ProtocolIE-ID ::= 25
id-CommonMeasurementAccuracy                                 ProtocolIE-ID ::= 39
id-CommonMeasurementObjectType-CM-Rprt                       ProtocolIE-ID ::= 31
id-CommonMeasurementObjectType-CM-Rqst                       ProtocolIE-ID ::= 32
```

```
id-CommonMeasurementObjectType-CM-Rsp                    ProtocolIE-ID ::= 33
id-CommonMeasurementType                                 ProtocolIE-ID ::= 34
id-CommonPhysicalChannelID                               ProtocolIE-ID ::= 35
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD           ProtocolIE-ID ::= 36
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD           ProtocolIE-ID ::= 37
id-CommunicationControlPortID                            ProtocolIE-ID ::= 40
id-ConfigurationGenerationID                             ProtocolIE-ID ::= 43
id-CRNC-CommunicationContextID                           ProtocolIE-ID ::= 44
id-CriticalityDiagnostics                                ProtocolIE-ID ::= 45
id-DCHs-to-Add-FDD                                       ProtocolIE-ID ::= 48
id-DCH-AddList-RL-ReconfPrepTDD                          ProtocolIE-ID ::= 49
id-DCHs-to-Add-TDD                                       ProtocolIE-ID ::= 50
id-DCH-DeleteList-RL-ReconfPrepFDD                       ProtocolIE-ID ::= 52
id-DCH-DeleteList-RL-ReconfPrepTDD                       ProtocolIE-ID ::= 53
id-DCH-DeleteList-RL-ReconfRqstFDD                       ProtocolIE-ID ::= 54
id-DCH-DeleteList-RL-ReconfRqstTDD                       ProtocolIE-ID ::= 55
id-DCH-FDD-Information                                   ProtocolIE-ID ::= 56
id-DCH-TDD-Information                                   ProtocolIE-ID ::= 57
id-DCH-InformationResponse                               ProtocolIE-ID ::= 59
id-FDD-DCHs-to-Modify                                    ProtocolIE-ID ::= 62
id-TDD-DCHs-to-Modify                                    ProtocolIE-ID ::= 63
id-DCH-ModifyList-RL-ReconfRqstTDD                       ProtocolIE-ID ::= 65
id-DCH-RearrangeList-Bearer-RearrangeInd                 ProtocolIE-ID ::= 135
id-DedicatedMeasurementObjectType-DM-Rprt                ProtocolIE-ID ::= 67
id-DedicatedMeasurementObjectType-DM-Rqst                ProtocolIE-ID ::= 68
id-DedicatedMeasurementObjectType-DM-Rsp                 ProtocolIE-ID ::= 69
id-DedicatedMeasurementType                              ProtocolIE-ID ::= 70
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD              ProtocolIE-ID ::= 72
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD          ProtocolIE-ID ::= 73
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD             ProtocolIE-ID ::= 76
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD            ProtocolIE-ID ::= 77
id-DL-DPCH-InformationList-RL-SetupRqstTDD               ProtocolIE-ID ::= 79
id-DL-DPCH-Information-RL-ReconfPrepFDD                  ProtocolIE-ID ::= 81
id-DL-DPCH-Information-RL-ReconfRqstFDD                  ProtocolIE-ID ::= 82
id-DL-DPCH-Information-RL-SetupRqstFDD                   ProtocolIE-ID ::= 83
id-DL-DPCH-TimingAdjustment                              ProtocolIE-ID ::= 21
id-DL-ReferencePowerInformationItem-DL-PC-Rqst           ProtocolIE-ID ::= 84
id-DLReferencePower                                      ProtocolIE-ID ::= 85
id-DLReferencePowerList-DL-PC-Rqst                       ProtocolIE-ID ::= 86
id-DSCH-AddItem-RL-ReconfPrepFDD                         ProtocolIE-ID ::= 87
id-DSCHs-to-Add-FDD                                      ProtocolIE-ID ::= 89
id-DSCH-DeleteItem-RL-ReconfPrepFDD                      ProtocolIE-ID ::= 91
id-DSCH-DeleteList-RL-ReconfPrepFDD                      ProtocolIE-ID ::= 93
id-DSCHs-to-Add-TDD                                      ProtocolIE-ID ::= 96
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD          ProtocolIE-ID ::= 98
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD          ProtocolIE-ID ::= 100
id-DSCH-InformationResponse                              ProtocolIE-ID ::= 105
id-DSCH-FDD-Information                                  ProtocolIE-ID ::= 106
id-DSCH-TDD-Information                                  ProtocolIE-ID ::= 107
id-DSCH-ModifyItem-RL-ReconfPrepFDD                      ProtocolIE-ID ::= 108
id-DSCH-ModifyList-RL-ReconfPrepFDD                      ProtocolIE-ID ::= 112
id-DSCH-RearrangeList-Bearer-RearrangeInd                ProtocolIE-ID ::= 136
id-End-Of-Audit-Sequence-Indicator                       ProtocolIE-ID ::= 113
```

```
id-FACH-Information                                    ProtocolIE-ID ::= 116
id-FACH-InformationItem-ResourceStatusInd              ProtocolIE-ID ::= 117
id-FACH-ParametersList-CTCH-ReconfRqstTDD              ProtocolIE-ID ::= 120
id-FACH-ParametersListIE-CTCH-SetupRqstFDD             ProtocolIE-ID ::= 121
id-FACH-ParametersListIE-CTCH-SetupRqstTDD             ProtocolIE-ID ::= 122
id-IndicationType-ResourceStatusInd                    ProtocolIE-ID ::= 123
id-Local-Cell-ID                                       ProtocolIE-ID ::= 124
id-Local-Cell-Group-InformationItem-AuditRsp           ProtocolIE-ID ::= 2
id-Local-Cell-Group-InformationItem-ResourceStatusInd  ProtocolIE-ID ::= 3
id-Local-Cell-Group-InformationItem2-ResourceStatusInd ProtocolIE-ID ::= 4
id-Local-Cell-Group-InformationList-AuditRsp           ProtocolIE-ID ::= 5
id-Local-Cell-InformationItem-AuditRsp                 ProtocolIE-ID ::= 125
id-Local-Cell-InformationItem-ResourceStatusInd        ProtocolIE-ID ::= 126
id-Local-Cell-InformationItem2-ResourceStatusInd       ProtocolIE-ID ::= 127
id-Local-Cell-InformationList-AuditRsp                 ProtocolIE-ID ::= 128
id-AdjustmentPeriod                                    ProtocolIE-ID ::= 129
id-MaxAdjustmentStep                                   ProtocolIE-ID ::= 130
id-MaximumTransmissionPower                            ProtocolIE-ID ::= 131
id-MeasurementFilterCoefficient                        ProtocolIE-ID ::= 132
id-MeasurementID                                       ProtocolIE-ID ::= 133
id-MessageStructure                                    ProtocolIE-ID ::= 115
id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst     ProtocolIE-ID ::= 134
id-NodeB-CommunicationContextID                        ProtocolIE-ID ::= 143
id-NeighbouringCellMeasurementInformation              ProtocolIE-ID ::= 455
id-P-CCPCH-Information                                 ProtocolIE-ID ::= 144
id-P-CCPCH-InformationItem-ResourceStatusInd           ProtocolIE-ID ::= 145
id-P-CPICH-Information                                 ProtocolIE-ID ::= 146
id-P-CPICH-InformationItem-ResourceStatusInd           ProtocolIE-ID ::= 147
id-P-SCH-Information                                   ProtocolIE-ID ::= 148
id-PCCPCH-Information-Cell-ReconfRqstTDD               ProtocolIE-ID ::= 150
id-PCCPCH-Information-Cell-SetupRqstTDD                ProtocolIE-ID ::= 151
id-PCH-Parameters-CTCH-ReconfRqstTDD                   ProtocolIE-ID ::= 155
id-PCH-ParametersItem-CTCH-SetupRqstFDD                ProtocolIE-ID ::= 156
id-PCH-ParametersItem-CTCH-SetupRqstTDD                ProtocolIE-ID ::= 157
id-PCH-Information                                     ProtocolIE-ID ::= 158
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst         ProtocolIE-ID ::= 161
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst      ProtocolIE-ID ::= 162
id-PDSCHSets-AddList-PSCH-ReconfRqst                   ProtocolIE-ID ::= 163
id-PDSCHSets-DeleteList-PSCH-ReconfRqst                ProtocolIE-ID ::= 164
id-PDSCHSets-ModifyList-PSCH-ReconfRqst                ProtocolIE-ID ::= 165
id-PICH-Information                                    ProtocolIE-ID ::= 166
id-PICH-Parameters-CTCH-ReconfRqstTDD                  ProtocolIE-ID ::= 168
id-PowerAdjustmentType                                 ProtocolIE-ID ::= 169
id-PRACH-Information                                   ProtocolIE-ID ::= 170
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD         ProtocolIE-ID ::= 175
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD          ProtocolIE-ID ::= 176
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD         ProtocolIE-ID ::= 177
id-PrimaryCPICH-Information-Cell-SetupRqstFDD          ProtocolIE-ID ::= 178
id-PrimarySCH-Information-Cell-ReconfRqstFDD           ProtocolIE-ID ::= 179
id-PrimarySCH-Information-Cell-SetupRqstFDD            ProtocolIE-ID ::= 180
id-PrimaryScramblingCode                               ProtocolIE-ID ::= 181
id-SCH-Information-Cell-ReconfRqstTDD                  ProtocolIE-ID ::= 183
id-SCH-Information-Cell-SetupRqstTDD                   ProtocolIE-ID ::= 184
```

```
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst                  ProtocolIE-ID ::= 185
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst               ProtocolIE-ID ::= 186
id-PUSCHSets-AddList-PSCH-ReconfRqst                            ProtocolIE-ID ::= 187
id-PUSCHSets-DeleteList-PSCH-ReconfRqst                         ProtocolIE-ID ::= 188
id-PUSCHSets-ModifyList-PSCH-ReconfRqst                         ProtocolIE-ID ::= 189
id-RACH-Information                                             ProtocolIE-ID ::= 190
id-RACH-ParametersItem-CTCH-SetupRqstFDD                        ProtocolIE-ID ::= 196
id-RACH-ParameterItem-CTCH-SetupRqstTDD                         ProtocolIE-ID ::= 197
id-ReportCharacteristics                                        ProtocolIE-ID ::= 198
id-Reporting-Object-RL-FailureInd                               ProtocolIE-ID ::= 199
id-Reporting-Object-RL-RestoreInd                               ProtocolIE-ID ::= 200
id-RL-InformationItem-DM-Rprt                                   ProtocolIE-ID ::= 202
id-RL-InformationItem-DM-Rqst                                   ProtocolIE-ID ::= 203
id-RL-InformationItem-DM-Rsp                                    ProtocolIE-ID ::= 204
id-RL-InformationItem-RL-AdditionRqstFDD                        ProtocolIE-ID ::= 205
id-RL-informationItem-RL-DeletionRqst                           ProtocolIE-ID ::= 206
id-RL-InformationItem-RL-FailureInd                             ProtocolIE-ID ::= 207
id-RL-InformationItem-RL-PreemptRequiredInd                     ProtocolIE-ID ::= 286
id-RL-InformationItem-RL-ReconfPrepFDD                          ProtocolIE-ID ::= 208
id-RL-InformationItem-RL-ReconfRqstFDD                          ProtocolIE-ID ::= 209
id-RL-InformationItem-RL-RestoreInd                             ProtocolIE-ID ::= 210
id-RL-InformationItem-RL-SetupRqstFDD                           ProtocolIE-ID ::= 211
id-RL-InformationList-RL-AdditionRqstFDD                        ProtocolIE-ID ::= 212
id-RL-informationList-RL-DeletionRqst                           ProtocolIE-ID ::= 213
id-RL-InformationList-RL-PreemptRequiredInd                     ProtocolIE-ID ::= 237
id-RL-InformationList-RL-ReconfPrepFDD                          ProtocolIE-ID ::= 214
id-RL-InformationList-RL-ReconfRqstFDD                          ProtocolIE-ID ::= 215
id-RL-InformationList-RL-SetupRqstFDD                           ProtocolIE-ID ::= 216
id-RL-InformationResponseItem-RL-AdditionRspFDD                 ProtocolIE-ID ::= 217
id-RL-InformationResponseItem-RL-ReconfReady                    ProtocolIE-ID ::= 218
id-RL-InformationResponseItem-RL-ReconfRsp                      ProtocolIE-ID ::= 219
id-RL-InformationResponseItem-RL-SetupRspFDD                    ProtocolIE-ID ::= 220
id-RL-InformationResponseList-RL-AdditionRspFDD                 ProtocolIE-ID ::= 221
id-RL-InformationResponseList-RL-ReconfReady                    ProtocolIE-ID ::= 222
id-RL-InformationResponseList-RL-ReconfRsp                      ProtocolIE-ID ::= 223
id-RL-InformationResponseList-RL-SetupRspFDD                    ProtocolIE-ID ::= 224
id-RL-InformationResponse-RL-AdditionRspTDD                     ProtocolIE-ID ::= 225
id-RL-InformationResponse-RL-SetupRspTDD                        ProtocolIE-ID ::= 226
id-RL-Information-RL-AdditionRqstTDD                            ProtocolIE-ID ::= 227
id-RL-Information-RL-ReconfRqstTDD                              ProtocolIE-ID ::= 228
id-RL-Information-RL-ReconfPrepTDD                              ProtocolIE-ID ::= 229
id-RL-Information-RL-SetupRqstTDD                               ProtocolIE-ID ::= 230
id-RL-ReconfigurationFailureItem-RL-ReconfFailure               ProtocolIE-ID ::= 236
id-RL-Set-InformationItem-DM-Rprt                               ProtocolIE-ID ::= 238
id-RL-Set-InformationItem-DM-Rsp                                ProtocolIE-ID ::= 240
id-RL-Set-InformationItem-RL-FailureInd                         ProtocolIE-ID ::= 241
id-RL-Set-InformationItem-RL-RestoreInd                         ProtocolIE-ID ::= 242
id-S-CCPCH-Information                                          ProtocolIE-ID ::= 247
id-S-CPICH-Information                                          ProtocolIE-ID ::= 249
id-SCH-Information                                              ProtocolIE-ID ::= 251
id-S-SCH-Information                                            ProtocolIE-ID ::= 253
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD                     ProtocolIE-ID ::= 257
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD            ProtocolIE-ID ::= 258
```

```
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD                ProtocolIE-ID ::= 259
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD            ProtocolIE-ID ::= 260
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD             ProtocolIE-ID ::= 261
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD            ProtocolIE-ID ::= 262
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD             ProtocolIE-ID ::= 263
id-SecondarySCH-Information-Cell-ReconfRqstFDD                  ProtocolIE-ID ::= 264
id-SecondarySCH-Information-Cell-SetupRqstFDD                   ProtocolIE-ID ::= 265
id-SegmentInformationListIE-SystemInfoUpdate                    ProtocolIE-ID ::= 266
id-SFN                                                          ProtocolIE-ID ::= 268
id-SignallingBearerRequestIndicator                             ProtocolIE-ID ::= 138
id-ShutdownTimer                                                ProtocolIE-ID ::= 269
id-Start-Of-Audit-Sequence-Indicator                            ProtocolIE-ID ::= 114
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD      ProtocolIE-ID ::= 270
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD         ProtocolIE-ID ::= 271
id-SyncCase                                                     ProtocolIE-ID ::= 274
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH                 ProtocolIE-ID ::= 275
id-T-Cell                                                       ProtocolIE-ID ::= 276
id-TargetCommunicationControlPortID                             ProtocolIE-ID ::= 139
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD                 ProtocolIE-ID ::= 277
id-TimeSlotConfigurationList-Cell-SetupRqstTDD                  ProtocolIE-ID ::= 278
id-TransmissionDiversityApplied                                 ProtocolIE-ID ::= 279
id-TypeOfError                                                  ProtocolIE-ID ::= 508
id-UARFCNforNt                                                  ProtocolIE-ID ::= 280
id-UARFCNforNd                                                  ProtocolIE-ID ::= 281
id-UARFCNforNu                                                  ProtocolIE-ID ::= 282
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD                    ProtocolIE-ID ::= 284
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD                 ProtocolIE-ID ::= 285
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD                    ProtocolIE-ID ::= 288
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD                   ProtocolIE-ID ::= 289
id-UL-DPCH-InformationList-RL-SetupRqstTDD                      ProtocolIE-ID ::= 291
id-UL-DPCH-Information-RL-ReconfPrepFDD                         ProtocolIE-ID ::= 293
id-UL-DPCH-Information-RL-ReconfRqstFDD                         ProtocolIE-ID ::= 294
id-UL-DPCH-Information-RL-SetupRqstFDD                          ProtocolIE-ID ::= 295
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD    ProtocolIE-ID ::= 296
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD       ProtocolIE-ID ::= 297
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD        ProtocolIE-ID ::= 300
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD           ProtocolIE-ID ::= 301
id-USCH-Information-Add                                         ProtocolIE-ID ::= 302
id-USCH-Information-DeleteList-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 304
id-USCH-Information-ModifyList-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 306
id-USCH-InformationResponse                                     ProtocolIE-ID ::= 309
id-USCH-Information                                             ProtocolIE-ID ::= 310
id-USCH-RearrangeList-Bearer-RearrangeInd                       ProtocolIE-ID ::= 141
id-Active-Pattern-Sequence-Information                          ProtocolIE-ID ::= 315
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD                     ProtocolIE-ID ::= 316
id-AdjustmentRatio                                              ProtocolIE-ID ::= 317
id-AP-AICH-Information                                          ProtocolIE-ID ::= 320
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD                  ProtocolIE-ID ::= 322
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD                     ProtocolIE-ID ::= 323
id-CauseLevel-PSCH-ReconfFailure                                ProtocolIE-ID ::= 324
id-CauseLevel-RL-AdditionFailureFDD                             ProtocolIE-ID ::= 325
id-CauseLevel-RL-AdditionFailureTDD                             ProtocolIE-ID ::= 326
id-CauseLevel-RL-ReconfFailure                                  ProtocolIE-ID ::= 327
```

```
id-CauseLevel-RL-SetupFailureFDD                                ProtocolIE-ID ::= 328
id-CauseLevel-RL-SetupFailureTDD                                ProtocolIE-ID ::= 329
id-CDCA-ICH-Information                                         ProtocolIE-ID ::= 330
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD                 ProtocolIE-ID ::= 332
id-Closed-Loop-Timing-Adjustment-Mode                           ProtocolIE-ID ::= 333
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD                 ProtocolIE-ID ::= 334
id-Compressed-Mode-Deactivation-Flag                            ProtocolIE-ID ::= 335
id-CPCH-Information                                             ProtocolIE-ID ::= 336
id-CPCH-Parameters-CTCH-SetupRsp                                ProtocolIE-ID ::= 342
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD                     ProtocolIE-ID ::= 343
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD                ProtocolIE-ID ::= 346
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD             ProtocolIE-ID ::= 347
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD             ProtocolIE-ID ::= 348
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD             ProtocolIE-ID ::= 349
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD             ProtocolIE-ID ::= 350
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD             ProtocolIE-ID ::= 351
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD             ProtocolIE-ID ::= 352
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD                ProtocolIE-ID ::= 353
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD         ProtocolIE-ID ::= 355
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD      ProtocolIE-ID ::= 356
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD      ProtocolIE-ID ::= 357
id-DL-TPC-Pattern01Count                                        ProtocolIE-ID ::= 358
id-DPC-Mode                                                     ProtocolIE-ID ::= 450
id-DPCHConstant                                                 ProtocolIE-ID ::= 359
id-DSCH-FDD-Common-Information                                  ProtocolIE-ID ::= 94
id-EnhancedDSCHPC                                               ProtocolIE-ID ::= 110
id-EnhancedDSCHPCIndicator                                      ProtocolIE-ID ::= 111
id-FACH-ParametersList-CTCH-SetupRsp                            ProtocolIE-ID ::= 362
id-Limited-power-increase-information-Cell-SetupRqstFDD         ProtocolIE-ID ::= 369
id-PCH-Parameters-CTCH-SetupRsp                                 ProtocolIE-ID ::= 374
id-PCH-ParametersItem-CTCH-ReconfRqstFDD                        ProtocolIE-ID ::= 375
id-PCPCH-Information                                            ProtocolIE-ID ::= 376
id-PICH-ParametersItem-CTCH-ReconfRqstFDD                       ProtocolIE-ID ::= 380
id-PRACHConstant                                                ProtocolIE-ID ::= 381
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD                    ProtocolIE-ID ::= 383
id-PUSCHConstant                                                ProtocolIE-ID ::= 384
id-RACH-Parameters-CTCH-SetupRsp                                ProtocolIE-ID ::= 385
id-SSDT-CellIDforEDSCHPC                                        ProtocolIE-ID ::= 443
id-Synchronisation-Configuration-Cell-ReconfRqst                ProtocolIE-ID ::= 393
id-Synchronisation-Configuration-Cell-SetupRqst                 ProtocolIE-ID ::= 394
id-Transmission-Gap-Pattern-Sequence-Information                ProtocolIE-ID ::= 395
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD                ProtocolIE-ID ::= 396
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD             ProtocolIE-ID ::= 397
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD             ProtocolIE-ID ::= 398
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD             ProtocolIE-ID ::= 399
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD             ProtocolIE-ID ::= 400
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD             ProtocolIE-ID ::= 401
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD             ProtocolIE-ID ::= 402
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD                ProtocolIE-ID ::= 403
id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD         ProtocolIE-ID ::= 405
id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD      ProtocolIE-ID ::= 406
id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD      ProtocolIE-ID ::= 407
id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD              ProtocolIE-ID ::= 408
```

```
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD                ProtocolIE-ID ::= 409
id-CommunicationContextInfoItem-Reset                             ProtocolIE-ID ::= 412
id-CommunicationControlPortInfoItem-Reset                         ProtocolIE-ID ::= 414
id-ResetIndicator                                                 ProtocolIE-ID ::= 416
id-TFCI2-Bearer-Information-RL-SetupRqstFDD                       ProtocolIE-ID ::= 417
id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD               ProtocolIE-ID ::= 418
id-TFCI2-BearerInformationResponse                                ProtocolIE-ID ::= 419
id-TFCI2BearerRequestIndicator                                    ProtocolIE-ID ::= 142
id-TimingAdvanceApplied                                           ProtocolIE-ID ::= 287
id-CFNReportingIndicator                                          ProtocolIE-ID ::= 6
id-SFNReportingIndicator                                          ProtocolIE-ID ::= 11
id-InnerLoopDLPCStatus                                            ProtocolIE-ID ::= 12
id-TimeslotISCPInfo                                               ProtocolIE-ID ::= 283
id-PICH-ParametersItem-CTCH-SetupRqstTDD                          ProtocolIE-ID ::= 167
id-PRACH-ParametersItem-CTCH-SetupRqstTDD                         ProtocolIE-ID ::= 20
id-CCTrCH-InformationItem-RL-FailureInd                           ProtocolIE-ID ::= 46
id-CCTrCH-InformationItem-RL-RestoreInd                           ProtocolIE-ID ::= 47
id-CauseLevel-SyncAdjustmntFailureTDD                             ProtocolIE-ID ::= 420
id-CellAdjustmentInfo-SyncAdjustmntRqstTDD                        ProtocolIE-ID ::= 421
id-CellAdjustmentInfoItem-SyncAdjustmentRqstTDD                   ProtocolIE-ID ::= 494
id-CellSyncBurstInfoList-CellSyncReconfRqstTDD                    ProtocolIE-ID ::= 482
id-CellSyncBurstTransInit-CellSyncInitiationRqstTDD               ProtocolIE-ID ::= 422
id-CellSyncBurstMeasureInit-CellSyncInitiationRqstTDD             ProtocolIE-ID ::= 423
id-CellSyncBurstTransReconfiguration-CellSyncReconfRqstTDD        ProtocolIE-ID ::= 424
id-CellSyncBurstMeasReconfiguration-CellSyncReconfRqstTDD         ProtocolIE-ID ::= 425
id-CellSyncBurstTransInfoList-CellSyncReconfRqstTDD               ProtocolIE-ID ::= 426
id-CellSyncBurstMeasInfoList-CellSyncReconfRqstTDD                ProtocolIE-ID ::= 427
id-CellSyncBurstTransReconfInfo-CellSyncReconfRqstTDD             ProtocolIE-ID ::= 428
id-CellSyncInfo-CellSyncReprtTDD                                  ProtocolIE-ID ::= 429
id-CSBTransmissionID                                              ProtocolIE-ID ::= 430
id-CSBMeasurementID                                               ProtocolIE-ID ::= 431
id-IntStdPhCellSyncInfoItem-CellSyncReprtTDD                      ProtocolIE-ID ::= 432
id-NCyclesPerSFNperiod                                            ProtocolIE-ID ::= 433
id-NRepetitionsPerCyclePeriod                                     ProtocolIE-ID ::= 434
id-SyncFrameNumber                                                ProtocolIE-ID ::= 437
id-SynchronisationReportType                                      ProtocolIE-ID ::= 438
id-SynchronisationReportCharacteristics                           ProtocolIE-ID ::= 439
id-Unsuccessful-cell-InformationRespItem-SyncAdjustmntFailureTDD  ProtocolIE-ID ::= 440
id-LateEntranceCellSyncInfoItem-CellSyncReprtTDD                  ProtocolIE-ID ::= 119
id-ReferenceClockAvailability                                     ProtocolIE-ID ::= 435
id-ReferenceSFNoffset                                             ProtocolIE-ID ::= 436
id-InformationExchangeID                                          ProtocolIE-ID ::= 444
id-InformationExchangeObjectType-InfEx-Rqst                       ProtocolIE-ID ::= 445
id-InformationType                                                ProtocolIE-ID ::= 446
id-InformationReportCharacteristics                               ProtocolIE-ID ::= 447
id-InformationExchangeObjectType-InfEx-Rsp                        ProtocolIE-ID ::= 448
id-InformationExchangeObjectType-InfEx-Rprt                       ProtocolIE-ID ::= 449
id-IPDLParameter-Information-Cell-ReconfRqstFDD                   ProtocolIE-ID ::= 451
id-IPDLParameter-Information-Cell-SetupRqstFDD                    ProtocolIE-ID ::= 452
id-IPDLParameter-Information-Cell-ReconfRqstTDD                   ProtocolIE-ID ::= 453
id-IPDLParameter-Information-Cell-SetupRqstTDD                    ProtocolIE-ID ::= 454
id-DL-DPCH-LCR-Information-RL-SetupRqstTDD                        ProtocolIE-ID ::= 74
id-DwPCH-LCR-Information                                          ProtocolIE-ID ::= 78
```

```
id-DwPCH-LCR-InformationList-AuditRsp                              ProtocolIE-ID ::= 90
id-DwPCH-LCR-Information-Cell-SetupRqstTDD                         ProtocolIE-ID ::= 97
id-DwPCH-LCR-Information-Cell-ReconfRqstTDD                        ProtocolIE-ID ::= 99
id-DwPCH-LCR-Information-ResourceStatusInd                         ProtocolIE-ID ::= 101
id-maxFACH-Power-LCR-CTCH-SetupRqstTDD                             ProtocolIE-ID ::= 154
id-maxFACH-Power-LCR-CTCH-ReconfRqstTDD                            ProtocolIE-ID ::= 174
id-FPACH-LCR-Information                                           ProtocolIE-ID ::= 290
id-FPACH-LCR-Information-AuditRsp                                  ProtocolIE-ID ::= 292
id-FPACH-LCR-InformationList-AuditRsp                              ProtocolIE-ID ::= 22
id-FPACH-LCR-InformationList-ResourceStatusInd                     ProtocolIE-ID ::= 311
id-FPACH-LCR-Parameters-CTCH-SetupRqstTDD                          ProtocolIE-ID ::= 312
id-FPACH-LCR-Parameters-CTCH-ReconfRqstTDD                         ProtocolIE-ID ::= 314
id-PCCPCH-LCR-Information-Cell-SetupRqstTDD                        ProtocolIE-ID ::= 456
id-PCH-Power-LCR-CTCH-SetupRqstTDD                                 ProtocolIE-ID ::= 457
id-PCH-Power-LCR-CTCH-ReconfRqstTDD                                ProtocolIE-ID ::= 458
id-PICH-LCR-Parameters-CTCH-SetupRqstTDD                           ProtocolIE-ID ::= 459
id-PRACH-LCR-ParametersList-CTCH-SetupRqstTDD                      ProtocolIE-ID ::= 461
id-RL-InformationResponse-LCR-RL-SetupRspTDD                       ProtocolIE-ID ::= 463
id-Secondary-CCPCH-LCR-parameterList-CTCH-SetupRqstTDD             ProtocolIE-ID ::= 465
id-TimeSlot                                                        ProtocolIE-ID ::= 495
id-TimeSlotConfigurationList-LCR-Cell-ReconfRqstTDD                ProtocolIE-ID ::= 466
id-TimeSlotConfigurationList-LCR-Cell-SetupRqstTDD                 ProtocolIE-ID ::= 467
id-TimeslotISCP-LCR-InfoList-RL-SetupRqstTDD                       ProtocolIE-ID ::= 468
id-TimeSlotLCR-CM-Rqst                                             ProtocolIE-ID ::= 469
id-UL-DPCH-LCR-Information-RL-SetupRqstTDD                         ProtocolIE-ID ::= 470
id-DL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD                  ProtocolIE-ID ::= 472
id-UL-DPCH-InformationItem-LCR-RL-AdditionRqstTDD                  ProtocolIE-ID ::= 473
id-TimeslotISCP-InformationList-LCR-RL-AdditionRqstTDD             ProtocolIE-ID ::= 474
id-DL-DPCH-LCR-InformationAddList-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 475
id-DL-DPCH-LCR-InformationModify-AddList-RL-ReconfPrepTDD          ProtocolIE-ID ::= 477
id-DL-Timeslot-LCR-InformationModify-ModifyList-RL-ReconfPrepTDD   ProtocolIE-ID ::= 479
id-TimeslotISCPInfoList-LCR-DL-PC-RqstTDD                          ProtocolIE-ID ::= 480
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfPrepTDD               ProtocolIE-ID ::= 481
id-UL-DPCH-LCR-InformationModify-AddList                           ProtocolIE-ID ::= 483
id-UL-TimeslotLCR-Information-RL-ReconfPrepTDD                     ProtocolIE-ID ::= 485
id-UL-SIRTarget                                                    ProtocolIE-ID ::= 510
id-PDSCH-AddInformation-LCR-PSCH-ReconfRqst                        ProtocolIE-ID ::= 486
id-PDSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst              ProtocolIE-ID ::= 487
id-PDSCH-Information-Cell-SetupRqstFDD                             ProtocolIE-ID ::=  26
id-PDSCH-Information-Cell-ReconfRqstFDD                            ProtocolIE-ID ::=  27
id-PDSCH-ModifyInformation-LCR-PSCH-ReconfRqst                     ProtocolIE-ID ::= 488
id-PDSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst        ProtocolIE-ID ::= 489
id-PUSCH-AddInformation-LCR-PSCH-ReconfRqst                        ProtocolIE-ID ::= 490
id-PUSCH-AddInformation-LCR-AddListIE-PSCH-ReconfRqst              ProtocolIE-ID ::= 491
id-PUSCH-ModifyInformation-LCR-PSCH-ReconfRqst                     ProtocolIE-ID ::= 492
id-PUSCH-ModifyInformation-LCR-ModifyListIE-PSCH-ReconfRqst        ProtocolIE-ID ::= 493
id-timeslotInfo-CellSyncInitiationRqstTDD                          ProtocolIE-ID ::= 496
id-SyncReportType-CellSyncReprtTDD                                 ProtocolIE-ID ::= 497
id-Power-Local-Cell-Group-InformationItem-AuditRsp                 ProtocolIE-ID ::= 498
id-Power-Local-Cell-Group-InformationItem-ResourceStatusInd        ProtocolIE-ID ::= 499
id-Power-Local-Cell-Group-InformationItem2-ResourceStatusInd       ProtocolIE-ID ::= 500
id-Power-Local-Cell-Group-InformationList-AuditRsp                 ProtocolIE-ID ::= 501
id-Power-Local-Cell-Group-InformationList-ResourceStatusInd        ProtocolIE-ID ::= 502
```

```
id-Power-Local-Cell-Group-InformationList2-ResourceStatusInd       ProtocolIE-ID ::= 503
id-Power-Local-Cell-Group-ID                                       ProtocolIE-ID ::= 504
id-PUSCH-Info-DM-Rqst                                              ProtocolIE-ID ::= 505
id-PUSCH-Info-DM-Rsp                                               ProtocolIE-ID ::= 506
id-PUSCH-Info-DM-Rprt                                              ProtocolIE-ID ::= 507
id-InitDL-Power                                                    ProtocolIE-ID ::= 509
id-cellSyncBurstRepetitionPeriod                                   ProtocolIE-ID ::= 511
id-ReportCharacteristicsType-OnModification                        ProtocolIE-ID ::= 512
id-SFNSFNMeasurementValueInformation                               ProtocolIE-ID ::= 513
id-SFNSFNMeasurementThresholdInformation                           ProtocolIE-ID ::= 514
id-TUTRANGPSMeasurementValueInformation                            ProtocolIE-ID ::= 515
id-TUTRANGPSMeasurementThresholdInformation                        ProtocolIE-ID ::= 516
id-Rx-Timing-Deviation-Value-LCR                                   ProtocolIE-ID ::= 520
id-RL-InformationResponse-LCR-RL-AdditionRspTDD                    ProtocolIE-ID ::= 51
id-DL-PowerBalancing-Information                                   ProtocolIE-ID ::= 28
id-DL-PowerBalancing-ActivationIndicator                           ProtocolIE-ID ::= 29
id-DL-PowerBalancing-UpdatedIndicator                              ProtocolIE-ID ::= 30
id-CCTrCH-Initial-DL-Power-RL-SetupRqstTDD                         ProtocolIE-ID ::= 517
id-CCTrCH-Initial-DL-Power-RL-AdditionRqstTDD                      ProtocolIE-ID ::= 518
id-CCTrCH-Initial-DL-Power-RL-ReconfPrepTDD                        ProtocolIE-ID ::= 519
id-IPDLParameter-Information-LCR-Cell-SetupRqstTDD                 ProtocolIE-ID ::= 41
id-IPDLParameter-Information-LCR-Cell-ReconfRqstTDD                ProtocolIE-ID ::= 42
id-HS-PDSCH-HS-SCCH-MaxPower-PSCH-ReconfRqst                       ProtocolIE-ID ::= 522
id-HS-PDSCH-HS-SCCH-ScramblingCode-PSCH-ReconfRqst                 ProtocolIE-ID ::= 523
id-HS-PDSCH-FDD-Code-Information-PSCH-ReconfRqst                   ProtocolIE-ID ::= 524
id-HS-SCCH-FDD-Code-Information-PSCH-ReconfRqst                    ProtocolIE-ID ::= 525
id-HS-PDSCH-TDD-Information-PSCH-ReconfRqst                        ProtocolIE-ID ::= 526
id-Add-To-HS-SCCH-Resource-Pool-PSCH-ReconfRqst                    ProtocolIE-ID ::= 527
id-Modify-HS-SCCH-Resource-Pool-PSCH-ReconfRqst                    ProtocolIE-ID ::= 528
id-Delete-From-HS-SCCH-Resource-Pool-PSCH-ReconfRqst               ProtocolIE-ID ::= 529
id-bindingID                                                       ProtocolIE-ID ::= 102
id-RL-Specific-DCH-Info                                            ProtocolIE-ID ::= 103
id-transportlayeraddress                                           ProtocolIE-ID ::= 104
id-DelayedActivation                                               ProtocolIE-ID ::= 231
id-DelayedActivationList-RL-ActivationCmdFDD                       ProtocolIE-ID ::= 232
id-DelayedActivationInformation-RL-ActivationCmdFDD                ProtocolIE-ID ::= 233
id-DelayedActivationList-RL-ActivationCmdTDD                       ProtocolIE-ID ::= 234
id-DelayedActivationInformation-RL-ActivationCmdTDD                ProtocolIE-ID ::= 235
id-neighbouringTDDCellMeasurementInformationLCR                    ProtocolIE-ID ::= 58
id-SYNCDlCodeId-TransInitLCR-CellSyncInitiationRqstTDD             ProtocolIE-ID ::= 543
id-SYNCDlCodeId-MeasureInitLCR-CellSyncInitiationRqstTDD           ProtocolIE-ID ::= 544
id-SYNCDlCodeIdTransReconfInfoLCR-CellSyncReconfRqstTDD            ProtocolIE-ID ::= 545
id-SYNCDlCodeIdMeasReconfigurationLCR-CellSyncReconfRqstTDD        ProtocolIE-ID ::= 546
id-SYNCDlCodeIdMeasInfoList-CellSyncReconfRqstTDD                  ProtocolIE-ID ::= 547
id-SyncDLCodeIdsMeasInfoList-CellSyncReprtTDD                      ProtocolIE-ID ::= 548
id-SyncDLCodeIdThreInfoLCR                                         ProtocolIE-ID ::= 549
id-NSubCyclesPerCyclePeriod-CellSyncReconfRqstTDD                  ProtocolIE-ID ::= 550
id-DwPCH-Power                                                     ProtocolIE-ID ::= 551
id-AccumulatedClockupdate-CellSyncReprtTDD                         ProtocolIE-ID ::= 552
id-Angle-Of-Arrival-Value-LCR                                      ProtocolIE-ID ::= 521
id-HSDSCH-FDD-Information                                          ProtocolIE-ID ::= 530
id-HSDSCH-FDD-Information-Response                                 ProtocolIE-ID ::= 531
id-HSDSCH-FDD-Information-to-Add                                   ProtocolIE-ID ::= 532
```

```
id-HSDSCH-FDD-Information-to-Delete                    ProtocolIE-ID ::= 533
id-HSDSCH-Information-to-Modify                        ProtocolIE-ID ::= 534
id-HSDSCH-RNTI                                         ProtocolIE-ID ::= 535
id-HSDSCH-TDD-Information                              ProtocolIE-ID ::= 536
id-HSDSCH-TDD-Information-Response                     ProtocolIE-ID ::= 537
id-HSDSCH-TDD-Information-Response-LCR                 ProtocolIE-ID ::= 538
id-HSDSCH-TDD-Information-to-Add                       ProtocolIE-ID ::= 539
id-HSDSCH-TDD-Information-to-Delete                    ProtocolIE-ID ::= 540
id-HSPDSCH-RL-ID                                       ProtocolIE-ID ::= 541
id-PrimCCPCH-RSCP-DL-PC-RqstTDD                        ProtocolIE-ID ::= 542
id-Qth-Parameter                                       ProtocolIE-ID ::= 64
id-PDSCH-RL-ID                                         ProtocolIE-ID ::= 66
id-HSDSCH-RearrangeList-Bearer-RearrangeInd            ProtocolIE-ID ::= 553
id-UL-Synchronisation-Parameters-LCR                   ProtocolIE-ID ::= 554

END

/*Partly omitted*/
```