TSGRP#10(00)0618

TSG-RAN Meeting #10 Bangkok, Thailand, 6 - 8 December 2000

Title: Agreed CRs to TS 25.423

Source: TSG-RAN WG3

Agenda item: 5.3.3

| Tdoc_Num | Specification | CR_Num | Revision_Nu | CR_Subject | CR_Categor | WG_Status | Cur_Ver_Nu | New_Ver_Nu |
|-----------|---------------|--------|-------------|--|------------|-----------|------------|------------|
| R3-002745 | 25.423 | 202 | 1 | Clarification of the handling of UL UU In-and Out-of-sync | F | agreed | 3.3.0 | 3.4.0 |
| R3-002767 | 25.423 | 203 | 1 | Correction of compressed mode handling in the physical | F | agreed | 3.3.0 | 3.4.0 |
| R3-002501 | 25.423 | 204 | | Clarification of Measurement Termination at Measurement | F | agreed | 3.3.0 | 3.4.0 |
| R3-002711 | 25.423 | 205 | 1 | Handling of the optional IEs inside the Criticality | F | agreed | 3.3.0 | 3.4.0 |
| R3-003264 | 25.423 | 206 | 1 | Removal of C-RNTI from the Common Transport Channel | F | agreed | 3.3.0 | 3.4.0 |
| R3-003013 | 25.423 | 207 | 2 | Downlink Power control correction | F | agreed | 3.3.0 | 3.4.0 |
| R3-002519 | 25.423 | 209 | | Clarification of Measurement termination | F | agreed | 3.3.0 | 3.4.0 |
| R3-002527 | 25.423 | 210 | | Protocol specification principles | F | agreed | 3.3.0 | 3.4.0 |
| R3-002989 | 25.423 | 211 | 2 | Transport channel modification | F | agreed | 3.3.0 | 3.4.0 |
| R3-002987 | 25.423 | 212 | 2 | Explanation of cause values | F | agreed | 3.3.0 | 3.4.0 |
| R3-002536 | 25.423 | 213 | | Handling of optional IE's in RL SETUP and RL | F | agreed | 3.3.0 | 3.4.0 |
| R3-002990 | 25.423 | 214 | 4 | CFN/SFN in measurement reporting | F | agreed | 3.3.0 | 3.4.0 |

| R3-003229 | 25.423 | 216 | 2 | Correction to CM Configuration validity | F | agreed | 3.3.0 | 3.4.0 |
|-----------|--------|-----|---|--|---|--------|-------|-------|
| R3-002731 | 25.423 | 217 | 1 | Handling of invalid patterns in Compressed Mode | F | agreed | 3.3.0 | 3.4.0 |
| R3-003230 | 25.423 | 219 | 5 | Support CN direct paging | F | agreed | 3.3.0 | 3.4.0 |
| R3-002580 | 25.423 | 221 | | Common Transport Channel Resources Initialisation | F | agreed | 3.3.0 | 3.4.0 |
| R3-002581 | 25.423 | 222 | | Inconsistency between Tabular and ASN.1 for TDD | F | agreed | 3.3.0 | 3.4.0 |
| R3-002870 | 25.423 | 223 | 2 | Clarification on rules for using the tabular format | F | agreed | 3.3.0 | 3.4.0 |
| R3-003201 | 25.423 | 224 | 4 | Corrections to Transport Format Set | F | agreed | 3.3.0 | 3.4.0 |
| R3-002765 | 25.423 | 226 | 1 | Update of Physical Channel Reconfiguration procedure | F | agreed | 3.3.0 | 3.4.0 |

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| For submission to: TS #1 | SG RAN | for approval | X | strate | gic (for SMG |
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| Source: R-WC | G3 | | | Date: | October 2000 |
| Subject: Clarif | fication of the han | dling of UL U | <mark>In- and out-of</mark> | -sync Detection in | RNSAP |
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| Category:FCorre A(only one category shall be marked with an X)FCorre BAddit CFunc DBEdito | ection esponds to a correction of feature stional modification orial modification | ection in an ea n of feature | arlier release he handling of | X <u>Release:</u> | Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00 |
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| Clauses affected: | <mark>8.3.1.2, 8.3.2.2,</mark> a | nd 8.3.3.2. | | | |
| Other specs affected: MS tes BSS te O&M s | 3G core specificat GSM core ecifications at specifications est specifications specifications | ions X | $\begin{array}{l} \rightarrow \ \text{List of CRs} \\ \rightarrow \ \text{List of CRs} \end{array}$ | TS 25.433 CR2 | 251 |
| Other comments: | | | | | |

Document R3-002745 e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

8.3.1.2 Successful Operation



Figure 1: 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 RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The *First RLS Indicator* IE indicates if the concerning RL shall be considered part of the first RLS established towards this UE. If the *First RLS indicator* IE is set to "first RLS", the DRNS shall use a TPC pattern of n*"01" + "1" in the DL of the concerning RL and all RLs which are part of the same RLS, until UL synchronisation is achieved on the Uu. The TPC pattern shall continuously be repeated but shall be restarted at the beginning of every frame with CFNmod4=0. For all other RLs, the DRNS shall use a TPC pattern of all "1"'s in the DL until UL synchronisation is achieved on the Uu.]

[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 on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then 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 RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

[FDD - If the *Initial DL TX Power* IE and *Uplink SIR Target* IE are present 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.]

[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 *DL Timeslot ISCP* IE are present, the DRNC should use the indicated values when deciding the Initial DL TX Power.]

[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] section 5.2.1 for the inner loop DL power control.]

[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 for the concerning RLS or a DL POWER CONTROL REQUEST message is received. No innerloop 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) with DPC_MODE=0 and the power control procedure (see 8.3.7).]

[TDD – 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 and on each Time Slot of a RL until UL synchronisation is achieved for the concerning RL. No innerloop 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 SETUP REQUEST message includes a *DCH Info* IE with multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCH Info* 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 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 *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH and DSCH (if any).

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the SSDT Cell Identity 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 *Transmission Gap Pattern Sequence Information* IE, the DRNS shall store the information about the Transmission Gap Pattern Sequences to be used when those are activated.]

[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 immediately activate the indicated Transmisson Gap Pattern Sequences: for each sequence the *TGCFN* refers to latest passed CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the DRNS shall behave as specified in ref. [26].]

[TDD – The DRNS shall use the *RB Identity* IE list inside the USCH information group to map each *RB Identity* IE to the corresponding USCH.]

At the reception of the RADIO LINK SETUP REQUEST message, 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 setup.

[TDD –. If the DSCH Information is included in the RADIO LINK SETUP REQUEST message, the DRNC shall send a valid set of *Scheduling Priority* IE and *MAC-c/sh SDU lengths* IE parameters to the SRNC in the message RADIO LINK SETUP RESPONSE message].

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

[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 – 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 - In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference *RL ID* IE shall be included to indicate with which RL the combination is performed. The Reference *RL ID* IE shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.]

[FDD - In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the *Diversity Indication* IE that no combining is performed. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH and DSCH of the RL in the RADIO LINK SETUP RESPONSE message.]

[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 [TDD – and USCH] of the RL.]

In case of a set of coordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

[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.]

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id), the Frequency Number, the [FDD-Primary Scrambling Code], the [TDD-Cell Parameter ID, the Sync Case, the SCH Time Slot information, the Block STTD Indicator] of the neighbouring cells to the cell(s) where the radio link(s) are added. In addition, if the information is available, the DRNC shall also provide the [FDD-CPICH Power level]/[TDD-PCCPCH Power level, DPCH Constant Value] and Frame Offset of the neighbouring cell.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC and CN domain nodes) of the RNC controlling the neighbouring cell. [FDD – If the information is available, the DRNC shall include the *Tx Diversity Indicator* IE and Tx diversity capability (i.e. *STTD Support Indicator* IE, *Closed Loop Mode1 Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE) in *Per FDD Cell Information* IE].

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received 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 *DRAC Control* IE is set to "requested" in the RADIO LINK SETUP REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info IE* to be received on FACH, for each added Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell and the UTRAN access point position for each of the established RLs in the RADIO LINK SETUP RESPONSE message.

After sending of the RADIO LINK SETUP RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [3].

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

[FDD- If the *Downlink compressed mode method* 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 Information Response* 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 –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, and the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set].

8.3.2.2 Successful Operation



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Figure 2: 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 *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), then 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.

[FDD - If the *Primary CCPCH Ec/No* IE measured by the UE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power. If the *Primary CCPCH Ec/No* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.]

[TDD - If the *Primary CCPCH RSCP* IE and/or the *DL Timeslot ISCP* 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 *DL Timeslot ISCP* IE are not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.]

[FDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved for that RLS or a DL POWER CONTROL REQUEST message is received. No innerloop 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) with DPC_MODE=0 and the power control procedure (see 8.3.7)].

[TDD – The Initial DL TX Power shall be applied until UL synchronisation is achieved for that RL. No innerloop 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 - The DRNS shall use the provided Uplink SIR Target value as the current target for the inner-loop power control.]

[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.]

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

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE, the DRNS shall use the information to immediately activate all ongoing Transmission Gap Pattern Sequence(s) also in the new RL. For each sequence the *TGCFN* refers to latest passed CFN with that value. If *Active Pattern Sequence Information* IE is not included, the DRNS shall not activate the on going CM pattern in the new RLs, but the on going pattern in the existing RL are maintained.]

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

[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 – 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.]

In the case of combining an RL with existing RL(s) the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that the RL is combined. In this case the Reference RL ID shall be included to indicate 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 DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH, DSCH [TDD – and USCH] of the RL in the RADIO LINK ADDITION RESPONSE message.

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

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

[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.]

For any cell neighbouring of a cell in which a RL was added, the DRNC shall provide in the RADIO LINK ADDITION RESPONSE message the UTRAN Cell Identifier (UC-Id), the Frequency Number, the [FDD - Primary Scrambling Code], the [TDD – Cell Parameter Id, the Sync Case, the SCH Time slot information, the Block STTD Indicator] and the node identification of CN nodes connected to the RNC controlling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the [FDD-*Primary CPICH Power* IE]/[TDD - *PCCPCH Power* IE, *DPCH Constant Value* IE], *Frame Offset* IE, [FDD – *Tx Diversity Indicator* IE, and Tx diversity capability, i.e. *STTD Support Indicator* IE, *Closed Loop Model Support Indicator* IE] of the neighbouring cell.

The DRNC shall also provide the configured uplink 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 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.

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

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell and the UTRAN access point position for each of the added RLs in the RADIO LINK SETUP RESPONSE message.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].

[FDD - If the UE has been allocated one or several DCH controlled by DRAC (*DRAC Control* IE was set to "requested" in the RADIO LINK ADDITION REQUEST message for at least one DCH) and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message the *Secondary CCPCH Info* IE to be received on FACH, for each added Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK ADDITION RESPONSE message.]

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

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

[FDD – After addition of the new RL(s), the UL out-of-sync algorithm defined in [10] shall <u>for each of the previously</u> <u>existing and newly established RL Set(s)</u> use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the DRNC cells supporting the radio links of the RL Set].

8.3.3.2 Successful Operation



Figure 3: Radio Link Deletion procedure, Successful Operation

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

Upon receipt of this message, the DRNS shall delete the radio link(s) identified in the message and release all associated resources and respond to the SRNC with a RADIO LINK DELETION RESPONSE message.

If the radio link(s) to be deleted represent the last radio link(s) for the UE in the DRNS then the DRNC shall also release the UE context, unless the UE is using common resources in the DRNS.

 $[FDD - After deletion of the RL(s), the UL out-of-sync algorithm defined in [10] shall for each of the remaining RL <u>Set(s)</u> use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the <u>DRNC</u>-cells supporting the radio links of the RL Set].$

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| Subject: | Correction Procedure | of Compressed M | ode Har | ndling in the | Physical Channe | Reconfiguration | |
| Work item: | | | | | | | |
| Category: (only one category shall be marked with an X) | F Correction A Correspond Addition of Functional D Editorial m | ds to a correction feature modification of fea odification | in an ea ature | rlier release | e Kelease | : Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00 | X |
| <u>Reason for</u> <u>change:</u> | The compresentation of the DRNC of the DRNC of scrambling scrambling This CR ad if this compresentation of the CONFIG Sequence of Additions in The Transmissi specification Consequent The Physic prepared of | essed mode hand s) that if there is a provides the SRM code is used if thi ds the information ressed mode met BURATION REQU Information Respondent on Gap Pattern Se on Gap Pattern Se on Gap Pattern Se on Cap Pattern Se | ling in th DL com C with in is compr n on whe hod SF/ JEST me onse IE t rn Sequence equence ed: is not ap | e current R pressed mod formation of essed mod ther or not 2 is activate essage by a o the <i>DL C</i> ence Inform Scrambling | RNSAP specificatio ode type SF/2 (pre on whether or not t le method is activa the alternate scrar ed to the PHYSICA adding the <i>Transmi</i> ode Information IE nation Response IE g Code Information | n includes (amony pared or active) th he alternate ted. nbling code is use AL CHANNEL ission Gap Pattern E is renamed to n throughout the | g nen ed n |
| Clauses affecte | ed: 8.3.1.2 9.2.21 | 2, 8.3.2.2, 8.3.4.2, .1, 9.3.3, and 9.3. | 8.3.8.2, 4. | 9.1.4.1, 9.7 | 1.5.1, 9.1.7.1, 9.1.8 | 3,1, 9.1.12.1, 9.1. ⁻ | 17, |
| Other specs affected: | Other 3G cor Other GSM of specificat MS test spec BSS test spec O&M specific | re specifications core ions ifications cifications cations | | $\begin{array}{l} \rightarrow \text{ List of C} \\ \rightarrow \text{ List of C} \end{array}$ | Rs: Rs: Rs: Rs: Rs: Rs: | | |

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Document **R3-002767**

comments:

8.3.1.2 Successful Operation



Figure 1: 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 RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The *First RLS Indicator* IE indicates if the concerning RL shall be considered part of the first RLS established towards this UE. If the *First RLS indicator* IE is set to "first RLS", the DRNS shall use a TPC pattern of n*"01" + "1" in the DL of the concerning RL and all RLs which are part of the same RLS, until UL synchronisation is achieved on the Uu. The TPC pattern shall continuously be repeated but shall be restarted at the beginning of every frame with CFNmod4=0. For all other RLs, the DRNS shall use a TPC pattern of all "1"'s in the DL until UL synchronisation is achieved on the Uu.]

[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 on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then 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 RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

[FDD - If the *Initial DL TX Power* IE and *Uplink SIR Target* IE are present 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.]

[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 *DL Timeslot ISCP* IE are present, the DRNC should use the indicated values when deciding the Initial DL TX Power.]

[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] section 5.2.1 for the inner loop DL power control.]

[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 for the concerning RLS or a DL POWER CONTROL REQUEST message is received. No innerloop 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) with DPC_MODE=0 and the power control procedure (see 8.3.7).]

[TDD – 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 and on each Time Slot of a RL until UL synchronisation is achieved for the concerning RL. No innerloop 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 SETUP REQUEST message includes a *DCH Info* IE with multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCH Info* 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 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 *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH and DSCH (if any).

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the SSDT Cell Identity 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 *Transmission Gap Pattern Sequence Information* IE, the DRNS shall store the information about the Transmission Gap Pattern Sequences to be used when those are activated.]

[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 immediately activate the indicated Transmisson Gap Pattern Sequences: for each sequence the *TGCFN* refers to latest passed CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the DRNS shall behave as specified in ref. [26].]

[TDD – The DRNS shall use the *RB Identity* IE list inside the USCH information group to map each *RB Identity* IE to the corresponding USCH.]

At the reception of the RADIO LINK SETUP REQUEST message, 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 setup.

[TDD –. If the DSCH Information is included in the RADIO LINK SETUP REQUEST message, the DRNC shall send a valid set of *Scheduling Priority* IE and *MAC-c/sh SDU lengths* IE parameters to the SRNC in the message RADIO LINK SETUP RESPONSE message].

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

[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 – 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 - In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference *RL ID* IE shall be included to indicate with which RL the combination is performed. The Reference *RL ID* IE shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.]

[FDD - In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the *Diversity Indication* IE that no combining is performed. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH and DSCH of the RL in the RADIO LINK SETUP RESPONSE message.]

[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 [TDD – and USCH] of the RL.]

In case of a set of coordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

[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.]

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id), the Frequency Number, the [FDD-Primary Scrambling Code], the [TDD-Cell Parameter ID, the Sync Case, the SCH Time Slot information, the Block STTD Indicator] of the neighbouring cells to the cell(s) where the radio link(s) are added. In addition, if the information is available, the DRNC shall also provide the [FDD-CPICH Power level]/[TDD-PCCPCH Power level, DPCH Constant Value] and Frame Offset of the neighbouring cell.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC and CN domain nodes) of the RNC controlling the neighbouring cell. [FDD – If the information is available, the DRNC shall include the *Tx Diversity Indicator* IE and Tx diversity capability (i.e. *STTD Support Indicator* IE, *Closed Loop Mode1 Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE) in *Per FDD Cell Information* IE].

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received 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 *DRAC Control* IE is set to "requested" in the RADIO LINK SETUP REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info IE* to be received on FACH, for each added Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell and the UTRAN access point position for each of the established RLs in the RADIO LINK SETUP RESPONSE message.

After sending of the RADIO LINK SETUP RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [3].

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

[FDD- If the *Downlink compressed mode method* 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* <u>Scrambling Code</u> Information Response-IE in the RADIO LINK SETUP RESPONSE message indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

8.3.2.2 Successful Operation



Figure 2: 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 *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), then 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.

[FDD - If the *Primary CCPCH Ec/No* IE measured by the UE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power. If the *Primary CCPCH Ec/No* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.]

[TDD - If the *Primary CCPCH RSCP* IE and/or the *DL Timeslot ISCP* 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 *DL Timeslot ISCP* IE are not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.]

[FDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved for that RLS or a DL POWER CONTROL REQUEST message is received. No innerloop 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) with DPC_MODE=0 and the power control procedure (see 8.3.7)].

[TDD – The Initial DL TX Power shall be applied until UL synchronisation is achieved for that RL. No innerloop 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 - The DRNS shall use the provided Uplink SIR Target value as the current target for the inner-loop power control.]

[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.]

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

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE, the DRNS shall use the information to immediately activate all ongoing Transmission Gap Pattern Sequence(s) also in the new RL. For each sequence the *TGCFN* refers to latest passed CFN with that value. If *Active Pattern Sequence Information* IE is not included, the DRNS shall not activate the on going CM pattern in the new RLs, but the on going pattern in the existing RL are maintained.]

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

[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 – 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.]

In the case of combining an RL with existing RL(s) the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that the RL is combined. In this case the Reference RL ID shall be included to indicate 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 DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH, DSCH [TDD – and USCH] of the RL in the RADIO LINK ADDITION RESPONSE message.

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

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

[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.]

For any cell neighbouring of a cell in which a RL was added, the DRNC shall provide in the RADIO LINK ADDITION RESPONSE message the UTRAN Cell Identifier (UC-Id), the Frequency Number, the [FDD - Primary Scrambling Code], the [TDD – Cell Parameter Id, the Sync Case, the SCH Time slot information, the Block STTD Indicator] and the node identification of CN nodes connected to the RNC controlling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the [FDD-*Primary CPICH Power* IE]/[TDD - *PCCPCH Power* IE, *DPCH Constant Value* IE], *Frame Offset* IE, [FDD – *Tx Diversity Indicator* IE, and Tx diversity capability, i.e. *STTD Support Indicator* IE, *Closed Loop Model Support Indicator* IE] of the neighbouring cell.

The DRNC shall also provide the configured uplink 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 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.

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

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell and the UTRAN access point position for each of the added RLs in the RADIO LINK SETUP RESPONSE message.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].

[FDD - If the UE has been allocated one or several DCH controlled by DRAC (*DRAC Control* IE was set to "requested" in the RADIO LINK ADDITION REQUEST message for at least one DCH) and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message the *Secondary CCPCH Info* IE to be received on FACH, for each added Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK ADDITION RESPONSE message.]

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

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

[FDD – After addition of the new RL, the UL out-of-sync algorithm defined in [10] shall use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the DRNC cells supporting the radio links of the RL Set].

8.3.4.2 Successful Operation



Figure 3: 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 before providing a response to the SRNC.

DCH Modification:

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message 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 RADIO LINK RECONFIGURATION PREPARE message 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 RADIO LINK RECONFIGURATION PREPARE message 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.

If the RADIO LINK RECONFIGURATION PREPARE message includes a *DCHs to Modify* IE with 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 RADIO LINK RECONFIGURATION PREPARE message includes the *UL FP Mode* IE for a DCH or a DCH which belongs to 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 RADIO LINK RECONFIGURATION PREPARE message includes the *ToAWS* IE for a DCH or a DCH which belongs to 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 RADIO LINK RECONFIGURATION PREPARE message includes the *ToAWE* IE for a DCH or a DCH which belongs to 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.

[FDD - If the *DRAC Control* IE is present and set to "requested" in the RADIO LINK RECONFIGURATION PREPARE message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

DCH Addition:

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If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to the Radio Link(s), 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 RADIO LINK RECONFIGURATION PREPARE message includes a DCHs to *Add* IE with 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 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 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 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 the RADIO LINK RECONFIGURATION PREPARE message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

DCH Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be deleted from the Radio Link(s), the DRNS 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 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 the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Uplink Channelisation Code* [Es, the DRNS shall apply the new Uplink Channelisation Code(s) in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes *Number of DL Channelisation Code 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, DRNS shall include the *Transmission Gap Pattern Sequence*

<u>Scrambling Code</u> Information Response-IE in the RADIO LINK RECONFIGURATION READY message in case it 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 - 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 - 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 RADIO LINK RECONFIGURATION PREPARE message includes on the *Diversity Mode* IE, the DRNS shall apply diversity according to the given value.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes on the *UL DPCCH Structure* IE, group the DRNS shall apply the new Uplink DPCCH Structure to the new configuration.]

FDD – If the RADIO LINK RECONFIGURATION PREPARE message 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 RADIO LINK RECONFIGURATION PREPARE message 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] section 5.2.1 for the inner loop DL power control in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message 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.]

[TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes UL/DL CCTrCH to be modified and includes any of *TFCS* IE, *TFCI coding* IE, *Puncture limit* IE, or *TPC CCTrCH ID* IEs the DRNC 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 *Midamble shift and Burst Type* IE, *Time Slot* IE, *TFCI presence* IE or Code information was modified. The DRNC shall include code information if *TDD Channelisation Code* IE was modified.]

[TDD – UL/DL CCTrCH Addition]

[TDD -If the RADIO LINK RECONFIGURATION PREPARE message includes any UL or DL CCTrCH to be added, the DRNC shall include this CCTrCH in the new configuration.]

[TDD – If the DRNC 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.]

[TDD – UL/DL CCTrCH Deletion]

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

SSDT Activation/Deactivation:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message 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 and SSDT Cell Identity Length IE in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the SSDT Indication IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

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 exist 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.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH Information Response* IE group shall be included only for one of the DCHs in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH Information Response* IE group shall be included only for one of the combined Radio Links.

Compressed Mode Preparation:

[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.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern* Sequence Information IE and 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 DRNS shall include the *Transmission Gap Pattern Sequence Scrambling Code Information Response-IE* to the RADIO LINK

RECONFIGURATION READY message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not].

DSCH Addition/Modification/Deletion:

The DRNC shall use any included DSCH information for the DSCHs to be added/modified/deleted in the RADIO LINK RECONFIGURATION PREPARE message, 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.

To add or modify each DSCH, 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 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.

The DRNS shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE of the DSCHs being added or modified.

USCH Addition/Modification/Deletion [TDD]

The DRNC shall use any included USCH information for the USCHs to be added/modified/deleted in the RADIO LINK RECONFIGURATION PREPARE message. 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.

To add or modify each USCH, 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 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.

The DRNS shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE of the USCHs being added or modified.

8.3.8.2 Successful Operation



Figure 4: Physical Channel Reconfiguration procedure, Successful Operation

When the DRNC detects the need to modify one of its physical channels, it shall send a PHYSICAL CHANNEL RECONFIGURATION REQUEST to the SRNC.

The message contains the new value of the physical channel parameter(s) that shall be reconfigured and in which radio link.

[FDD- If compressed mode is prepared or active and at least one of the downlink compressed mode methods is 'SF/2', the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE in the *DL Code Information* IE in the PHYSICAL CHANNEL RECONFIGURATION REQUEST message indicating for each DL Channelisation Code whether the alternative scrambling code will be used or not if the downlink compressed mode methods 'SF/2' is activated.]

Upon reception of the PHYSICAL CHANNEL RECONFIGURATION REQUEST, the SRNC shall decide an appropriate execution time for the change. The SRNC shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMMAND message to the DRNC that includes the *CFN* IE indicating the execution time.

At the CFN, the DRNS shall switch to the new configuration that has been requested, and release the resources related to the old physical channel configuration.

9.1.4.1 FDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|----------------------------------|------------|---|-----------|------------------------------|-------------|-------------|
| | | _ | and | description | | Criticality |
| | | | reference | | | |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | _ | |
| D-RNTI | 0 | | 9.2.1.24 | | YES | ignore |
| CN PS Domain Identifier | 0 | | 9.2.1.12 | | YES | ignore |
| CN CS Domain Identifier | 0 | | 9.2.1.11 | | YES | ignore |
| RL Information Response | | 1 <maxno< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxno<> | | | EACH | ignore |
| | | ofRLs> | | | | |
| >RL ID | M | | 9.2.1.49 | | _ | |
| >RL Set ID | M | | 9.2.2.35 | | _ | |
| >URA ID | M | | 9.2.1.70 | | _ | |
| >SAI | M | | 9.2.1.52 | | _ | |
| | 0 | - | | | - | |
| >UTRAN Access Point | 0 | | | | - | |
| Position | 5.4 | | 0.0.0.054 | | | |
| >RSSI | IVI | 0.1 | 9.2.2.35A | | _ | |
| >Secondary CCPCH Into | 5.4 | 01 | 0.0.0.45 | Componendo | _ | |
| >>FDD S-CCPCH Offset | IVI | | 9.2.2.15 | Corresponds | _ | |
| | | | | to: $	au_{\text{S-CCPCH,k}}$ | | |
| | | | | , see ref. [8] | | |
| >>DL Scrambling Code | М | | 9.2.2.8 | | - | |
| >>FDD DL Channelisation | Μ | | 9.2.2.14 | | - | |
| Code | | | | | | |
| Number | | | | | | |
| >>TFCS | M | | 9.2.1.63 | For the DL. | _ | |
| >>Secondary CCPCH Slot Format | М | | 9.2.2.38 | | — | |
| >>TFCI presence | C - | | 9.2.1.55 | | - | |
| | SlotFormat | | | | | |
| >>Multiplexing Position | M | | 9.2.2.26 | | _ | |
| >>STTD Indicator | M | | 9.2.2.44 | | _ | |
| >>FACH/PCH Information | | 1 | | | - | |
| | | <maxfac< td=""><td></td><td></td><td></td><td></td></maxfac<> | | | | |
| TEO | | Hcount+1> | 0.04.04 | E | | |
| >>>1F5 | | | 9.2.1.64 | For each FACH, and | _ | |
| | | | | the PCH | | |
| | | | | when | | |
| | | | | multiplexed | | |
| | | | | on the same | | |
| | | | | | | |
| | | | | COPOIN | | |
| >>Scheduling | | 1 | | | _ | |
| Information | | | | | | |
| >>>IB_SG_REP | М | | 9.2.2.4 | | - | |
| >>>Segment | | 1 | | | - | |
| Information | | <maxibse< td=""><td></td><td></td><td></td><td></td></maxibse<> | | | | |
| | | G> | | | | |
| >>>IB_SG_POS | М | | 9.2.2.20 | | _ | |
| >DL Code Information | | 1 | | | - | |
| | | <maxnoof DLCodes</maxnoof | | | | |
| >>DL Scrambling Code | М | | 9.2.2.8 | | | |
| >>FDD DL Channelisation | M | | 9.2.2.14 | | - | |
| Code Number | | | | | | |
| >>Transmission Gap | 0 | | | | — | |
| Pattern Sequence | | | | | | |
| Scrambling Code | | | | | | |
| Information Response | | | | | | |
| >Diversity Indication | C- | | 9.2.2.7 | | - | |
| | NotFirstRL | | | | | |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--|----------|--|-----------------------------|--|-------------|-------------------------|
| >CHOICE diversity | | | | | | |
| >>Combining | | | | | YES | ignore |
| >>>RL ID | Μ | | 9.2.1.49 | Reference RL ID for the combining | _ | |
| >>Non Combining or First RL | | | | | YES | ignore |
| >>>DCH Information Response | | 0 <maxno ofDCHs></maxno | | Only one DCH per set of co-ordinated DCHs shall be included | _ | |
| >>>DCH ID | M | | 9.2.1.16 | | — | |
| >>>>Binding ID >>>>Transport Layer Address | M | | 9.2.1.3 | | | |
| >SSDT Support Indicator | Μ | | 9.2.2.43 | | _ | |
| >Maximum Uplink SIR | М | | Uplink SIR 9.2.1.69 | | - | |
| >Minimum Uplink SIR | М | | Uplink SIR 9.2.1.69 | | - | |
| >Closed loop timing adjustment mode | 0 | | | | - | |
| >Maximum Allowed UL Tx Power | М | | 9.2.1.35 | | - | |
| >Maximum DL TX Power | М | | DL Power 9.2.2.10 | | - | |
| >Minimum DL TX Power | М | | DL Power 9.2.2.10 | | - | |
| >DSCH Information Response | | 01 | | | YES | ignore |
| >>DSCH Information | | 1 <maxno ofDSCHs></maxno | | | - | |
| >>>DSCH ID | М | | | | _ | |
| >>>Priority Indicator | | 116 | | Provide Information for each priority class used | - | |
| >>>Scheduling Priority Indicator | М | | | For DSCH | _ | |
| >>>>MAC-c/sh SDU Length | | 1 <maxnb MAC- c/shSDUL ength></maxnb | | | _ | |
| >>>>MAC-c/sh SDU Length | М | | | | _ | |
| >>>Binding ID >>>Transport Layer Address | M | | | | - | |
| >>PDSCH code mapping | М | | | PDSCH code mapping to be used | _ | |
| >Neighbouring Cell Information | | 0 <maxnoof neighbourin gRNCs></maxnoof | | | EACH | ignore |
| >>RNC-Id | М | | 9.2.1.50 | | - | |
| >>CN PS Domain Identifier | 0 | | 9.2.1.12 | | - | |
| >>CN CS Domain Identifier | 0 | | 9.2.1.11 | | — | |
| >>Per FDD Cell Information | | 0 <maxno ofFDDneig</maxno | | | | |

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|---|----------|---|------------------------|-------------------------------------|-------------|-------------|
| | | | reference | description | | Criticality |
| | | hbours> | | | | |
| >>>C-ld | М | | 9.2.1.6 | | | |
| >>>UARFCN | M | | 9.2.1.66 | Corresponds to Nu in ref. [6] | - | |
| >>>UARFCN | M | | 9.2.1.66 | Corresponds to Nd in ref. [6] | | |
| >>>Frame Offset | 0 | | 9.2.1.30 | | _ | |
| >>>Primary Scrambling Code | М | | 9.2.1.45 | | _ | |
| >>>Primary CPICH Power | 0 | | 9.2.1.44 | | _ | |
| >>>Cell Individual Offset | 0 | | 9.2.1.7 | | | |
| >>>Tx Diversity Indicator | Μ | | 9.2.2.50 | | | |
| >>>STTD Support Indicator | 0 | | 9.2.2.45 | | | |
| >>>Closed Loop Mode1 Support Indicator | 0 | | 9.2.2.2 | | | |
| >>>Closed Loop Mode2 Support Indicator | 0 | | 9.2.2.3 | | | |
| >>Per TDD Cell Information | | 0 <maxno ofTDDneig hbours></maxno | | | | |
| >>>C-ld | М | | 9.2.1.6 | | | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nt in ref. [7] | _ | |
| >>>Frame Offset | 0 | | 9.2.1.30 | | | |
| >>>Cell Parameter ID | Μ | | 9.2.1.8 | | _ | |
| >>>Sync Case | Μ | | 9.2.1.54 | | _ | |
| >>>Time Slot | C-Case1 | | 9.2.1.56 | | _ | |
| >>>SCH Time Slot | C-Case2 | | 9.2.1.51 | | _ | |
| >>>Block STTD Indicator | Μ | | | | _ | |
| >>>Cell Individual Offset | 0 | | 9.2.1.7 | | - | |
| >>>DPCH Constant | 0 | | 9.2.1.23 | | - | |
| Value | | | | | | |
| >>>PCCPCH Power | 0 | | 9.2.1.43 | | - | |
| Uplink SIR Target | 0 | | Uplink SIR 9.2.1.69 | | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|------------|--|
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information |
| Case1 | This IE is present only if Sync Case = Case1. |
| Case2 | This IE is present only if Sync Case = Case2. |
| SlotFormat | This IE is present only if the Secondary CCPCH Slot Format is equal |
| | to any of the value 8 to 17 |

| Range bound | Explanation |
|-------------------------|--|
| MaxnoofRLs | Maximum number of RLs for one UE. |
| MaxnoofDCHs | Maximum number of DCHs for one UE. |
| MaxNbMAC-c/shSDULength | Maximum number of different MAC-c/sh SDU lengths |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofneighbouringRNCs | Maximum number of neighbouring RNCs |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell. |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell. |
| MaxFACHCount | Maximum number of FACH's mapped onto secondary CCPCH's |
| MaxIBSEG | Maximum number of segments for one Information Block |

9.1.5.1 FDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|-------------------------------------|----------|---|------------------------|--------------|-------------|-------------|
| | | | and | description | | Criticality |
| | | | reference | | | |
| Message Type | M | | 9.2.1.40 | | YES | reject |
| I ransaction ID | M | | 9.2.1.59 | | | : |
| D-RNTI CN DC Demoin Identifier | 0 | | 9.2.1.24 | | YES | Ignore |
| CN PS Domain Identifier | 0 | | 9.2.1.12 | | YES | ignore |
| | 0 | | 9.2.1.11 | | TES | ignore |
| Choice cause level | | | | | Vec | ignore |
| | М | | | | 165 | Ignore |
| >RL specific | 101 | | | | Yes | ignore |
| >>Unsuccessful RI | | 1 <maxn< td=""><td></td><td></td><td>FACH</td><td>ignore</td></maxn<> | | | FACH | ignore |
| Information Response | | oofRLs> | | | 2,1011 | ignore |
| >>>RL ID | М | | 9.2.1.49 | | _ | |
| >>>Cause | М | | 9.2.1.5 | | - | |
| >>Successful RL | | 0 <maxno< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxno<> | | | EACH | ignore |
| Information Response | | ofRLs-1> | | | _ | 5 |
| >>>RL ID | Μ | | 9.2.1.49 | | _ | |
| >>>RL Set ID | Μ | | 9.2.2.35 | | - | |
| >>>URA ID | Μ | | 9.2.1.70 | | - | |
| >>>SAI | Μ | | 9.2.1.52 | | - | |
| >>>RSSI | Μ | | 9.2.2.35A | | - | |
| >>>DL Code | | 1 <maxno< td=""><td></td><td></td><td>GLOBAL</td><td>ignore</td></maxno<> | | | GLOBAL | ignore |
| Information | | ofDLCode s | | | | |
| >>>>DL Scrambling Code | М | | 9.2.2.8 | | - | |
| >>>FDD DL | М | | 9.2.2.14 | | _ | |
| Channelisation Code | | | - | | | |
| Number | | | | | | |
| >>>>Transmission Gap | 0 | | 9.2.2.47B | | - | |
| Pattern Sequence | | | | | | |
| Scrambling Code | | | | | | |
| Information Response | | | | | | |
| >>>Diversity Indication | М | | 9.2.2.7 | | _ | |
| >>>CHOICE diversity | | | | | - | |
| Indication | | | | | VEO | : |
| >>>Combining | NA | | 0.0.1.40 | Deference | TES | Ignore |
| >>>>RL ID | IVI | | 9.2.1.49 | Reference | _ | |
| | | | | combining | | |
| >>>Non Combining | | | | combining | VES | ignore |
| First RL | | | | | 120 | ignore |
| >>>>DCH | | 0 <maxno< td=""><td></td><td>Only one</td><td>_</td><td></td></maxno<> | | Only one | _ | |
| Information | | ofDCHs> | | DCH per set | | |
| Response | | | | of | | |
| | | | | co-ordinated | | |
| | | | | DCHs shall | | |
| | | | | be included. | | |
| >>>>>DCH ID | M | | 9.2.1.16 | | _ | |
| >>>>>Binding ID | M | | 9.2.1.3 | | _ | |
| >>>>>Transport | М | | 9.2.1.62 | | - | |
| Layer Address | | | 0.0.0.40 | | | |
| Indicator | IVI | | 9.2.2.43 | | _ | |
| >>>Maximum Uplink SIR | М | | Uplink SIR 9.2.1.69 | | _ | |
| >>>Minimum Uplink SIR | М | | Uplink SIR | | - | |
| >>>Closed loop timing | 0 | | 0.2.1.00 | | - | |
| adjustment mode | | | 0.0.4.05 | | | |
| >>>iviaximum Allowed UL Tx Power | IVI | | 9.2.1.35 | | - | |

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|-------------------------------------|----------|---|----------------------|-------------------------------------|-------------|-------------|
| | | | reference | description | | Criticality |
| >>>Maximum DL TX Power | М | | DL Power 9.2.2.10 | | - | |
| >>>Minimum DL TX | М | | DL Power | | _ | |
| >>>DSCH Information | | 0 <maxno< td=""><td>9.2.2.10</td><td></td><td>GLOBAL</td><td>ignore</td></maxno<> | 9.2.2.10 | | GLOBAL | ignore |
| Response | | ofDSCHs> | | | | |
| >>>DSCH ID | M | | | | - | |
| >>>Binding ID | M | | | | _ | |
| Address | IVI | | | | _ | |
| >>>Neighbouring Cell Information | 0 | 0 <maxnoof neighbourin gRNCs></maxnoof | | | EACH | ignore |
| >>>RNC-Id | М | | 9.2.1.50 | | - | |
| >>>CN PS Domain Identifier | 0 | | 9.2.1.12 | | - | |
| >>>CN CS Domain | 0 | | 9.2.1.11 | | _ | |
| >>>>Per FDD Cell | | 0 <maxno< td=""><td></td><td></td><td>_</td><td></td></maxno<> | | | _ | |
| Information | | ofFDDneig | | | | |
| >>>>C-ld | М | 1100ui3> | 9216 | | _ | |
| >>>>UARFCN | M | | 9.2.1.66 | Corresponds to Nu in ref. | - | |
| | N4 | | 0.2.1.66 | [6] Corresponde | | |
| >>>>UARTON | | | 9.2.1.00 | to Nd in ref. | _ | |
| >>>>Frame Offset | 0 | | 9.2.1.30 | | — | |
| >>>>Primary Scrambling Code | Μ | | 9.2.1.45 | | - | |
| >>>>Primary CPICH Power | 0 | | 9.2.1.44 | | - | |
| >>>>Cell Individual | 0 | | 9.2.1.7 | | - | |
| >>>>Tx Diversity | М | | 9.2.2.50 | | - | |
| >>>>STTD Support | 0 | | 9.2.2.45 | | - | |
| Indicator | 0 | | 0.0.0.0 | | | |
| Mode1 Support | 0 | | 9.2.2.2 | | _ | |
| >>>>Closed Loop Mode2 Support | 0 | | 9.2.2.3 | | _ | |
| | | $0 < max_{n0}$ | | | _ | |
| Information | | ofTDDneig hbours> | | | | |
| >>>>C-ld | М | | 9.2.1.6 | | _ | |
| >>>>UARFCN | Μ | | 9.2.1.66 | Corresponds to Nt in ref. [7] | _ | |
| >>>>Frame Offset | 0 | | 9.2.1.30 | | | |
| >>>>Cell Parameter | М | | 9.2.1.8 | | - | |
| >>>>Sync Case | М | | 9.2.1.54 | | _ | |
| >>>>Time Slot | C-Case1 | | 9.2.1.56 | | | |
| >>>>SCH Time Slot | C-Case2 | | 9.2.1.51 | | _ | |
| >>>>Block STTD Indicator | М | | | | _ | |
| >>>>Cell Individual | 0 | | 9.2.1.7 | | - | |
| >>>>DPCH | 0 | | 9.2.1.23 | | - | |
| | 1 | 1 | 1 | 1 | 1 | 1 |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------------|-----------------------|-------------|-------------------------|
| >>>>PCCPCH Power | 0 | | 9.2.1.43 | | - | |
| Uplink SIR Target | 0 | | Uplink SIR 9.2.1.69 | | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|-----------|---|
| Case1 | This IE is present only if Sync Case = Case1. |
| Case2 | This IE is present only if Sync Case = Case2. |

| Range bound | Explanation |
|-------------------------|--|
| MaxnoofRLs | Maximum number of RLs for one UE. |
| MaxnoofDCHs | Maximum number of DCHs for one UE. |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofneighbouringRNCs | Maximum number of neighbouring RNCs |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell |

9.1.7.1 FDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|-------------------------|------------|---|-----------|----------------|-------------|-------------|
| | | - | and | description | - | Criticality |
| | | | reference | | | |
| Message Type | Μ | | 9.2.1.40 | | YES | reject |
| Transaction ID | Μ | | 9.2.1.59 | | - | |
| RL Information Response | | 1 <maxnoof< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxnoof<> | | | EACH | ignore |
| | | RLs-1> | | | | |
| >RL ID | Μ | | 9.2.1.49 | | _ | |
| >RL Set ID | Μ | | 9.2.2.35 | | _ | |
| >URA ID | Μ | | 9.2.1.70 | | _ | |
| >SAI | М | | 9.2.1.52 | | - | |
| >Cell GAI | 0 | | | | _ | |
| >UTRAN Access Point | 0 | | | | - | |
| Position | | | | | | |
| >RSSI | Μ | | 9.2.2.35A | | _ | |
| >Secondary CCPCH Info | | 01 | | | - | |
| >>FDD S-CCPCH Offset | Μ | | 9.2.2.15 | Corresponds | - | |
| | | | | to. Te conclut | | |
| | | | | see ref [8] | | |
| >>DL Scrambling Code | М | | 9228 | , 300 101. [0] | _ | |
| | M | | 92214 | | _ | |
| Channelisation Code | | | 5.2.2.14 | | | |
| Number | | | | | | |
| >>TECS | М | | 92163 | For the DI | _ | |
| >>Secondary CCPCH | M | | 92238 | | _ | |
| Slot Format | | | 0.2.2.00 | | | |
| >>TFCI presence | С- | | 92155 | | _ | |
| | SlotFormat | | 0.2.1100 | | | |
| >>Multiplexing Position | M | | 9.2.2.26 | | _ | |
| >>STTD Indicator | M | | 92244 | | _ | |
| >>FACH/PCH | | 1 | 0.2.2.11 | | _ | |
| Information | | <maxfachc< td=""><td></td><td></td><td></td><td></td></maxfachc<> | | | | |
| | | ount+1> | | | | |
| >>>TFS | | | 9.2.1.64 | For each | _ | |
| | | | | FACH, and | | |
| | | | | the PCH | | |
| | | | | when | | |
| | | | | multiplexed | | |
| | | | | on the same | | |
| | | | | Secondary | | |
| | | | | CCPCH | | |
| | | | | | | |
| >>Scheduling | | 1 | | | - | |
| Information | | | | | | |
| >>>IB_SG_EP | Μ | | 9.2.2.21 | | _ | |
| >>>Segment | | 1 | | | - | |
| Information | | <maxibseg< td=""><td></td><td></td><td></td><td></td></maxibseg<> | | | | |
| | | > | | | | |
| >>>>IB_SG_POS | Μ | | 9.2.2.20 | | _ | |
| >DL Code Information | | 1 <maxnoof< td=""><td></td><td></td><td>GLOBAL</td><td>ignore</td></maxnoof<> | | | GLOBAL | ignore |
| | | DLCodes> | | | | |
| >>DL Scrambling Code | M | | 9.2.2.8 | | _ | |
| >>FDD DL | M | | 9.2.2.14 | | - | |
| Channelisation Code | | | | | | |
| Number | | | | | | |
| >>Transmission Gap | 0 | | | | - | |
| Pattern Sequence | | | | | | |
| Scrambling Code | | | | | | |
| Information Response | | | | | | |
| >Diversity Indication | М | | 9.2.2.7 | | YES | ignore |
| >CHOICE diversity | | | | | | |
| indication | | | | | | |
| >>Combining | | | | | YES | ignore |
| >>>RL ID | М | | 9.2.1.49 | Reference | | |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--|----------|---|-----------------------------|---|-------------|-------------------------|
| | | | | RL-Id | | |
| >>Non combinina | | | | - | YES | ianore |
| >>>DCH Information Response | | 1 <maxnoof DCHs></maxnoof | | Only one DCH per set of co-ordinated DCHs shall be included. | _ | |
| >>>>DCH ID | М | | 9.2.1.16 | | - | |
| >>>>Binding ID | М | | 9.2.1.3 | | _ | |
| >>>>Transport Layer Address | М | | 9.2.1.62 | | - | |
| >SSDT Support Indicator | М | | 9.2.2.43 | | _ | |
| >Minimum Uplink SIR | М | | Uplink SIR 9.2.1.69 | | _ | |
| >Maximum Uplink SIR | М | | Uplink SIR 9.2.1.69 | | _ | |
| >Closed loop timing adjustment mode | 0 | | | | - | |
| >Maximum Allowed UL Tx Power | Μ | | 9.2.1.35 | | - | |
| >Maximum DL TX Power | М | | DL Power 9.2.2.10 | | - | |
| >Minimum DL TX Power | М | | DL Power 9.2.2.10 | | _ | |
| >Neighbouring Cell Information | | 0 <maxnoofn eighbouringR NCs></maxnoofn | | | EACH | ignore |
| >>RNC-Id | Μ | | 9.2.1.50 | | _ | |
| >>CN PS Domain Identifier | 0 | | 9.2.1.12 | | - | |
| >>CN CS Domain Identifier | 0 | | 9.2.1.11 | | - | |
| >>Per FDD Cell Information | | 0 <maxnoof FDDneighbo urs></maxnoof | | | _ | |
| >>>C-ld | Μ | | 9.2.1.6 | | _ | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nu in ref. [6] | _ | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nd in ref. [6] | - | |
| >>>Frame Offset | 0 | | 9.2.1.30 | | _ | |
| >>>Primary Scrambling Code | М | | 9.2.1.45 | | - | |
| >>>Primary CPICH Power | 0 | | 9.2.1.44 | | - | |
| >>>Cell Individual Offset | 0 | | 9.2.1.7 | | - | |
| >>>Tx Diversity Indicator | М | | 9.2.2.50 | | - | |
| >>>STTD Support Indicator | 0 | | 9.2.2.45 | | - | |
| >>>Closed Loop Mode1 Support Indicator | 0 | | 9.2.2.2 | | _ | |
| >>>Closed Loop Mode2 Support Indicator | 0 | | 9.2.2.3 | | _ | |
| >>Per TDD Cell Information | | 0 <maxnoof TDDneighbo urs></maxnoof | | | _ | |
| >>>C-Id | М | | 9.2.1.6 | | - | |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|------------------------------|----------|-------|-----------------------------|-------------------------------------|-------------|-------------------------|
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nt in ref. [7] | _ | |
| >>>Frame Offset | 0 | | 9.2.1.30 | | _ | |
| >>>Cell Parameter ID | М | | 9.2.1.8 | | - | |
| >>>Sync Case | М | | 9.2.1.54 | | - | |
| >>>Time Slot | C-Case1 | | 9.2.1.56 | | - | |
| >>>SCH Time Slot | C-Case2 | | 9.2.1.51 | | - | |
| >>>Block STTD Indicator | М | | | | - | |
| >>>Cell Individual Offset | 0 | | 9.2.1.7 | | - | |
| >>>DPCH Constant Value | 0 | | 9.2.1.23 | | _ | |
| >>>PCCPCH Power | 0 | | 9.2.1.43 | | _ | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|------------|---|
| Case1 | This IE is present only if Sync Case = Case1. |
| Case2 | This IE is present only if Sync Case = Case2. |
| SlotFormat | This IE is present only if the Secondary CCPCH Slot Format is |
| | equal to any of the value 8 to 17 |

| Range bound | Explanation |
|-------------------------|--|
| MaxnoofDCHs | Maximum number of dedicated channels on one RL |
| MaxnoofRLs | Maximum number of radio links for one UE |
| MaxnoofneighbouringRNCs | Maximum number of neighbouring RNCs |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one |
| | cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one |
| | cell |
| MaxnoofDLCodes | Maximum number of DL code information |
| MaxFACHCount | Maximum number of FACH's mapped onto secondary |
| | CCPCH's |
| MaxIBSEG | Maximum number of segments for one Information |
| | Block |

9.1.8.1 FDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|------------------------------------|----------|--|------------|-------------|-------------|-------------|
| | | | and | description | | Criticality |
| | | | reference | | | |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | - | |
| CHOICE cause level | | | | | | |
| >General | | | | | Yes | ignore |
| >>Cause | M | | | | | |
| >RL specific | | | | | Yes | ignore |
| >>Unsuccessful RL | | 1 <maxnoof< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxnoof<> | | | EACH | ignore |
| | N/ | RLS-1> | 0.2.1.40 | | | |
| | | | 9.2.1.49 | | _ | |
| | 171 | 0 <maxnoof< td=""><td>3.2.1.5</td><td></td><td>EACH</td><td>ignore</td></maxnoof<> | 3.2.1.5 | | EACH | ignore |
| Information Response | | RI s-2> | | | LAON | ignore |
| >>>RL ID | М | | 9.2.1.49 | | _ | |
| >>>RL Set ID | M | | 9.2.2.35 | | _ | |
| >>>URA ID | M | | 9.2.1.70 | | _ | |
| >>>SAI | М | | 9.2.1.52 | | - | |
| >>>RSSI | М | | 9.2.2.35A | | _ | |
| >>>DL Code | | 1 <maxnoof< td=""><td></td><td></td><td>GLOBAL</td><td>ignore</td></maxnoof<> | | | GLOBAL | ignore |
| Information | | DLCodes> | | | | 9 |
| >>>>DL Scrambling | Μ | | 9.2.2.8 | | - | |
| Code | | | | | | |
| >>>>FDD DL | Μ | | 9.2.2.14 | | - | |
| Channelisation Code | | | | | | |
| Number | - | | 0.0.0.175 | | | |
| >>>> I ransmission | 0 | | 9.2.2.47B | | - | |
| Gap Pattern Sequence Scrambling | | | | | | |
| Code Information | | | | | | |
| Response | | | | | | |
| >>>Diversity Indication | М | | 9.2.2.7 | | YES | ianore |
| >>>CHOICE diversity | | | - | | | |
| indication | | | | | | |
| >>>Combining | | | | | YES | ignore |
| >>>>RL ID | Μ | | 9.2.1.49 | Reference | - | |
| | | | | RL-Id | | |
| >>>Non combining | | | | | YES | ignore |
| >>>>DCH | | 1 <maxnoof< td=""><td></td><td>Only one</td><td>-</td><td></td></maxnoof<> | | Only one | - | |
| Information | | DCHs> | | DCH per set | | |
| Response | | | | 01 | | |
| | | | | | | |
| | | | | be included | | |
| >>>>DCH ID | М | | 9.2.1.16 | | _ | |
| >>>>Binding ID | М | | 9.2.1.3 | | _ | |
| >>>>>Transport | Μ | | 9.2.1.62 | | _ | |
| Layer Address | | | | | | |
| >>>SSDT Support | Μ | | 9.2.2.43 | | - | |
| Indicator | | | | | | |
| >>>Minimum Uplink | Μ | | Uplink SIR | | - | |
| | | | 9.2.1.69 | | | |
| >>>Maximum Uplink | М | | | | - | |
| | | | 9.2.1.09 | | <u> </u> | |
| adjustment mode | 0 | | | | - | |
| >>>Maximum Allowed | М | | 9.2.1.35 | | _ | |
| UL Tx Power | | | 0.2.1.00 | | | |
| >>>Maximum DL TX | М | | DL Power | | - | |
| Power | | | 9.2.2.10 | | | |
| >>>Minimum DL TX | М | | DL Power | | - | |
| Power | | | 9.2.2.10 | | | |
| >>>Neighbouring Cell | | 0 <maxnoofn< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxnoofn<> | | | EACH | ignore |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|----------|---|-----------------------------|-------------------------------------|-------------|-------------------------|
| Information | | eighbouringR NCs> | | | | |
| >>>>RNC-Id | М | 11002 | 9.2.1.50 | | _ | |
| >>>CN PS Domain | 0 | | 9.2.1.12 | | - | |
| >>>CN CS Domain Identifier | 0 | | 9.2.1.11 | | _ | |
| >>>Per FDD Cell Information | | 0 <maxnoof FDDneighbo urs></maxnoof | | | | |
| >>>>C-Id | М | | 9.2.1.6 | | | |
| >>>>UARFCN | М | | 9.2.1.66 | Corresponds to Nu in ref. [6] | _ | |
| >>>>UARFCN | М | | 9.2.1.66 | Corresponds to Nd in ref. [6] | | |
| >>>>Frame Offset | 0 | | 9.2.1.30 | | — | |
| >>>>Primary Scrambling Code | М | | 9.2.1.45 | | - | |
| >>>>Primary CPICH Power | 0 | | 9.2.1.44 | | _ | |
| >>>>Cell Individual Offset | 0 | | 9.2.1.7 | | | |
| >>>>Tx Diversity Indicator | М | | 9.2.2.50 | | | |
| >>>>STTD Support Indicator | 0 | | 9.2.2.45 | | | |
| >>>>Closed Loop Mode1 Support Indicator | 0 | | 9.2.2.2 | | | |
| >>>>Closed Loop Mode2 Support Indicator | 0 | | 9.2.2.3 | | | |
| >>>>Per TDD Cell Information | | 0 <maxnoof TDDneighbo urs></maxnoof | | | | |
| >>>>C-ld | Μ | | 9.2.1.6 | | | |
| >>>>UARFCN | М | | 9.2.1.66 | Corresponds to Nt in ref. [7] | _ | |
| >>>>Frame Offset | 0 | | 9.2.1.30 | | _ | |
| >>>>Cell Parameter ID | М | | 9.2.1.8 | | - | |
| >>>>Sync Case | Μ | | 9.2.1.54 | | _ | |
| >>>>Time Slot | C-Case1 | | 9.2.1.56 | | _ | |
| >>>>SCH Time Slot | C-Case2 | | 9.2.1.51 | | _ | |
| >>>>Block STTD Indicator | Μ | | | | - | |
| >>>>Cell Individual Offset | 0 | | 9.2.1.7 | | - | |
| >>>>DPCH Constant Value | 0 | | 9.2.1.23 | | - | |
| >>>>PCCPCH Power | 0 | | 9.2.1.43 | | _ | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|-----------|---|
| Case1 | This IE is present only if Sync Case = Case1. |
| Case2 | This IE is present only if Sync Case = Case2. |

| Range bound | Explanation |
|----------------------------------|---|
| MaxnoofDCHs | Maximum number of dedicated channels on one RL |
| MaxnoofRLs | Maximum number of radio links for one UE |
| Maxno <i>ofneighbouringRNC</i> s | Maximum number of neighbouring RNCs |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one cell |
| MaxnoofDLCodes | Maximum number of DL code information |

9.1.12.1 FDD Message

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|---|-------------------|--|------------------------|--|-------------|-------------|
| | | | and | Description | | Criticality |
| | | | Reference | | | |
| Message Type | M | | 9.2.1.40 | | YES | reject |
| Transaction ID | M | - | 9.2.1.59 | | - | |
| RL Information Response | | 0 <maxno ofRLs></maxno | | | EACH | ignore |
| >RL ID | М | | 9.2.1.49 | | _ | |
| >Maximum Uplink SIR | 0 | | Uplink SIR 9.2.1.69 | | - | |
| >Minimum Uplink SIR | 0 | | Uplink SIR 9.2.1.69 | | - | |
| >Maximum DL TX Power | 0 | | DL Power 9.2.2.10 | | - | |
| >Minimum DL TX Power | 0 | | DL Power 9.2.2.10 | | - | |
| >Secondary CCPCH Info | | 01 | | | _ | |
| >>FDD S-CCPCH Offset | М | | 9.2.2.15 | Corresponds | _ | |
| | | | | to: T _{S-CCPCH,k} | | |
| >>DL Scrambling Code | М | | 9.2.2.8 | | _ | |
| >>FDD DL Channelisation Code Number | М | | 9.2.2.14 | | _ | |
| >>TFCS | М | | 9.2.1.63 | For the DL. | _ | |
| >>Secondary CCPCH Slot Format | М | | 9.2.2.38 | | _ | |
| >>TFCI Presence | C - SlotFormat | | 9.2.1.55 | | _ | |
| >>Multiplexing Position | M | | 9.2.2.26 | | _ | |
| >>STTD Indicator | M | | 9.2.2.44 | | _ | |
| >>FACH/PCH | | 1 | | | _ | |
| Information | | <maxfac Hcount+1></maxfac | | | | |
| >>>TFS | | | 9.2.1.64 | For each FACH, and the PCH when multiplexed on the same Secondary CCPCH | _ | |
| >>Scheduling | | 1 | | | - | |
| >>>IB SG REP | М | | 9.2.2.21 | | _ | |
| >>>Segment Information | | 1 <maxibse< td=""><td></td><td></td><td>_</td><td></td></maxibse<> | | | _ | |
| >>>>IB SG POS | М | | 9.2.2.20 | | _ | |
| >Downlink Code | 1 | 0., <maxno< td=""><td>51212120</td><td>1</td><td>GLOBAL</td><td>ignore</td></maxno<> | 51212120 | 1 | GLOBAL | ignore |
| Information | | ofDLCode s> | | | | .9 |
| >>DL Scrambling Code | М | | 9.2.2.8 | T | - | |
| >>FDD DL Channelisation Code Number | М | | 9.2.2.14 | | _ | |
| >>Transmission Gap Pattern Sequence <u>Scrambling Code</u> Information Response | 0 | | | | - | |
| >DCH Information Response | | 0 <maxno ofDCHs></maxno | | Only one DCH per set | GLOBAL | ignore |
| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|-------------------------------------|----------|--|------------------|---|-------------|-------------|
| | | | and Reference | Description | | Criticality |
| | | | | of co- ordinated DCHs shall be included. | | |
| | | | | The IE group shall be included only once per DCH per set of combined RLs. | | |
| >>DCH ID | М | | 9.2.1.16 | | _ | |
| >>Binding ID | Μ | | 9.2.1.3 | | _ | |
| >>Transport Layer Address | М | | 9.2.1.62 | | _ | |
| >DSCH to be Added or Modified | | 01 | | | YES | ignore |
| >>DSCH Information | | 1 <maxnoof DSCHs></maxnoof | | | - | |
| >>>DSCH ID | Μ | | | | _ | |
| >>>Priority Indicator | | 116 | | Provide Information for each priority class used | - | |
| >>>Scheduling Priority Indicator | М | | | DSCH priority indicator | _ | |
| >>>>MAC-c/sh SDU Length | | 1 <maxnb MAC- c/shSDUL ength></maxnb | | | - | |
| >>>>MAC-c/sh SDU Length | М | | | | _ | |
| >>>Binding ID | Μ | | | | - | |
| >>>Transport Layer Address | М | | | | - | |
| >>PDSCH code mapping | M | | | PDSCH code mapping to be used | - | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|------------|---|
| SlotFormat | This IE is present only if the Secondary CCPCH Slot Format is equal |
| | to any of the value 8 to 17 |

| Range bound | Explanation |
|------------------------|---|
| MaxnoofDCHs | Maximum number of DCHs. |
| MaxNbMAC-c/shSDULength | Maximum number of different MAC-c/sh SDU lengths |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofRLs | Maximum number of RLs for a UE. |
| MaxnoofDLCodes | Maximum number of Downlink Channelisation Codes. |
| MaxFACHCount | Maximum number of FACH's mapped onto secondary CCPCH's |
| MaxIBSEG | Maximum number of segments for one Information Block |

9.1.17 RADIO LINK RECONFIGURATION RESPONSE

| IE/Group Name | Presence | Range | IE Type Semantics | | Criticality | Assigned |
|---|-------------------------|---|------------------------------|--|-------------|-------------|
| | | | and Description Reference | | | Criticality |
| Message Type | Message Type M 9.2.1.40 | | | YES | reject | |
| Transaction ID | М | | 9.2.1.59 | | _ | |
| RL Information Response | | 0 <maxno ofRLs></maxno | | | EACH | ignore |
| >RL ID | М | | 9.2.1.49 | | _ | |
| >Maximum Uplink SIR | 0 | | Uplink SIR 9.2.1.69 | | - | |
| >Minimum Uplink SIR | 0 | | Uplink SIR 9.2.1.69 | | - | |
| >Maximum DL TX Power | 0 | | DL Power 9.2.2.10 | | Ι | |
| >Minimum DL TX Power | 0 | | DL Power 9.2.2.10 | | - | |
| >Secondary CCPCH Info | | 01 | | | - | |
| >>FDD S-CCPCH Offset | М | | 9.2.2.15 | Corresponds | _ | |
| | | | | to: τ _{S-CCPCH,k} , see ref. [8] | | |
| >>DL Scrambling Code | М | | 9.2.2.8 | | _ | |
| >>FDD DL Channelisation Code Number | М | | 9.2.2.14 | | _ | |
| >>TFCS | М | | 9.2.1.63 | For the DL. | _ | |
| >>Secondary CCPCH | M | | 9.2.2.38 | | _ | |
| >>TECI Presence | C | | 92155 | | | |
| | SlotFormat | | 0.2.1.00 | | | |
| >>Multiplexing Position | M | | 9.2.2.26 | | _ | |
| >>STID Indicator | M | | 9.2.2.44 | | _ | |
| >>FACH/PCH Information | | 1 <maxfac< td=""><td></td><td></td><td>_</td><td></td></maxfac<> | | | _ | |
| | | Hcount+1> | | | | |
| >>>TFS | | | 9.2.1.64 | For each FACH, and the PCH when multiplexed on the same Secondary CCPCH | _ | |
| >>Scheduling Information | | 1 | | | - | |
| >>>IB SG REP | М | | 9.2.2.21 | | _ | |
| >>>Segment Information | | 1 <maxibse G></maxibse | | | - | |
| >>>IB_SG_POS | М | | 9.2.2.20 | | - | |
| >DCH Information Response | | 0 <maxno ofDCHs></maxno | | Only one DCH per set of co- ordinated DCHs shall be included. The IE group shall be included only once per DCH per set | GLOBAL | ignore |
| | | | | of combined | | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|---------------------------------------|-----------------------------|--------------------------|-------------|-------------------------|
| >>DCH ID | М | | 9.2.1.16 | | _ | |
| >>Binding ID | М | | 9.2.1.3 | | - | |
| >>Transport Layer Address | М | | 9.2.1.62 | | - | |
| >DL Code Information | | 0 <maxnoof DLCodes</maxnoof | | | GLOBAL | ignore |
| >>DL Scrambling Code | М | | | | - | |
| >>FDD DL Channelisation Code Number | M | | | | - | |
| >>Transmission Gap Pattern Sequence Scrambling Code Information Response | M | | | | _ | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation | | |
|------------|---|--|--|
| SlotFormat | This IE is present only if the Secondary CCPCH Slot Format is | | |
| | equal to any of the value 8 to 17 | | |

| Range Bound | Explanation |
|---------------------|--|
| MaxnoofDCHs | Maximum number of DCHs for a UE. |
| MaxnoofRLs | Maximum number of RLs for a UE. |
| MaxnoofDLCodes | Maximum number of Downlink Channelisation Codes. |
| MaxSysinfoFACHCount | Maximum number of references to system information |
| | blocks on the FACH |
| MaxIBSEG | Maximum number of segments for one Information |
| | Block |

9.1.21.1 FDD Message

| IE/Group Name | Presence | Range | IE type and | Semantics description | Criticality | Assigned Criticality |
|---|----------|---|------------------|-----------------------|-------------|-------------------------|
| | | | reference | | | |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | Μ | | 9.2.1.59 | | - | |
| RL Information | | 1 | | | YES | reject |
| >RL ID | Μ | | 9.2.1.49 | | _ | |
| >DL Code Information | | 1 <maxnoof DLCodes></maxnoof | | | GLOBAL | notify |
| >>DL Scrambling Code | Μ | | 9.2.2.11 | | _ | |
| >>FDD DL Channelisation Code Number | М | | 9.2.2.14 | | _ | |
| >Transmission Gap Pattern Sequence Scrambling Code Information | <u>0</u> | | <u>9.2.2.47B</u> | | = | |

| Range bound | Explanation |
|----------------|---------------------------------------|
| MaxnoofDLcodes | Maximum number of DL codes for one UE |

9.2.2.47B Transmission Gap Pattern Sequence <u>Scrambling Code</u> Information Response

This IE indicates whether <u>or not</u> the alternative scrambling code <u>can-will</u> be used <u>in the DRNS</u> for the Downlink compressed mode method <u>'SF/2'or not</u> in the Transmission Gap Pattern Sequence. For details see [16].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|-----------------------------|----------|-------|-----------------------|-----------------------------------|
| Transmission Gap Pattern | | | Enumerated | Indicates whether the alternative |
| Sequence Scrambling Code | | | (code | scrambling code is used for |
| Information Scrambling code | | | change, no | compressed mode method |
| change | | | code | <u>'SF/2'. Code change =</u> |
| | | | change) | alternative scrambling code will |
| | | | | be used. |

9.3.3 PDU Definitions

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

IMPORTS

```
Active-Pattern-Sequence-Information,
AllocationRetentionPriority,
AllowedQueuingTime,
BLER,
Block-STTD-Indicator,
BindingID,
C-ID,
C-RNTI,
CCTrCH-ID,
CellIndividualOffset,
CFN,
ClosedLoopModel-SupportIndicator,
ClosedLoopMode2-SupportIndicator,
Closedlooptimingadjustmentmode,
CN-CS-DomainIdentifier,
CN-PS-DomainIdentifier,
Cause,
CellParameterID,
ChipOffset,
CriticalityDiagnostics,
D-RNTI,
D-RNTI-ReleaseIndication,
DCH-ID,
DL-DPCH-SlotFormat,
DL-TimeslotISCP,
DL-Power,
DL-ScramblingCode,
```

DPCHConstantValue, DPCH-ID. DRACControl. DRXCycleLengthCoefficient, DedicatedMeasurementType, DedicatedMeasurementValue, DiversityControlField, DiversityMode, DSCH-ID, FACH-InitialWindowSize, SchedulingPriorityIndicator, FDD-DL-ChannelisationCodeNumber, FDD-S-CCPCH-Offset, FDD-TPC-DownlinkStepSize, FirstRLS-Indicator, FrameHandlingPriority, FrameOffset, GA-AccessPointPosition, GA-Cell, IB-SG-POS, IB-SG-REP, IMSI, L3-Information, LimitedPowerIncrease, MAC-c-sh-SDU-Length, MaximumAllowedULTxPower, MaxNrDLPhysicalchannels, MaxNrOfUL-DPCHs, MaxNrTimeslots, MaxNrULPhysicalchannels, MeasurementFilterCoefficient, MeasurementID, MidambleShiftAndBurstType, MinimumSpreadingFactor, MinUL-ChannelisationCodeLength, MultipleURAsIndicator, MultiplexingPosition, NrOfDLchannelisationcodes, PDSCHCodeMapping, PayloadCRC-PresenceIndicator, PCCPCH-Power, PowerAdjustmentType, PowerOffset, PRACH-Midamble, PRACH-MinimumSpreadingFactor, PreambleSignatures, PrimaryCCPCH-RSCP, PrimaryCPICH-EcNo, PrimaryCPICH-Power, PrimaryScramblingCode, PropagationDelay,

PunctureLimit, OE-Selector, RACH-SubChannelNumbers. RANAP-RelocationInformation, RB-Identity, RL-ID, RL-Set-ID, RNC-ID, RepetitionLength, RepetitionPeriod, ReportCharacteristics, RSSI, S-FieldLength, S-RNTI, SCH-TimeSlot, SAI, SN, SSDT-CellID, SSDT-CellID-Length, SSDT-Indication, SSDT-SupportIndicator, STTD-Indicator, STTD-SupportIndicator, AdjustmentPeriod, ScaledAdjustmentRatio, MaxAdjustmentStep, ScramblingCodeNumber, SecondaryCCPCH-SlotFormat, SyncCase, TDD-ChannelisationCode, TDD-DPCHOffset, TDD-PhysicalChannelOffset, TDD-TPC-DownlinkStepSize, TFCI-Coding, TFCI-Presence, TFCI-SignallingMode, TimeSlot, TimingAdjustmentRequired, TOAWE, TOAWS, TransmitDiversityIndicator, TransportBearerID, TransportBearerRequestIndicator, TFCS, Transmission-Gap-Pattern-Sequence-Information, Transmission-Gap-Pattern-Sequence-ScramblingCode-Information-Response, TransportFormatManagement, TransportFormatSet, TransportLayerAddress, TrCH-SrcStatisticsDescr, TxDiversityIndicator,

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UARFCN, UC-ID, UL-DPCCH-SlotFormat, UL-SIR, UL-FP-Mode, UL-ScramblingCode, UL-TimeslotISCP, URA-ID, USCH-ID FROM RNSAP-IES

<Editor's note: Parts of the module is skipped.>

-- RADIO LINK SETUP RESPONSE FDD ---RadioLinkSetupResponseFDD ::= SEOUENCE { protocolIEs ProtocolIE-Container {{RadioLinkSetupResponseFDD-IEs}}, ProtocolExtensionContainer {{RadioLinkSetupResponseFDD-Extensions}} protocolExtensions OPTIONAL, . . . } RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= { ID id-D-RNTI PRESENCE optional CRITICALITY ignore TYPE D-RNTI ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional ID id-RL-InformationResponseList-RL-SetupRspFDD CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD PRESENCE mandatory } ID id-UL-SIRTarget CRITICALITY ignore TYPE UL-SIR PRESENCE optional } | CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional }, { ID id-CriticalityDiagnostics . . . } RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList1 { {RL-InformationResponseItemIEs-RL-SetupRspFDD} } RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= { { ID id-RL-InformationResponseItem-RL-SetupRspFDD CRITICALITY ignore TYPE RL-InformationResponseItem-RL-SetupRspFDD PRESENCE mandatory }, . . . } RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE { rL-ID RL-ID, rL-Set-ID RL-Set-ID, uRA-ID URA-ID, sAI SAI, qA-Cell GA-Cell OPTIONAL, qA-AccessPointPosition GA-AccessPointPosition OPTIONAL, rSSI RSSI,

```
secondary-CCPCH-Info
                                     Secondary-CCPCH-Info-RL-SetupRspFDD
                                                                             OPTIONAL,
    dl-CodeInformation
                                    DL-CodeInformationList-RL-SetupRspFDD,
    diversitvIndication
                                    DiversityIndication-RL-SetupRspFDD.
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                     SSDT-SupportIndicator,
    maxUL-SIR
                                    UL-SIR,
   minUL-SIR
                                    UL-SIR,
    closedlooptimingadjustmentmode Closedlooptimingadjustmentmode OPTIONAL,
                                    MaximumAllowedULTxPower,
    maximumAllowedULTxPower
    maximumDLTxPower
                                    DL-Power,
    minimumDLTxPower
                                    DL-Power,
    dSCHInformationResponse
                                    DSCH-InformationResponse-RL-SetupRspFDD OPTIONAL,
    neighbouring-CellInformation
                                    Neighbouring-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    . . .
RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
Secondary-CCPCH-Info-RL-SetupRspFDD ::= SEQUENCE {
    fDD-S-CCPCH-Offset
                                            FDD-S-CCPCH-Offset,
    dl-ScramblingCode
                                            DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber
                                            FDD-DL-ChannelisationCodeNumber,
    dl-TFCS
                                            TFCS,
    secondaryCCPCH-SlotFormat
                                            SecondaryCCPCH-SlotFormat,
    tFCI-Presence
                                            TFCI-Presence OPTIONAL,
    -- This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17
    multiplexingPosition
                                            MultiplexingPosition,
    sTTD-Indicator
                                            STTD-Indicator,
    fACH-PCH-InformationList
                                            FACH-PCH-InformationList-RL-SetupRspFDD,
    schedulingInformation
                                            SchedulingInformation-RL-SetupRspFDD,
    iE-Extensions
                                            ProtocolExtensionContainer { { Secondary-CCPCH-Info-RL-SetupRspFDD-ExtIEs } } OPTIONAL.
    . . .
Secondary-CCPCH-Info-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::=
    . . .
}
FACH-PCH-InformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE(1..maxFACHCountPlus1)) OF FACH-PCH-InformationItem-RL-SetupRspFDD
FACH-PCH-InformationItem-RL-SetupRspFDD ::= SEOUENCE {
    transportFormatSet
                                    TransportFormatSet,
    iE-Extensions
                                    ProtocolExtensionContainer { { FACH-PCH-InformationItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL.
    . . .
FACH-PCH-InformationItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
SchedulingInformation-RL-SetupRspFDD ::= SEQUENCE {
                                    IB-SG-REP.
    iB-SG-Rep
    segmentInformationList
                                    SegmentInformationList-RL-SetupRspFDD,
                                    ProtocolExtensionContainer { { SchedulingInformation-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
        . . .
SchedulingInformation-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
ι
SegmentInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE(1..maxIBSEG)) OF SegmentInformationItem-RL-SetupRspFDD
SegmentInformationItem-RL-SetupRspFDD ::= SEQUENCE {
    iB-SG-POS
                                    IB-SG-POS,
                                    ProtocolExtensionContainer { { SegmentInformationItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
SeqmentInformationItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DL-CodeInformationList-RL-SetupRspFDD ::= SEOUENCE (SIZE (1..maxNrOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupRspFDD
DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE
    dl-ScramblingCode
                                    DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber
                                            FDD-DL-ChannelisationCodeNumber,
    transmission-Gap-Pattern-Sequence-ScramblingCode-Information-Response
                                                                                         Transmission-Gap-Pattern-Sequence-ScramblingCode-Information-
Response
           OPTIONAL,
                                    ProtocolExtensionContainer { {DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
DiversityIndication-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ DiversityIndicationIE-RL-SetupRspFDD }}
DiversityIndicationIE-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DiversityIndicationItem-RL-SetupRspFDD CRITICALITY ignore TYPE
                                                                                  DiversityIndicationItem-RL-SetupRspFDD PRESENCE mandatory }
}
DiversityIndicationItem-RL-SetupRspFDD ::= CHOICE {
    combining
                                    Combining-RL-SetupRspFDD,
    nonCombiningOrFirstRL
                                    NonCombiningOrFirstRL-RL-SetupRspFDD,
    . . .
}
```

```
Combining-RL-SetupRspFDD ::= ProtocollE-Single-Container {{ CombiningIE-RL-SetupRspFDD }}
CombiningIE-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-SetupRspFDD CRITICALITY ignore TYPE CombiningItem-RL-SetupRspFDD PRESENCE mandatory }
l
CombiningItem-RL-SetupRspFDD ::= SEOUENCE {
   rL-ID
                                RL-ID,
                                ProtocolExtensionContainer { { CombiningItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
CombiningItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
NonCombiningOrFirstRL-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ NonCombiningOrFirstRLIE-RL-SetupRspFDD }}
NonCombiningOrFirstRLIE-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-NonCombiningOrFirstRLItem-RL-SetupRspFDD CRITICALITY ignore TYPE NonCombiningOrFirstRLItem-RL-SetupRspFDD PRESENCE mandatory }
}
NonCombiningOrFirstRLItem-RL-SetupRspFDD ::= SEOUENCE {
    dCH-InformationResponse-RL-SetupRspFDD
                                                DCH-InformationResponseList-RL-SetupRspFDD OPTIONAL,
    iE-Extensions
                                                ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    . . .
NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspFDD
DCH-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
    dCH-ID
                                DCH-ID,
    bindingID
                                BindingID,
    transportLayerAddress
                                        TransportLayerAddress,
    iE-Extensions
                                    ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    . . .
DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DSCH-InformationResponse-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseIE-RL-SetupRspFDD }}
DSCH-InformationResponseIE-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
```

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```

```
{ ID id-DSCH-InformationResponseItem-RL-SetupRspFDD CRITICALITY ignore
                                                                                 TYPE
                                                                                         DSCH-InformationResponseItem-RL-SetupRspFDD PRESENCE mandatory
DSCH-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
    dschInformationList
                            DSCHInformationList-RL-SetupRspFDD,
    pdSCHCodeMapping
                            PDSCHCodeMapping,
                            ProtocolExtensionContainer { { DSCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
DSCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DSCHInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE(1..maxNoOfDSCHs)) OF DSCHInformationItem-RL-SetupRspFDD
DSCHInformationItem-RL-SetupRspFDD ::= SEQUENCE {
    dsch-ID
                            DSCH-ID,
    priorityIndicator
                            PriorityIndicator-RL-SetupRspFDD,
    bindingID
                            BindingID,
    transportLayerAddress TransportLayerAddress,
                            ProtocolExtensionContainer { {DSCHInformationItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
DSCHInformationItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
PriorityIndicator-RL-SetupRspFDD ::= SEQUENCE (SIZE(1..16)) OF PriorityIndicatorItem-RL-SetupRspFDD
PriorityIndicatorItem-RL-SetupRspFDD ::= SEQUENCE {
    schedulingPriorityIndicator
                                    SchedulingPriorityIndicator,
    mAC-c-sh-SDU-Lengths
                                    MAC-c-sh-SDU-LengthList-RL-SetupRspFDD,
    iE-Extensions
                                    ProtocolExtensionContainer { {PriorityIndicatorItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    . . .
PriorityIndicatorItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
MAC-c-sh-SDU-LengthList-RL-SetupRspFDD ::= SEQUENCE(SIZE(1..maxNrOfMACcshSDU-Length)) OF MAC-c-sh-SDU-Length
Neighbouring-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (0..maxNrOfNeighbouringRNCs)) OF ProtocollE-Single-Container {{ Neighbouring-
CellInformationItemIE-RL-SetupRsp }}
Neighbouring-CellInformationItemIE-RL-SetupRsp RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-CellInformationItem-RL-SetupRsp CRITICALITY ignore TYPE
                                                                                         Neighbouring-CellInformationItem-RL-SetupRsp PRESENCE
    mandatory }
```

```
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```

}

```
Neighbouring-CellInformationItem-RL-SetupRsp ::= SEQUENCE
    rNC-ID
                                        RNC-ID.
    cN-PS-DomainIdentifier
                                         CN-PS-DomainIdentifier
                                                                     OPTIONAL.
    cN-CS-DomainIdentifier
                                        CN-CS-DomainIdentifier
                                                                     OPTIONAL,
    per-FDD-Cell-InformationList
                                        Per-FDD-Cell-InformationList-RL-SetupRsp
                                                                                      OPTIONAL,
    per-TDD-Cell-InformationList
                                        Per-TDD-Cell-InformationList-RL-SetupRsp
                                                                                      OPTIONAL,
    iE-Extensions
                                         ProtocolExtensionContainer { {Neighbouring-CellInformationItem-RL-SetupRsp-ExtIEs } } OPTIONAL,
    . . .
Neighbouring-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
Per-FDD-Cell-InformationList-RL-SetupRsp ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF Per-FDD-Cell-InformationItem-RL-SetupRsp
Per-FDD-Cell-InformationItem-RL-SetupRsp ::= SEOUENCE {
    c-ID
                                         C-ID,
    uARFCNforNu
                                        UARFCN,
    uARFCNforNd
                                        UARFCN,
    frameOffset
                                         FrameOffset
                                                             OPTIONAL,
    primaryScramblingCode
                                        PrimaryScramblingCode,
    primaryCPICH-Power
                                        PrimaryCPICH-Power
                                                                 OPTIONAL
    cellIndividualOffset
                                        CellIndividualOffset
                                                                 OPTIONAL,
    txDiversityIndicator
                                        TxDiversityIndicator,
    sTTD-SupportIndicator
                                        STTD-SupportIndicator
                                                                 OPTIONAL,
    closedLoopModel-SupportIndicator
                                        ClosedLoopModel-SupportIndicator
                                                                             OPTIONAL,
    closedLoopMode2-SupportIndicator
                                        ClosedLoopMode2-SupportIndicator
                                                                             OPTIONAL,
    iE-Extensions
                                         ProtocolExtensionContainer { { Per-FDD-Cell-InformationItem-RL-SetupRsp-ExtIEs } } OPTIONAL,
    . . .
Per-FDD-Cell-InformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Per-TDD-Cell-InformationList-RL-SetupRsp ::= SEOUENCE ( SIZE (1..maxNrOfTDDNeighboursPerRNC,...)) OF Per-TDD-Cell-InformationItem-RL-SetupRsp
Per-TDD-Cell-InformationItem-RL-SetupRsp ::= SEQUENCE {
    c-ID
                                     C-ID.
    uARFCNforNt
                                    UARFCN,
    frameOffset
                                     FrameOffset
                                                         OPTIONAL,
    cellParameterID
                                     CellParameterID,
    syncCase
                                     SyncCase,
    timeSlot
                                    TimeSlot
                                                         OPTIONAL
    -- This IE is present only if Sync Case = Casel -- ,
    sCH-TimeSlot
                                     SCH-TimeSlot
                                                             OPTIONAL
    -- This IE is present only if Sync Case = Case2 -- ,
    block-STTD-Indicator
                                    Block-STTD-Indicator,
```

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cellIndividualOffset CellIndividualOffset OPTIONAL. dPCHConstantValue DPCHConstantValue OPTIONAL, pCCPCH-Power PCCPCH-Power OPTIONAL. iE-Extensions ProtocolExtensionContainer { { Per-TDD-Cell-InformationItem-RL-SetupRsp-ExtIEs } } OPTIONAL, . . . Per-TDD-Cell-InformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { . . . RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= { . . . <Editor's note: Parts of the module is skipped.> ****** _ _ -- RADIO LINK SETUP FAILURE FDD RadioLinkSetupFailureFDD ::= SEQUENCE { {{RadioLinkSetupFailureFDD-IEs}}, protocolIEs ProtocolIE-Container protocolExtensions ProtocolExtensionContainer {{RadioLinkSetupFailureFDD-Extensions}} OPTIONAL, . . . } RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= { ID id-D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE optional } | ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } PRESENCE mandatory } | ID id-CauseLevel-RL-SetupFailureFDD CRITICALITY ignore TYPE CauseLevel-RL-SetupFailureFDD ID id-UL-SIRTarget CRITICALITY ignore TYPE UL-SIR PRESENCE optional } | ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional }, . . . } CauseLevel-RL-SetupFailureFDD ::= CHOICE { generalCause GeneralCauseList-RL-SetupFailureFDD, RLSpecificCauseList-RL-SetupFailureFDD, rLSpecificCause . . . } GeneralCauseList-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ GeneralCauseIE-RL-SetupFailureFDD }} GeneralCauseIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {

```
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```

```
{ ID id-GeneralCauseItem-RL-SetupFailureFDD
                                                     CRITICALITY ignore
                                                                             TYPE GeneralCauseItem-RL-SetupFailureFDD
                                                                                                                                           PRESENCE
mandatory }
}
GeneralCauseItem-RL-SetupFailureFDD ::= SEQUENCE
    cause
                                                Cause.
                                                ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureFDD-ExtIEs} }
    iE-Extensions
                                                                                                                                 OPTIONAL,
    . . .
GeneralCauseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
RLSpecificCauseList-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ RLSpecificCauseIE-RL-SetupFailureFDD }}
RLSpecificCauseIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID
           id-RLSpecificCauseItem-RL-SetupFailureFDD
                                                             CRITICALITY
                                                                             ignore
                                                                                             TYPE
                                                                                                               RLSpecificCauseItem-RL-SetupFailureFDD
    PRESENCE
                mandatory }
RLSpecificCauseItem-RL-SetupFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-SetupFailureFDD
                                                                 UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
    successful-RL-InformationRespList-RL-SetupFailureFDD
                                                                 SuccessfulRL-InformationResponseList-RL-SetupFailureFDD OPTIONAL,
                                                ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs } }
    iE-Extensions
                                                                                                                                    OPTIONAL.
    . . .
RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList1 { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }
UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
                                                                         CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
    PRESENCE mandatory },
    . . .
UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID
                                RL-ID,
                                Cause,
    cause
                                    ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL.
    iE-Extensions
    . . .
UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
```

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```
SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
                                                                    CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-SetupFailureFDD
    PRESENCE mandatory },
    . . .
SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE
    rL-ID
                                            RL-ID,
    rL-Set-ID
                                            RL-Set-ID,
    uRA-ID
                                            URA-ID.
    sAI
                                            SAI.
    rSSI
                                            RSSI,
    dl-CodeInformation
                                            DL-CodeInformationList-RL-SetupFailureFDD,
    diversityIndication
                                            DiversityIndication-RL-SetupFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                            SSDT-SupportIndicator,
    maxUL-SIR
                                            UL-SIR,
    minUL-SIR
                                            UL-SIR,
    closedlooptimingadjustmentmode
                                            Closedlooptimingadjustmentmode OPTIONAL,
    maximumAllowedULTxPower
                                            MaximumAllowedULTxPower,
    maximumDLTxPower
                                            DL-Power,
    minimumDLTxPower
                                            DL-Power.
    dSCH-InformationResponse-RL-SetupFailureFDD
                                                    DSCH-InformationResponseList-RL-SetupFailureFDD
                                                                                                        OPTIONAL,
    neighbouring-CellInformationList
                                            Neighbouring-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    iE-Extensions
                                            ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    . . .
SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DL-CodeInformationList-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-SetupFailureFDD }}
DL-CodeInformationListIEs-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CodeInformationListIE-RL-SetupFailureFDD CRITICALITY ignore TYPE DL-CodeInformationListIE-RL-SetupFailureFDD
                                                                                                                                      PRESENCE mandatory
DL-CodeInformationListIE-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupFailureFDD
DL-CodeInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    dl-ScramblingCode
                                    DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber
                                            FDD-DL-ChannelisationCodeNumber,
    transmission-Gap-Pattern-Sequence-ScramblingCode-Information-Response
                                                                                         Transmission-Gap-Pattern-Sequence-ScramblingCode-Information-
Response
          OPTIONAL,
                                    ProtocolExtensionContainer { {DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
```

SuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList0-1 { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

```
. . .
DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
l
DiversityIndication-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ DiversityIndicationIE-RL-SetupFailureFDD }}
DiversityIndicationIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DiversityIndicationItem-RL-SetupFailureFDD CRITICALITY ignore TYPE
                                                                                     DiversityIndicationItem-RL-SetupFailureFDD PRESENCE mandatory
}
DiversityIndicationItem-RL-SetupFailureFDD ::= CHOICE
    combining
                                    Combining-RL-SetupFailureFDD,
    nonCombiningOrFirstRL
                                NonCombiningOrFirstRL-RL-SetupFailureFDD,
    . . .
Combining-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ CombiningIE-RL-SetupFailureFDD }}
CombiningIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-SetupFailureFDD CRITICALITY ignore TYPE CombiningItem-RL-SetupFailureFDD PRESENCE mandatory }
CombiningItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID
                                RL-ID,
    iE-Extensions
                                ProtocolExtensionContainer { { CombiningItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    . . .
}
CombiningItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
NonCombiningOrFirstRL-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ NonCombiningOrFirstRLIE-RL-SetupFailureFDD }}
NonCombiningOrFirstRLIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-NonCombiningOrFirstRLItem-RL-SetupFailureFDD CRITICALITY ignore TYPE
                                                                                        NonCombiningOrFirstRLItem-RL-SetupFailureFDD PRESENCE
mandatory }
NonCombiningOrFirstRLItem-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-InformationResponse-RL-SetupFailureFDD
                                                    DCH-InformationResponseList-RL-SetupFailureFDD
                                                                                                        OPTIONAL,
                                                ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL.
    iE-Extensions
    . . .
}
NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
```

```
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEOUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupFailureFDD
DCH-InformationResponseItem-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-ID
                                DCH-ID.
    bindingID
                                BindingID,
    transportLayerAddress
                                        TransportLayerAddress,
    iE-Extensions
                                    ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL.
    . . .
DCH-InformationResponseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DSCH-InformationResponseList-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-SetupFailureFDD }}
DSCH-InformationResponseListIEs-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponseListIE-RL-SetupFailureFDD CRITICALITY ignore TYPE DSCH-InformationResponseListIE-RL-SetupFailureFDD
                                                                                                                                                PRESENCE
mandatory }
DSCH-InformationResponseListIE-RL-SetupFailureFDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCHInformationItem-RL-SetupFailureFDD
DSCHInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    dsch-ID
                            DSCH-ID,
    bindingID
                            BindingID,
    transportLayerAddress
                           TransportLayerAddress,
                            ProtocolExtensionContainer { {DSCHInformationItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
DSCHInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
Neighbouring-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (0..maxNrOfNeighbouringRNCs)) OF ProtocollE-Single-Container {{ Neighbouring-
CellInformationItemIE-RL-SetupFailureFDD }}
Neighbouring-CellInformationItemIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-CellInformationItem-RL-SetupFailureFDD CRITICALITY ignore
                                                                                         TYPE
                                                                                                 Neighbouring-CellInformationItem-RL-SetupFailureFDD
PRESENCE
           mandatory }
}
Neighbouring-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
   rNC-ID
                                        RNC-ID,
    cN-PS-DomainIdentifier
                                        CN-PS-DomainIdentifier
                                                                     OPTIONAL,
    cN-CS-DomainIdentifier
                                        CN-CS-DomainIdentifier
                                                                     OPTIONAL,
    per-FDD-Cell-InformationList
                                        Per-FDD-Cell-InformationList-RL-SetupFailureFDD OPTIONAL,
    per-TDD-Cell-InformationList
                                        Per-TDD-Cell-InformationList-RL-SetupFailureFDD OPTIONAL,
    iE-Extensions
                                        ProtocolExtensionContainer { {Neighbouring-CellInformationItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
```

. . .

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```
Neighbouring-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
}
```

}

Per-FDD-Cell-InformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF Per-FDD-Cell-InformationItem-RL-SetupFailureFDD

Per-FDD-Cell-InformationItem-RL-SetupFailureFDD ::= SEQUENCE {

| c-ID | C-ID, |
|----------------------------------|---|
| uARFCNforNu | UARFCN, |
| uARFCNforNd | UARFCN, |
| frameOffset | FrameOffset OPTIONAL, |
| primaryScramblingCode | PrimaryScramblingCode, |
| primaryCPICH-Power | PrimaryCPICH-Power OPTIONAL, |
| cellIndividualOffset | CellIndividualOffset OPTIONAL, |
| txDiversityIndicator | TxDiversityIndicator, |
| sTTD-SupportIndicator | STTD-SupportIndicator OPTIONAL, |
| closedLoopModel-SupportIndicator | ClosedLoopModel-SupportIndicator OPTIONAL, |
| closedLoopMode2-SupportIndicator | ClosedLoopMode2-SupportIndicator OPTIONAL, |
| iE-Extensions | ProtocolExtensionContainer { { Per-FDD-Cell-InformationItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL, |
| | |

```
}
```

Per-FDD-Cell-InformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

}

}

. . .

Per-TDD-Cell-InformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDDNeighboursPerRNC,...)) OF Per-TDD-Cell-InformationItem-RL-SetupFailureFDD

Per-TDD-Cell-InformationItem-RL-SetupFailureFDD ::= SEQUENCE {

| c-ID | C-ID, |
|----------------------------|--|
| uARFCNforNt | UARFCN, |
| frameOffset | FrameOffset OPTIONAL, |
| cellParameterID | CellParameterID, |
| syncCase | SyncCase , |
| timeSlot | TimeSlot OPTIONAL |
| This IE is present only if | Sync Case = Casel , |
| sCH-TimeSlot | SCH-TimeSlot OPTIONAL |
| This IE is present only if | Sync Case = Case2 , |
| block-STTD-Indicator | Block-STTD-Indicator, |
| cellIndividualOffset | CellIndividualOffset OPTIONAL, |
| dPCHConstantValue | DPCHConstantValue OPTIONAL, |
| pCCPCH-Power | PCCPCH-Power, |
| iE-Extensions | ProtocolExtensionContainer { { Per-TDD-Cell-InformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL, |
| | |

3GPP

. . .

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Per-TDD-Cell-InformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```
RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
```

```
<Editor's note: Parts of the module is skipped.>
```

```
_ _
-- RADIO LINK ADDITION RESPONSE FDD
  RadioLinkAdditionResponseFDD ::= SEQUENCE {
                                 ProtocolIE-Container
                                                           {{RadioLinkAdditionResponseFDD-IEs}},
   protocolIEs
   protocolExtensions
                                 ProtocolExtensionContainer {{RadioLinkAdditionResponseFDD-Extensions}}
                                                                                                                    OPTIONAL,
   . . .
}
RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::=
     ID id-RL-InformationResponseList-RL-AdditionRspFDD
                                                       CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
                                                                                                                           PRESENCE mandatory
    { ID id-CriticalityDiagnostics
                                        CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                          PRESENCE optional },
   . . .
}
RL-InformationResponseList-RL-AdditionRspFDD
                                               ::= RL-IE-ContainerList1-1 { {RL-InformationResponseItemIEs-RL-AdditionRspFDD} }
RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
   { ID id-RL-InformationResponseItem-RL-AdditionRspFDD
                                                           CRITICALITY ignore TYPE RL-InformationResponseItem-RL-AdditionRspFDD
                                                                                                                              PRESENCE
mandatory },
   . . .
RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE
   rL-ID
                                 RL-ID,
   rL-Set-ID
                                 RL-Set-ID,
   uRA-ID
                                 URA-ID,
   sAI
                                 SAI,
   qA-Cell
                                 GA-Cell
                                            OPTIONAL,
   gA-AccessPointPosition
                                 GA-AccessPointPosition OPTIONAL,
   rSSI
                                 RSSI,
   secondary-CCPCH-Info
                                 Secondary-CCPCH-Info-RL-AdditionRspFDD
                                                                          OPTIONAL,
   dl-CodeInformation
                                 DL-CodeInformationList-RL-AdditionRspFDD,
   diversityIndication
                                 DiversityIndication-RL-AdditionRspFDD,
   -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
```

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|---------|----|
|---------|----|

}

}

```
-- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                        SSDT-SupportIndicator,
    minUL-SIR
                                        UL-SIR.
    maxUL-SIR
                                        UL-SIR,
    closedlooptimingadjustmentmode
                                        Closedlooptimingadjustmentmode OPTIONAL,
    maximumAllowedULTxPower
                                        MaximumAllowedULTxPower,
    maximumDLTxPower
                                        DL-Power,
    minimumDLTxPower
                                        DL-Power,
    neighbouring-CellInformationList
                                        Neighbouring-CellInformationList-RL-AdditionRsp OPTIONAL,
                                        ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
Secondary-CCPCH-Info-RL-AdditionRspFDD ::= SEQUENCE
    fDD-S-CCPCH-Offset
                                            FDD-S-CCPCH-Offset,
                                            DL-ScramblingCode,
    dl-ScramblingCode
    fDD-DL-ChannelisationCodeNumber
                                            FDD-DL-ChannelisationCodeNumber,
    dl-TFCS
                                            TFCS,
    secondaryCCPCH-SlotFormat
                                            SecondaryCCPCH-SlotFormat,
    tFCI-Presence
                                            TFCI-Presence OPTIONAL,
    -- This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17
    multiplexingPosition
                                            MultiplexingPosition,
                                            STTD-Indicator,
    sTTD-Indicator
    fACH-PCH-InformationList
                                            FACH-PCH-InformationList-RL-AdditionRspFDD,
    schedulingInformation
                                            SchedulingInformation-RL-AdditionRspFDD,
                                            ProtocolExtensionContainer { { Secondary-CCPCH-Info-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
Secondary-CCPCH-Info-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
FACH-PCH-InformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE(1..maxFACHCountPlus1)) OF FACH-PCH-InformationItem-RL-AdditionRspFDD
FACH-PCH-InformationItem-RL-AdditionRspFDD ::= SEQUENCE
    transportFormatSet
                                    TransportFormatSet,
                                    ProtocolExtensionContainer { { FACH-PCH-InformationItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
FACH-PCH-InformationItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
SchedulingInformation-RL-AdditionRspFDD ::= SEQUENCE {
    iB-SG-Rep
                                    IB-SG-REP,
```

```
segmentInformationList
                                    SegmentInformationList-RL-AdditionRspFDD,
    iE-Extensions
                                    ProtocolExtensionContainer { { SchedulingInformation-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
        . . .
SchedulingInformation-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
SegmentInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE(1..maxIBSEG)) OF SegmentInformationItem-RL-AdditionRspFDD
SegmentInformationItem-RL-AdditionRspFDD ::= SEQUENCE {
    iB-SG-POS
                                    IB-SG-POS.
    iE-Extensions
                                    ProtocolExtensionContainer { { SegmentInformationItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    . . .
SegmentInformationItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= ·
    . . .
DL-CodeInformationList-RL-AdditionRspFDD ::= ProtocollE-Single-Container {{ DL-CodeInformationListIEs-RL-AdditionRspFDD }}
DL-CodeInformationListIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CodeInformationListIE-RL-AdditionRspFDD CRITICALITY ignore TYPE DL-CodeInformationListIE-RL-AdditionRspFDD
                                                                                                                                PRESENCE mandatory
}
DL-CodeInformationListIE-RL-AdditionRspFDD ::= SEOUENCE (SIZE (1..maxNrOfDL-Codes)) OF DL-CodeInformationItem-RL-AdditionRspFDD
DL-CodeInformationItem-RL-AdditionRspFDD ::= SEQUENCE {
    dl-ScramblingCode
                                    DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber
                                            FDD-DL-ChannelisationCodeNumber,
    transmission-Gap-Pattern-Sequence-ScramblingCode-Information-Response
                                                                                         Transmission-Gap-Pattern-Sequence-ScramblingCode-Information-
Response
                OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { {DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
    . . .
DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DiversityIndication-RL-AdditionRspFDD ::= ProtocolIE-Single-Container {{ DiversityIndicationIE-RL-AdditionRspFDD }}
DiversityIndicationIE-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DiversityIndicationItem-RL-AdditionRspFDD CRITICALITY ignore TYPE
                                                                                     DiversityIndicationItem-RL-AdditionRspFDD PRESENCE mandatory
}
DiversityIndicationItem-RL-AdditionRspFDD ::= CHOICE {
    combining
                                    Combining-RL-AdditionRspFDD,
    nonCombining
                                    NonCombining-RL-AdditionRspFDD,
```

CellInformationItemIE-RL-AdditionRsp }}

```
Combining-RL-AdditionRspFDD ::= ProtocollE-Single-Container {{ CombiningIE-RL-AdditionRspFDD }}
CombiningIE-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-AdditionRspFDD CRITICALITY ignore TYPE CombiningItem-RL-AdditionRspFDD PRESENCE mandatory }
}
CombiningItem-RL-AdditionRspFDD ::= SEQUENCE {
    rL-ID
                                RL-ID,
                                ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
CombiningItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
NonCombining-RL-AdditionRspFDD ::= ProtocolIE-Single-Container {{ NonCombiningIE-RL-AdditionRspFDD }}
NonCombiningIE-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-NonCombiningItem-RL-AdditionRspFDD CRITICALITY ignore TYPE NonCombiningItem-RL-AdditionRspFDD PRESENCE mandatory }
NonCombiningItem-RL-AdditionRspFDD ::= SEQUENCE {
    dCH-InformationResponse-RL-AdditionRspFDD
                                                     DCH-InformationResponseList-RL-AdditionRspFDD,
    iE-Extensions
                                                ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    . . .
}
NonCombiningItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionRspFDD
DCH-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
    dCH-ID
                                DCH-ID,
    bindingID
                                BindingID,
    transportLayerAddress
                                        TransportLayerAddress,
    iE-Extensions
                                    ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    . . .
}
DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Neighbouring-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (0..maxNrOfNeighbouringRNCs)) OF ProtocolIE-Single-Container {{ Neighbouring-
```

```
Neighbouring-CellInformationItemIE-RL-AdditionRsp RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-CellInformationItem-RL-AdditionRsp CRITICALITY ignore
                                                                                      TYPE
                                                                                              Neighbouring-CellInformationItem-RL-AdditionRsp PRESENCE
    mandatory }
}
Neighbouring-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    rNC-ID
                                             RNC-ID,
    cN-PS-DomainIdentifier
                                             CN-PS-DomainIdentifier
                                                                         OPTIONAL,
    cN-CS-DomainIdentifier
                                             CN-CS-DomainIdentifier
                                                                         OPTIONAL,
    per-FDD-Cell-InformationList
                                             Per-FDD-Cell-InformationList-RL-AdditionRsp OPTIONAL,
    per-TDD-Cell-InformationList
                                             Per-TDD-Cell-InformationList-RL-AdditionRsp OPTIONAL,
    iE-Extensions
                                             ProtocolExtensionContainer { {Neighbouring-CellInformationItem-RL-AdditionRsp-ExtIEs } } OPTIONAL,
    . . .
Neighbouring-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
Per-FDD-Cell-InformationList-RL-AdditionRsp ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF Per-FDD-Cell-InformationItem-RL-AdditionRsp
Per-FDD-Cell-InformationItem-RL-AdditionRsp ::= SEQUENCE {
    c-ID
                                         C-ID,
    uARFCNforNu
                                        UARFCN,
    uARFCNforNd
                                         UARFCN,
    frameOffset
                                         FrameOffset
                                                             OPTIONAL,
    primaryScramblingCode
                                        PrimaryScramblingCode,
    primaryCPICH-Power
                                         PrimaryCPICH-Power
                                                                     OPTIONAL,
    cellIndividualOffset
                                        CellIndividualOffset
                                                                     OPTIONAL,
    txDiversitvIndicator
                                        TxDiversitvIndicator,
    sTTD-SupportIndicator
                                        STTD-SupportIndicator
                                                                     OPTIONAL,
    closedLoopModel-SupportIndicator
                                        ClosedLoopModel-SupportIndicator
                                                                             OPTIONAL,
    closedLoopMode2-SupportIndicator
                                        ClosedLoopMode2-SupportIndicator
                                                                             OPTIONAL,
    iE-Extensions
                                         ProtocolExtensionContainer { { Per-FDD-Cell-InformationItem-RL-AdditionRsp-ExtIEs } } OPTIONAL,
    . . .
Per-FDD-Cell-InformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Per-TDD-Cell-InformationList-RL-AdditionRsp ::= SEQUENCE ( SIZE (1..maxNrOfTDDNeighboursPerRNC,...)) OF Per-TDD-Cell-InformationItem-RL-AdditionRsp
Per-TDD-Cell-InformationItem-RL-AdditionRsp ::= SEOUENCE {
    c-ID
                                    C-ID,
    uARFCNforNt
                                     UARFCN,
    frameOffset.
                                     FrameOffset
                                                         OPTIONAL,
    cellParameterID
                                    CellParameterID,
    syncCase
                                     SyncCase,
    timeSlot
                                     TimeSlot
                                                         OPTIONAL
```

```
-- This IE is present only if Sync Case = Case1 -- ,
   sCH-TimeSlot
                                SCH-TimeSlot
                                                      OPTIONAL
   -- This IE is present only if Sync Case = Case2 -- ,
   block-STTD-Indicator
                              Block-STTD-Indicator,
   cellIndividualOffset
                                CellIndividualOffset
                                                       OPTIONAL.
   dPCHConstantValue
                                DPCHConstantValue OPTIONAL,
   pCCPCH-Power
                                PCCPCH-Power,
   iE-Extensions
                                ProtocolExtensionContainer { { Per-TDD-Cell-InformationItem-RL-AdditionRsp-ExtIEs } } OPTIONAL,
   . . .
Per-TDD-Cell-InformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
<Editor's note: Parts of the module is skipped.>
  _ _
-- RADIO LINK ADDITION FAILURE FDD
  RadioLinkAdditionFailureFDD ::= SEQUENCE {
   protocolIEs
                                 ProtocolIE-Container
                                                          {{RadioLinkAdditionFailureFDD-IEs}},
                                ProtocolExtensionContainer {{RadioLinkAdditionFailureFDD-Extensions}}
   protocolExtensions
                                                                                                                  OPTIONAL,
   . . .
}
RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
   { ID id-CauseLevel-RL-AdditionFailureFDD
                                                                                         TYPE CauseLevel-RL-AdditionFailureFDD
                                                          CRITICALITY
                                                                         ignore
   PRESENCE mandatory }
   { ID id-CriticalityDiagnostics
                                        CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                         PRESENCE optional },
   . . .
}
CauseLevel-RL-AdditionFailureFDD ::= CHOICE {
   generalCause
                    GeneralCauseList-RL-AdditionFailureFDD,
   rLSpecificCause RLSpecificCauseList-RL-AdditionFailureFDD,
   . . .
}
GeneralCauseList-RL-AdditionFailureFDD ::= ProtocolIE-Single-Container {{ GeneralCauseIE-RL-AdditionFailureFDD }}
GeneralCauseIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
```

```
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    { ID id-GeneralCauseItem-RL-AdditionFailureFDD
                                                                                  CRITICALITY ignore
        TYPE GeneralCauseItem-RL-AdditionFailureFDD
                                                                                  PRESENCE mandatory
}
GeneralCauseItem-RL-AdditionFailureFDD ::= SEQUENCE {
    cause
                                                 Cause.
    iE-Extensions
                                                 ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs } }
                                                                                                                                        OPTIONAL,
    . . .
GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
RLSpecificCauseList-RL-AdditionFailureFDD ::= ProtocolIE-Single-Container {{ RLSpecificCauseIE-RL-AdditionFailureFDD }}
RLSpecificCauseIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
           id-RLSpecificCauseItem-RL-AdditionFailureFDD
                                                                                                                TYPE RLSpecificCauseItem-RL-
    { ID
                                                                                  CRITICALITY
                                                                                                  ignore
AdditionFailureFDD
                                        PRESENCE
                                                     mandatory }
RLSpecificCauseItem-RL-AdditionFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD
                                                                     UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
    successful-RL-InformationRespList-RL-AdditionFailureFDD
                                                                     SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD OPTIONAL,
                                                 ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs } }
    iE-Extensions
                                                                                                                                           OPTIONAL,
    . . .
}
RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList1-1 { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-
IEs} }
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
                                                                         CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
AdditionFailureFDD
                        PRESENCE mandatory },
    . . .
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID
                                    RL-ID,
    cause
                                    Cause,
                                     ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL.
    iE-Extensions
    . . .
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
```

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SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList0-2 { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

```
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
                                                                         CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
        PRESENCE mandatory },
    . . .
}
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID
                                        RL-ID,
    rL-Set-ID
                                        RL-Set-ID,
    uRA-ID
                                        URA-ID.
    sAI
                                        SAI.
    rSSI
                                        RSSI.
    dl-CodeInformation
                                        DL-CodeInformationList-RL-AdditionFailureFDD,
    diversityIndication
                                        DiversityIndication-RL-AdditionFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    sSDT-SupportIndicator
                                        SSDT-SupportIndicator,
    minUL-SIR
                                        UL-SIR,
    maxUL-SIR
                                        UL-SIR,
    closedlooptimingadjustmentmode
                                        Closedlooptimingadjustmentmode OPTIONAL,
    maximumAllowedULTxPower
                                        MaximumAllowedULTxPower,
    maximumDLTxPower
                                        DL-Power,
    minimumDLTxPower
                                        DL-Power,
                                        Neighbouring-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
    neighbouring-CellInformationList
    iE-Extensions
                                        ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs } OPTIONAL,
    . . .
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DL-CodeInformationList-RL-AdditionFailureFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-AdditionFailureFDD }}
DL-CodeInformationListIEs-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CodeInformationListIE-RL-AdditionFailureFDD CRITICALITY ignore TYPE DL-CodeInformationListIE-RL-AdditionFailureFDD
                                                                                                                                          PRESENCE
mandatory }
DL-CodeInformationListIE-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF DL-CodeInformationItem-RL-AdditionFailureFDD
DL-CodeInformationItem-RL-AdditionFailureFDD ::= SEOUENCE {
    dl-ScramblingCode
                                            DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber
                                            FDD-DL-ChannelisationCodeNumber,
    transmission-Gap-Pattern-Sequence-ScramblingCode-Information-Response
                                                                                         Transmission-Gap-Pattern-Sequence-ScramblingCode-Information-
Response
          OPTIONAL,
    iE-Extensions
                                            ProtocolExtensionContainer { {DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    . . .
```

}

```
DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
DiversityIndication-RL-AdditionFailureFDD ::= ProtocolIE-Single-Container {{ DiversityIndicationIE-RL-AdditionFailureFDD }}
DiversityIndicationIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DiversityIndicationItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE
                                                                                         DiversityIndicationItem-RL-AdditionFailureFDD PRESENCE
mandatory }
}
DiversityIndicationItem-RL-AdditionFailureFDD ::= CHOICE {
                                    Combining-RL-AdditionFailureFDD,
    combining
    nonCombining
                                    NonCombining-RL-AdditionFailureFDD,
    . . .
Combining-RL-AdditionFailureFDD ::= ProtocolIE-Single-Container {{ CombiningIE-RL-AdditionFailureFDD }}
CombiningIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-AdditionFailureFDD CRITICALITY ignore
                                                                        TYPE CombiningItem-RL-AdditionFailureFDD PRESENCE mandatory }
CombiningItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID
                                RL-ID,
    iE-Extensions
                                ProtocolExtensionContainer { { CombiningItem-RL-AdditionFailureFDD-ExtIEs } } OPTIONAL,
    . . .
}
CombiningItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= ·
    . . .
}
NonCombining-RL-AdditionFailureFDD ::= ProtocolIE-Single-Container {{ NonCombiningIE-RL-AdditionFailureFDD }}
NonCombiningIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-NonCombiningItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE NonCombiningItem-RL-AdditionFailureFDD PRESENCE mandatory }
}
NonCombiningItem-RL-AdditionFailureFDD ::= SEQUENCE {
    dCH-InformationResponse-RL-AdditionFailureFDD
                                                        DCH-InformationResponseList-RL-AdditionFailureFDD,
    iE-Extensions
                                                ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionFailureFDD-ExtIEs } } OPTIONAL,
    . . .
NonCombiningItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEOUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionFailureFDD
DCH-InformationResponseItem-RL-AdditionFailureFDD ::= SEQUENCE {
    dCH-ID
                                DCH-ID,
    bindingID
                                BindingID,
    transportLaverAddress
                                        TransportLaverAddress,
                                    ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL.
    iE-Extensions
    . . .
DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Neighbouring-CellInformationList-RL-AdditionFailureFDD ::= SEOUENCE (SIZE (0..maxNrOfNeighbouringRNCs)) OF ProtocolIE-Single-Container {{ Neighbouring-
CellInformationItemIE-RL-AdditionFailureFDD } }
Neighbouring-CellInformationItemIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-CellInformationItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE
                                                                                                 Neighbouring-CellInformationItem-RL-AdditionFailureFDD
     PRESENCE mandatory }
}
Neighbouring-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
    rNC-ID
                                            RNC-ID,
    cN-PS-DomainIdentifier
                                            CN-PS-DomainIdentifier
                                                                         OPTIONAL,
    cN-CS-DomainIdentifier
                                            CN-CS-DomainIdentifier
                                                                         OPTIONAL,
    per-FDD-Cell-InformationList
                                            Per-FDD-Cell-InformationList-RL-AdditionFailureFDD OPTIONAL,
    per-TDD-Cell-InformationList
                                            Per-TDD-Cell-InformationList-RL-AdditionFailureFDD OPTIONAL,
    iE-Extensions
                                            ProtocolExtensionContainer { {Neighbouring-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    . . .
Neighbouring-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
Per-FDD-Cell-InformationList-RL-AdditionFailureFDD ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF Per-FDD-Cell-InformationItem-RL-
AdditionFailureFDD
Per-FDD-Cell-InformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
    c-ID
                                        C-ID,
    uARFCNforNu
                                        UARFCN,
    uARFCNforNd
                                        UARFCN,
    frameOffset
                                        FrameOffset
                                                             OPTIONAL,
                                        PrimaryScramblingCode,
    primaryScramblingCode
    primaryCPICH-Power
                                        PrimaryCPICH-Power
                                                                 OPTIONAL.
    cellIndividualOffset
                                        CellIndividualOffset
                                                                 OPTIONAL,
    txDiversityIndicator
                                        TxDiversityIndicator,
    sTTD-SupportIndicator
                                        STTD-SupportIndicator
                                                                OPTIONAL,
    closedLoopModel-SupportIndicator
                                        ClosedLoopModel-SupportIndicator
                                                                             OPTIONAL,
    closedLoopMode2-SupportIndicator
                                        ClosedLoopMode2-SupportIndicator
                                                                             OPTIONAL,
```

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```

. . .

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```
iE-Extensions ProtocolExtensionContainer { { Per-FDD-Cell-InformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}
```

```
Per-FDD-Cell-InformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

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```

Per-TDD-Cell-InformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDDNeighboursPerRNC,...)) OF Per-TDD-Cell-InformationItem-RL-AdditionFailureFDD

```
Per-TDD-Cell-InformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
```

```
c-ID
                              C-ID,
   uARFCNforNt.
                              UARFCN.
   frameOffset
                              FrameOffset
                                                OPTIONAL,
   cellParameterID
                              CellParameterID,
   syncCase
                               SyncCase,
   timeSlot
                              TimeSlot
                                                OPTIONAL
   -- This IE is present only if Sync Case = Case1 -- ,
   sCH-TimeSlot
                              SCH-TimeSlot
                                                   OPTIONAL
   -- This IE is present only if Sync Case = Case2 -- ,
   block-STTD-Indicator
                              Block-STTD-Indicator,
   cellIndividualOffset
                              CellIndividualOffset
                                                   OPTIONAL,
   dPCHConstantValue
                              DPCHConstantValue OPTIONAL,
                              PCCPCH-Power,
   pCCPCH-Power
                               ProtocolExtensionContainer { { Per-TDD-Cell-InformationItem-RL-AdditionFailureFDD-ExtIEs } } OPTIONAL,
   iE-Extensions
   . . .
Per-TDD-Cell-InformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
}
RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
<Editor's note: Parts of the module is skipped.>
  _ _
-- RADIO LINK RECONFIGURATION READY FDD
```

RadioLinkReconfigurationReadyFDD ::= SEQUENCE {

| protocolIEs | ProtocolIE-Container | {{RadioLinkReconfigurationReadyFDD-IEs}}, | |
|--------------------|--------------------------|--|-----------|
| protocolExtensions | ProtocolExtensionContain | er {{RadioLinkReconfigurationReadyFDD-Extensions}} | OPTIONAL, |
| | | | |

}

```
RadioLinkReconfigurationReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
      ID id-RL-InformationResponseList-RL-ReconfReadyFDD
                                                             CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfReadyFDD
                                                                                                                                       PRESENCE optional
     ID id-CriticalityDiagnostics
                                            CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                                   PRESENCE optional },
    . . .
}
                                                     ::= RL-IE-ContainerList0 { {RL-InformationResponse-RL-ReconfReadyFDD-IEs} }
RL-InformationResponseList-RL-ReconfReadyFDD
RL-InformationResponse-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
     ID id-RL-InformationResponseItem-RL-ReconfReadyFDD
                                                          CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfReadyFDD
                                                                                                                                       PRESENCE mandatory
    },
    . . .
}
RL-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE
    rL-ID
                                    RL-ID,
    max-UL-SIR
                                    UL-SIR
                                                     OPTIONAL,
    min-UL-STR
                                    UL-SIR
                                                     OPTIONAL,
    maximumDLTxPower
                                                     OPTIONAL,
                                    DL-Power
    minimumDLTxPower
                                    DL-Power
                                                     OPTIONAL,
    secondary-CCPCH-Info
                                    Secondary-CCPCH-Info-RL-ReconfReadyFDD
                                                                                 OPTIONAL,
    dl-CodeInformationList
                                    DL-CodeInformationList-RL-ReconfReadyFDD
                                                                                 OPTIONAL,
    dCHsInformationResponseList
                                    DCH-InformationResponseList-RL-ReconfReadyFDD
                                                                                     OPTIONAL,
    dSCHToBeAddedOrModified
                                    DSCHToBeAddedOrModified-RL-ReconfReadyFDD
                                                                                     OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
    . . .
RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
Secondary-CCPCH-Info-RL-ReconfReadyFDD ::= SEQUENCE {
    fDD-S-CCPCH-Offset
                                            FDD-S-CCPCH-Offset,
    dl-ScramblingCode
                                            DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber
                                            FDD-DL-ChannelisationCodeNumber,
    dl-TFCS
                                            TFCS,
    secondaryCCPCH-SlotFormat
                                            SecondaryCCPCH-SlotFormat,
    tFCI-Presence
                                            TFCI-Presence OPTIONAL,
    -- This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17
    multiplexingPosition
                                            MultiplexingPosition,
    sTTD-Indicator
                                            STTD-Indicator,
    fACH-PCH-InformationList
                                            FACH-PCH-InformationList-RL-ReconfReadyFDD,
    schedulingInformation
                                            SchedulingInformation-RL-ReconfReadyFDD,
                                            ProtocolExtensionContainer { { Secondary-CCPCH-Info-RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
```

}

}

```
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Secondary-CCPCH-Info-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
FACH-PCH-InformationList-RL-ReconfReadyFDD ::= SEQUENCE (SIZE(1..maxFACHCountPlus1)) OF FACH-PCH-InformationItem-RL-ReconfReadyFDD
FACH-PCH-InformationItem-RL-ReconfReadyFDD ::= SEQUENCE {
    transportFormatSet
                                    TransportFormatSet,
   iE-Extensions
                                    ProtocolExtensionContainer { { FACH-PCH-InformationItem-RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,
FACH-PCH-InformationItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
SchedulingInformation-RL-ReconfReadyFDD ::= SEQUENCE {
    iB-SG-Rep
                                        IB-SG-REP,
    segmentInformationList
                                        SegmentInformationList-RL-ReconfReadyFDD,
    iE-Extensions
                                        ProtocolExtensionContainer { { SchedulingInformation-RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,
        . . .
SchedulingInformation-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
SegmentInformationList-RL-ReconfReadyFDD ::= SEQUENCE (SIZE(1..maxIBSEG)) OF SegmentInformationItem-RL-ReconfReadyFDD
SegmentInformationItem-RL-ReconfReadyFDD ::= SEQUENCE {
    iB-SG-POS
                                    IB-SG-POS,
                                    ProtocolExtensionContainer { { SegmentInformationItem-RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
SegmentInformationItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DL-CodeInformationList-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-ReconfReadyFDD }}
DL-CodeInformationListIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CodeInformationListIE-RL-ReconfReadyFDD CRITICALITY ignore TYPE DL-CodeInformationListIE-RL-ReconfReadyFDD
                                                                                                                                 PRESENCE mandatory }
DL-CodeInformationListIE-RL-ReconfReadyFDD ::= SEQUENCE (SIZE (0..maxNrOfDL-Codes)) OF DL-CodeInformationItem-RL-ReconfReadyFDD
DL-CodeInformationItem-RL-ReconfReadyFDD ::= SEQUENCE {
    dl-ScramblingCode
                                        DL-ScramblingCode,
```

fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,

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    transmission-Gap-Pattern-Sequence-ScramblingCode-Information-Response
                                                                                         Transmission-Gap-Pattern-Sequence-ScramblingCode-Information-
          OPTIONAL,
Response
    iE-Extensions
                                        ProtocolExtensionContainer { { DL-CodeInformationItem-RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,
    . . .
DL-CodeInformationItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
                                                             ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfReadyFDD} }
DCH-InformationResponseList-RL-ReconfReadyFDD
DCH-InformationResponseListIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponseListIE-RL-ReconfReadyFDD
                                                                CRITICALITY ignore TYPE DCH-InformationResponseListIE-RL-ReconfReadyFDD PRESENCE
mandatory }
}
DCH-InformationResponseListIE-RL-ReconfReadyFDD ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-ReconfReadyFDD
DCH-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE {
    dCH-ID
                                    DCH-ID,
    bindingID
                                    BindingID,
    transportLayerAddress
                                    TransportLayerAddress,
    iE-Extensions
                                    ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL.
    . . .
DCH-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DSCHTOBeAddedOrModified-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container { {DSCHTOBeAddedOrModifiedIEs-RL-ReconfReadyFDD } }
DSCHToBeAddedOrModifiedIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCHToBeAddedOrModifiedIE-RL-ReconfReadvFDD CRITICALITY ignore TYPE DSCHToBeAddedOrModifiedIE-RL-ReconfReadvFDD
                                                                                                                                 PRESENCE mandatory
}
DSCHToBeAddedOrModifiedIE-RL-ReconfReadyFDD ::= SEQUENCE {
    dschInformation
                       DSCHInformation-RL-ReconfReadyFDD,
    pdSCHCodeMapping
                        PDSCHCodeMapping,
                        ProtocolExtensionContainer { {DSCHToBeAddedOrModifiedIE-RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
}
DSCHToBeAddedOrModifiedIE-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
DSCHInformation-RL-ReconfReadyFDD ::= SEOUENCE (SIZE(1..maxNoOfDSCHs)) OF DSCHInformationItem-RL-ReconfReadyFDD
DSCHInformationItem-RL-ReconfReadyFDD ::= SEQUENCE {
```

```
dsch-ID
                         DSCH-ID,
   priorityIndicator
                         PriorityIndicator-RL-ReconfReadyFDD,
   bindingID
                         BindingID.
   transportLayerAddress TransportLayerAddress,
   iE-Extensions
                         ProtocolExtensionContainer { {DSCHInformation-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
   . . .
DSCHInformation-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
}
PriorityIndicator-RL-ReconfReadyFDD ::= SEOUENCE (SIZE(1..16)) OF PriorityIndicatorItem-RL-ReconfReadyFDD
PriorityIndicatorItem-RL-ReconfReadyFDD ::= SEQUENCE {
   schedulingPriorityIndicator
                                 SchedulingPriorityIndicator,
   mAC-c-sh-SDU-Lengths
                                 MAC-c-sh-SDU-LengthList-RL-ReconfReadyFDD,
                                 ProtocolExtensionContainer { {PriorityIndicatorItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
   . . .
}
PriorityIndicatorItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
MAC-c-sh-SDU-LengthList-RL-ReconfReadyFDD ::= SEQUENCE(SIZE(1..maxNrOfMACcshSDU-Length)) OF MAC-c-sh-SDU-Length
RadioLinkReconfigurationReadyFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
<Editor's note: Parts of the module is skipped.>
    _ _
-- RADIO LINK RECONFIGURATION RESPONSE
_ _
  RadioLinkReconfigurationResponse ::= SEQUENCE {
                                                          {{RadioLinkReconfigurationResponse-IEs}},
   protocolIEs
                                 ProtocolIE-Container
   protocolExtensions
                                 ProtocolExtensionContainer {{RadioLinkReconfigurationResponse-Extensions}}
                                                                                                                       OPTIONAL,
   . . .
}
RadioLinkReconfigurationResponse-IEs RNSAP-PROTOCOL-IES ::= {
                                                 CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfRsp
                                                                                                                      PRESENCE optional }
     ID id-RL-InformationResponseList-RL-ReconfRsp
   { ID id-CriticalityDiagnostics
                                 CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                          PRESENCE optional },
   . . .
```

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```
RL-InformationResponseList-RL-ReconfRsp
                                            ::= RL-IE-ContainerList0 { {RL-InformationResponse-RL-ReconfRsp-IEs } }
RL-InformationResponse-RL-ReconfRsp-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfRsp
                                                        CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfRsp
                                                                                                                              PRESENCE mandatory },
    . . .
}
RL-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
    rL-ID
                                    RL-ID,
   max-UL-SIR
                                    UL-SIR
                                                     OPTIONAL,
   min-UL-SIR
                                    UL-SIR
                                                     OPTIONAL,
    maximumDLTxPower
                                    DL-Power
                                                     OPTIONAL,
    minimumDLTxPower
                                    DL-Power
                                                     OPTIONAL,
    secondary-CCPCH-Info
                                    Secondary-CCPCH-Info-RL-ReconfRsp
                                                                             OPTIONAL,
    dCHsInformationResponseList
                                    DCH-InformationResponseList-RL-ReconfRsp
                                                                                 OPTIONAL,
    dL-CodeInformationList-RL-ReconfResp
                                            DL-CodeInformationList-RL-ReconfRsp OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfRsp-ExtIEs} } OPTIONAL,
    . . .
RL-InformationResponseItem-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
Secondary-CCPCH-Info-RL-ReconfRsp ::= SEQUENCE {
    fDD-S-CCPCH-Offset
                                            FDD-S-CCPCH-Offset,
    dl-ScramblingCode
                                            DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber
                                            FDD-DL-ChannelisationCodeNumber,
    dl-TFCS
                                            TFCS,
    secondaryCCPCH-SlotFormat
                                            SecondaryCCPCH-SlotFormat,
    tFCI-Presence
                                            TFCI-Presence OPTIONAL,
    -- This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17
    multiplexingPosition
                                            MultiplexingPosition,
    sTTD-Indicator
                                            STTD-Indicator,
    fACH-PCH-InformationList
                                            FACH-PCH-InformationList-RL-ReconfRsp,
    schedulingInformation
                                            SchedulingInformation-RL-ReconfRsp,
                                            ProtocolExtensionContainer { { Secondary-CCPCH-Info-RL-ReconfRsp-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
Secondary-CCPCH-Info-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
FACH-PCH-InformationList-RL-ReconfRsp ::= SEQUENCE (SIZE(1..maxFACHCountPlus1)) OF FACH-PCH-InformationItem-RL-ReconfRsp
FACH-PCH-InformationItem-RL-ReconfRsp ::= SEQUENCE
    transportFormatSet
                                    TransportFormatSet,
                                    ProtocolExtensionContainer { { FACH-PCH-InformationItem-RL-ReconfRsp-ExtIEs } } OPTIONAL,
    iE-Extensions
```
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```
. . .
}
FACH-PCH-InformationItem-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
SchedulingInformation-RL-ReconfRsp ::= SEOUENCE {
    iB-SG-Rep
                                  IB-SG-REP,
    segmentInformationList
                                    SegmentInformationList-RL-ReconfRsp,
   iE-Extensions
                                    ProtocolExtensionContainer { { SchedulingInformation-RL-ReconfRsp-ExtIEs } } OPTIONAL,
        . . .
}
SchedulingInformation-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
SegmentInformationList-RL-ReconfRsp ::= SEQUENCE (SIZE(1..maxIBSEG)) OF SegmentInformationItem-RL-ReconfRsp
SegmentInformationItem-RL-ReconfRsp ::= SEQUENCE {
   iB-SG-POS
                                    IB-SG-POS,
                                    ProtocolExtensionContainer { { SegmentInformationItem-RL-ReconfRsp-ExtIEs } } OPTIONAL,
   iE-Extensions
    . . .
SegmentInformationItem-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-InformationResponseList-RL-ReconfRsp
                                                        ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfRsp} }
DCH-InformationResponseListIEs-RL-ReconfRsp RNSAP-PROTOCOL-IES ::= {
                                                            CRITICALITY ignore TYPE DCH-InformationResponseListIE-RL-ReconfRsp PRESENCE mandatory
     ID id-DCH-InformationResponseListIE-RL-ReconfRsp
}
DCH-InformationResponseListIE-RL-ReconfRsp ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-ReconfRsp
DCH-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
    dCH-ID
                                    DCH-ID,
    bindingID
                                    BindingID,
    transportLayerAddress
                                    TransportLayerAddress,
                                    ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-ReconfRsp-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DCH-InformationResponseItem-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
```

```
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                                                                    323TS 25.423 v.3.3.0 (2000-09)
DL-CodeInformationList-RL-ReconfRsp ::= ProtocolIE-Single-Container {{ DL-CodeInformationListIEs-RL-ReconfRsp }}
DL-CodeInformationListIEs-RL-ReconfRsp RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CodeInformationListIE-RL-ReconfResp CRITICALITY ignore TYPE DL-CodeInformationListIE-RL-ReconfRsp
                                                                                                              PRESENCE optional
}
DL-CodeInformationListIE-RL-ReconfRsp ::= SEOUENCE (SIZE (0..maxNrOfDL-Codes)) OF DL-CodeInformationItem-RL-ReconfRsp
DL-CodeInformationItem-RL-ReconfRsp ::= SEQUENCE {
   dl-ScramblingCode
                                     DL-ScramblingCode,
   fdd-DL-ChannelisationCodeNumber
                                     FDD-DL-ChannelisationCodeNumber,
   transmission-Gap-Pattern-Sequence-ScramblingCode-Information-Response
                                                                                  Transmission-Gap-Pattern-Sequence-ScramblingCode-Information-
  Response,
   iE-Extensions
                                     ProtocolExtensionContainer { { DL-CodeInformationItem-RL-ReconfRsp-ExtIEs } } OPTIONAL,
   . . .
DL-CodeInformationItem-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
}
RadioLinkReconfigurationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
<Editor's note: Parts of the module is skipped.>
     _ _
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST FDD
_ _
    PhysicalChannelReconfigurationRequestFDD ::= SEQUENCE {
                                                           {{PhysicalChannelReconfigurationRequestFDD-IEs}},
   protocolIEs
                                 ProtocolIE-Container
                                 ProtocolExtensionContainer {{PhysicalChannelReconfigurationRequestFDD-Extensions}}
   protocolExtensions
                                                                                                                               OPTIONAL
   . . .
PhysicalChannelReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-PhyChReconfRqstFDD CRITICALITY reject TYPE RL-Information-PhyChReconfRqstFDD PRESENCE mandatory },
    . . .
```

}

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```
RL-Information-PhyChReconfRgstFDD ::= SEQUENCE {
   rL-ID
                             RL-ID,
    dl-CodeInformations
                                   DL-CodeInformationList-PhyChReconfRgstFDD,
    iE-Extensions
                                   ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
    . . .
l
RL-Information-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DL-CodeInformationList-PhyChReconfRgstFDD
                                             ::= ProtocolIE-Single-Container { {DL-CodeInformationListIEs-PhyChReconfRgstFDD} }
DL-CodeInformationListIEs-PhyChReconfRqstFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CodeInformationListIE-PhyChReconfRqstFDD CRITICALITY notify TYPE DL-CodeInformationListIE-PhyChReconfRqstFDD PRESENCE mandatory }
DL-CodeInformationListIE-PhyChReconfRgstFDD ::= SEQUENCE (SIZE(1..maxNrOfDL-Codes)) OF DL-CodeInformationItem-PhyChReconfRgstFDD
DL-CodeInformationItem-PhyChReconfRqstFDD ::= SEQUENCE {
    dl-scramblingCode
                                   DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber
                                           FDD-DL-ChannelisationCodeNumber,
    transmission-Gap-Pattern-Sequence-ScramblingCode-Information
                                                                               Transmission-Gap-Pattern-Sequence-ScramblingCode-Information OPTIONAL,
   iE-Extensions
                                   ProtocolExtensionContainer { {DL-CodeInformationItem-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
    . . .
DL-CodeInformationItem-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
PhysicalChannelReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
<Editor's note: The rest of the module is skipped.>
```

Information Element Definitions 9.3.4 _ _ -- Information Element Definitions ___ RNSAP-IEs { itu-t (0) identified-organization (4) etsi (0) mobileDomain (0) umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-IEs (2) } DEFINITIONS AUTOMATIC TAGS ::= BEGIN <Editor's note: Parts of the module is skipped.> Transmission-Gap-Pattern-Sequence-ScramblingCode-Information-Response ::= ENUMERATED{ code-change, nocode-change }

<Editor's note: The rest of the module is skipped.>

Document R3-002501 e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

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| | | CHANGE | REQI | JES | Please page fo | see embedded help r instructions on how | file at the bottom of this to fill in this form correctly. | | |
|--|--|--|---|------------------------|--------------------|--|---|--|--|
| | | 25.423 | CR | 204 | | Current Versi | on: 3.3.0 | | |
| GSM (AA.BB) or 3G (| (AA.BBB) specifica | tion number \uparrow | | ſ | CR number a | as allocated by MCC | support team | | |
| For submission t | o: TSG RA #10 | N for a | pproval | X | | strategic | | | |
| list expected approval r | meeting # here ↑ | for info | rmation | | | non-strate | gic use only) | | |
| For | m: CR cover sheet, ve | ersion 2 for 3GPP and SMG | The lates | t version of t | his form is availa | able from: ftp://ftp.3gpp.o | org/Information/CR-Form-v2.doc | | |
| (at least one should be m | <u>e affects:</u> harked with an X) | | IVIE | | UTRAN | | | | |
| Source: | R-WG3 | | | | | Date: | October 2000 | | |
| Subject: | Clarification | of Measurement | Termina | ation at | Measurer | ment Object De | eletion | | |
| Work item: | | | | | | | | | |
| Category:F(only one categoryBshall be markedCwith an X)D | Correction Correspond Addition of Functional Editorial mo | ls to a correction feature modification of fea odification nt RNSAP specifi | in an ea ature <mark>cation it</mark> | rlier rele is not c | | <u>Release:</u> | Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00 | | |
| <u>change:</u> | This CR cla locally. <u>Consequen</u> The handlin unclear if th | In the current RNSAP specification it is not clearly specified what happens if a procedure removes an object (RL, RL set, or DPCH) that has an active measurement. Such a procedure could be the RL Deletion procedure (RL or RL Set) or Synchronised RL Reconfiguration Preparation/Commit (DPCH). This CR clarifies that the measurement for any such removed object is terminated locally. <u>Consequences if not approved:</u> The handling of objects with active measurements when they are removed will remain unclear if this CR is not approved. | | | | | | | |
| Clauses affected | l: 8.3.11. | 2 | | | | | | | |
| Other specs | Dther specs affected:Other 3G core specifications $X \rightarrow List of CRs:$ TS 25.433 CR252Other GSM core specifications $\rightarrow List of CRs:$ $\rightarrow List of CRs:$ MS test specifications $\rightarrow List of CRs:$ $\rightarrow List of CRs:$ BSS test specifications $\rightarrow List of CRs:$ O&M specifications $\rightarrow List of CRs:$ | | | | | | 252 | | |
| Other comments: | | | | | | | | | |

8.3.11.2 Successful Operation



Figure 1: Measurement Initiation procedure, Successful Operation

The procedure is initiated with a DEDICATED MEASUREMENT INITIATION REQUEST message sent from the SRNC to the DRNC.

Upon reception, the DRNC shall initiate the requested measurement according to the parameters given in the request. Unless specified below, the meaning of the parameters are given in other specifications.

- If the *Dedicated Measurement Object Type* IE is set to "RL", measurement results shall be reported for all of the indicated Radio Links.
- [FDD If the *Dedicated Measurement Object Type* IE is set to "RLS", -measurement results shall be reported for all of the indicated Radio Link Sets.]

If the *Dedicated Measurement Object Type* IE is set to "ALL RL", measurement results shall be reported for all current and future Radio Links within the UE Context.

[FDD - If the *Dedicated Measurement Object Type* IE is set to "ALL RLS", -measurement results shall be reported for all the existing and future Radio Link Sets within the UE Context.]

Report characteristics

The Report Characteristics IE indicates how the reporting of the measurement shall be performed.

If the Report Characteristics IE is set to 'On-Demand', the DRNS shall report the measurement result immediately.

If the *Report Characteristics* IE is set to 'Periodic', the DRNS shall periodically initiate a Measurement Report procedure for this measurement, with the requested report periodicity.

If the *Report Characteristics* IE is set to 'Event A', the DRNS shall initiate a Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event B', the DRNS shall initiate a Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the DRNS shall initiate a Measurement Reporting procedure when the measured entity rises more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event D', the DRNS shall initiate a Measurement Reporting procedure when the measured entity falls more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event E', the DRNS shall initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The DRNS shall also initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity* IE is provided, the DRNS shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to 'Event F', the DRNS shall initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The DRNS shall also initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity* IE is provided, the DRNS shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is not set to 'On-Demand', the DRNS is required to perform reporting for a dedicated measurement object, in accordance with the conditions provided in the DEDICATED MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no dedicated measurement object(s) for which a measurement is defined exists any more the DRNS shall terminate the measurement locally without reporting this to the SRNC.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event A, Event B, Event E or Event F, the DRNS shall initiate a Measurement Reporting procedure immediately, and then continue with the measurements as specified in the DEDICATED MEASUREMENT INITIATION REQUEST message.

Higher layer filtering

The *Measurement Filter Coefficient* IE indicates how filtering of the measurement values shall be performed before measurement event evaluation and reporting.

The averaging shall be performed according to the following formula.

$$F_n = (1-a) \cdot F_{n-1} + a \cdot M_n$$

The variables in the formula are defined as follows:

 F_n is the updated filtered measurement result

 F_{n-1} is the old filtered measurement result

 M_n is the latest received measurement result from physical layer measurements

 $a = 1/2^{(k/2)}$, where k is the parameter received in the *Measurement Filter Coefficient* IE. If the *Measurement Filter Coefficient* IE is not present, *a* shall be set to 1 (no filtering)

In order to initialise the averaging filter, F_0 is set to M_1 when the first measurement result from the physical layer measurement is received.

Response message

If the DRNS was able to initiate the measurement requested by the SRNS it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message. The message shall include the same Measurement Id that was used in the measurement request.

Only in the case when the *Report Characteristics* IE is set to "On-Demand", the DEDICATED MEASUREMENT INITIATION RESPONSE message shall contain the measurement result. In this case also the *Dedicated Measurement Object* IE shall be included if it was included in the request message.

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| CHANGE REQUEST Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. | | | | | | | | |
|--|---|--|-----------|--|---|--------------------|-----------|--|
| | | 25.423 | CR | 205r1 | Current Versi | on: 3.3.0 | | |
| GSM (AA.BB) or 30 | G (AA.BBB) specific | ation number \uparrow | | ↑ CR nui | mber as allocated by MCC | support team | | |
| For submission | to: TSG RA | N for ap | oproval | X | strate | egic | 10 | |
| list expected approva | # TO I meeting # here ↑ | for infor | mation | | non-strate | | ig ly) | |
| Proposed chan (at least one should be | <u>ge affects:</u> marked with an X) | (U)SIM | ME | UTF | RAN / Radio X | Core Network | v2.doc | |
| Source: | R-WG3 | | | | Date: | October 2000 |) | |
| Subject: | Handling of | the optional IEs in | nside the | e Criticality E | Diagnostics IE | | | |
| Work item: | | | | | | | | |
| Category:F(only one categoryFshall be marked(0with an X)FReason for change: | Im: X Release: Phase 2 A Corresponds to a correction in an earlier release Release: Phase 2 Release 96 Im: B Addition of feature Release 97 Release 97 Release D Editorial modification of feature Release 97 Release 98 D Editorial modification Release 99 X for In the current RNSAP specification the handling of the Criticality Diagnostics IE is not clear. Currently there is semantics for the individual parts of the IE but there is no normative specification text. Since this IE is used to report compatibility problems between nodes it is absolutely essential that all nodes behave in the same (well-defined) way. This CR introduces normative text for chapter 10 describing under what conditions different parts of the Criticality Diagnostics IE are included. Some enhancements of the Criticality IE itself are also included. Consequence if not accepted: | | | | | | | |
| Clauses affecte | | | and 10.2 | 5 | | | | |
| | <u>9.2.1.1</u> | o, 9.5.4, 10.5.4, a | | | TO 05 (10 0D | 400 | | |
| <u>Other specs</u> affected: | Other GSM co specificat MS test spec BSS test spec O&M specific | e specifications fore ions ifications cifications cations | × - | → List of CR | s: 15 25.413 CR TS 25.419 CR TS 25.433 CR s: s: | 189, 24, 253 | | |
| <u>Other</u> comments: | | | | | | | | |

1

Document **R3-002711**

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

9.2.1.13 Criticality Diagnostics

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|----------|--|---|--|
| Criticality Diagnostics | | | | |
| >Procedure ID | | 01 | | Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error |
| >>Procedure Code | M | | INTEGER (0255) | Procedure code is to be used if Criticality diagnostics is part of Error Indication procedure, and not within the response message of the same operation that caused the error |
| >>Ddmode | M | | ENUMERAT ED (FDD, TDD, Common) | Common = common to FDD and TDD. |
| >Triggering Message | 0 | | ENUMERAT ED(initiating message, successful outcome, unsuccessful outcome, outcome) | The Triggering Message is used only if the Criticality dDiagnostics is part of Error Indication-except when the procedure code is not understood. |
| > <u>Procedure</u> Criticality Response | 0 | | ENUMERAT ED(reject, ignore, notify) | This <u>Procedure</u> Criticality response IE-is used for reporting the Criticality of the Triggering message <u>(Procedure). The value</u> 'ignore' shall never be used. |
| >Transaction ID | 0 | | Transaction ID | |
| Information Element Criticality Diagnostics | | 4 <u>0</u> <maxnoof errors></maxnoof | | |
| > <u>IE</u> Criticality Response | М | | ENUMERAT ED(reject, ignore, notify) | The <u>IE</u> Criticality response IE is used for reporting the criticality of the triggering IE. The value 'Ignore'' shall never be used. |
| >IE ld | М | | INTEGER (065535) | The IE Id of the not understood or missing IE as defined in the ASN.1 part of the specification. |
| >Repetition Number | 0 | | INTEGER (1256) | The repetition number of the not understood IE if applicable |

| Range bound | Explanation |
|---------------|---|
| Maxnooferrors | Maximum number- of IE errors allowed to be reported with a single |
| | message. |

3GPP

9.3.4 Information Element Definitions

-- Information Element Definitions

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

_ _

<Editor's note: Parts of the module is skipped.>

-- C

```
Cause ::= CHOICE {
    radioNetwork
                         CauseRadioNetwork,
    transport
                         CauseTransport,
                         CauseProtocol,
    protocol
    misc
                         CauseMisc,
    . . .
}
CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    . . .
}
CauseProtocol ::= ENUMERATED {
    transaction-not-allowed,
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
    . . .
}
```

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Release 1999

CauseRadioNetwork ::= ENUMERATED { unknown-C-ID. cell-not-available, power-level-not-supported, ul-scrambling-code-already-in-use, dl-radio-resources-not-available, ul-radio-resources-not-available, measurement-not-supported-for-the-object, combining-resources-not-available, reconfiguration-not-allowed, requested-configuration-not-supported, synchronisation-failure, requested-tx-diversity-mode-not-supported, measurement-temporaily-not-available, unspecified, invalid-CM-settings, reconfiguration-CFN-not-elapsed, number-of-DL-codes-not-supported, dch-not-supported, dsch-not-supported, usch-not-supported, rach-fach-cpch-not-supported, ul-spreading-factor-not-supported, dl-spreading-factor-not-supported, cm-not-supported, transaction-not-supported-by-destination-node-b, . . . } CauseTransport ::= ENUMERATED { transmission-link-failure, transmission-port-not-available, unspecified, . . . } C-ID ::= INTEGER (0..65535) CCTrCH-ID ::= INTEGER (0..15) CellIndividualOffset ::= INTEGER (-20..20) CellParameterID ::= INTEGER (0..127,...) CFN ::= INTEGER (0..255) ChannelCodingType ::= ENUMERATED { no-coding, convolutional-coding, turbo-coding,

```
. . .
}
ChipOffset
                       ::= INTEGER (0..38399)
ClosedLoopModel-SupportIndicator
                                    ::= ENUMERATED {
    closedLoop-Model-Supported,
    closedLoop-Model-not-Supported
}
ClosedLoopMode2-SupportIndicator
                                    ::= ENUMERATED
    closedLoop-Mode2-Supported,
    closedLoop-Mode2-not-Supported
}
Closedlooptimingadjustmentmode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    . . .
}
CodeNumber ::= INTEGER (0..maxCodeNumComp-1)
CodingRate ::= ENUMERATED {
    half,
    third,
    . . .
}
CRC-Size
                        ::= ENUMERATED {
    v0,
    v8,
    v12,
    v16,
    v24,
    . . .
}
CriticalityDiagnostics ::= SEQUENCE {
    procedureID
                                ProcedureID
                                                     OPTIONAL,
    triggeringMessage
                                TriggeringMessage
                                                         OPTIONAL,
    procedureCeriticalityResponse
                                        -----Criticality
                                                                     OPTIONAL,
    transactionID
                                TransactionID
                                                         OPTIONAL,
    iEsCriticalityDiagnosticsResponses
                                            CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions
                                ProtocolExtensionContainer { { CriticalityDiagnostics-ExtIEs } } OPTIONAL,
    . . .
}
CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
```

300G TS 25.423 version 3.3.0

```
CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        iECeriticalityResponse
                                        Criticality,
        iE-ID
                                ProtocolIE-ID,
       repetitionNumber
                                RepetitionNumber
                                                         OPTIONAL,
       iE-Extensions
                                ProtocolExtensionContainer { { CriticalityDiagnostics-IE-List-ExtIEs } } OPTIONAL,
        . . .
    }
CriticalityDiagnostics-IE-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
CN-CS-DomainIdentifier ::= SEQUENCE {
    pLMN-ID
                       PLMN-ID,
    lac
                        LAC,
                       ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs } } OPTIONAL
    iE-Extensions
}
CN-CS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
CN-PS-DomainIdentifier ::= SEQUENCE {
    pLMN-ID
                        PLMN-ID,
   lac
                        LAC,
   rAC
                        RAC,
                        ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs } } OPTIONAL
    iE-Extensions
}
CN-PS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
C-RNTI
                       ::= INTEGER (0..65535)
-- D
```

<Editor's note: The rest of the module is skipped.>

10.3.4 Not Comprehended IE/IE group

10.3.4.1 Procedure ID

The receiving node shall treat the different types of received criticality information of the *Procedure ID* according to the following:

Reject IE:

- if a message is received with a *Procedure ID* marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall reject the procedure using the Error Indication procedure.

Ignore IE and Notify Sender:

- if a message is received with a *Procedure ID* marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the procedure and initiate the Error Indication procedure.

Ignore IE:

- if a message is received with a *Procedure ID* marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the procedure.

When using the Error Indication procedure to reject a procedure or to report an ignored procedure it shall include the *Procedure ID* IE, the *Triggering Message* IE, and the *Procedure Criticality* IE in the *Criticality Diagnostics* IE.

10.3.4.2 IEs other than the Procedure ID

The receiving node shall treat the different types of received criticality information of an IE/IE group other than the *Procedure ID* according to the following:

Reject IE:

- if a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the rejection of one or more IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure.
- if a message *initiating* a procedure that does not have a message to report unsuccessful outcome is received containing one or more IEs/IE groups marked with "*Reject IE*" which the receiving node does not comprehend, the receiving node shall initiate the Error Indication procedure.
- if a *response* message is received containing one or more IEs/IE groups marked with "*Reject IE*, that the receiving node does not comprehend, the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

- if a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and report in the response message of the procedure that one or more IEs/IE groups have been ignored.
- if a message *initiating* a procedure that does not have a message to report the outcome of the procedure is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups, continue with the procedure as if the not comprehended IEs/IE groups were not received (except for the reporting) using the understood IEs/IE groups, and initiate the Error Indication procedure to report that one or more IEs/IE groups have been ignored.
- if a *response* message is received containing one or more IEs/IE groups marked with "*Ignore IE and Notify Sender*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and initiate the Error Indication procedure.

Ignore IE:

- if a message *initiating* a procedure is received containing one or more IEs/IE groups marked with "*Ignore IE*" which the receiving node does not comprehend, the receiving node shall ignore the content of the not comprehended IEs/IE groups and continue with the procedure as if the not comprehended IEs/IE groups were not received using the understood IEs/IE groups.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

When reporting not comprehended IEs/IE groups marked with "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction Id* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group. The *Repetition Number* IE shall be included in the *Information Element Criticality Diagnostics* IE if the reported IE/IE group was part of a "SEQUENCE OF" definition.

10.3.5 Missing IE or IE group

The receiving node shall treat the missing IE/IE group according to the criticality information for the missing IE/IE group in the received message specified in the version of this specification used by the receiver:

Reject IE:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Reject IE*"; none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the missing IEs/IE groups using the message normally used to report unsuccessful outcome of the procedure.
- if a received message *initiating* a procedure that does not have a message to report unsuccessful outcome is missing one or more IEs/IE groups with specified criticality "*Reject IE*", the receiving node shall initiate the Error Indication procedure.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Reject IE*, the receiving node shall initiate local error handling.

Ignore IE and Notify Sender:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and report in the response message of the procedure that one or more IEs/IE groups were missing.
- if a received message *initiating* a procedure that does not have a message to report the outcome of the procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message and initiate the Error Indication procedure to report that one or more IEs/IE groups were missing.
- if a received *response* message is missing one or more IEs/IE groups with specified criticality "*Ignore IE and Notify Sender*", the receiving node shall initiate the Error Indication procedure.

Ignore IE:

- if a received message *initiating* a procedure is missing one or more IEs/IE groups with specified criticality "*Ignore IE*", the receiving node shall continue with the procedure based on the other IEs/IE groups present in the message.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using a response message defined for the procedure, the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group.

When reporting missing IEs/IE groups with specified criticality "*Reject IE*" or "*Ignore IE and Notify Sender*" using the Error Indication procedure, the *Procedure ID* IE, the *Triggering Message* IE, *Procedure Criticality* IE, the *Transaction Id* IE, and the *Information Element Criticality Diagnostics* IE shall be included in the *Criticality Diagnostics* IE for each reported IE/IE group.

TSG-RAN Working Group 3 Meeting #16 Windsor, UK, 16th –20th October 2000

| CHANGE REQUEST Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. | | | | | | | | | | | | | |
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| Source: | | R-WG3 | | | | | | | | Date: | Octobe | r 2000 |) |
| Subject: | | Removal of Procedure | C-RN | FI from the | Commo | on Tra | nsport | Char | nel Re | sources | s Release |) | |
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| <u>Reason for</u> <u>change:</u> | | In the currer Release pro- this was inti- the commo a transition in the UE a Transfer pro- is conseque- thus no need does not ut need to rele- UE. This CR me that it is po- addition to "dedicated" Compare R DRNC. R1 addition - FDD/TDD | nt RNS ocedure roduce n unde period t cell re ocedure ently nc ed to be ilise "cc ease the odifies t ssible to that als resour L delet | AP specifi e provides d when the rstanding t (at cell re- -selection) e that ever ot needed t e able to "p ommon" re e "commor che Commo o the UE c ces (DCH, ion of the I | ication the the pose handlir hat there selection and con y time a to be able in point" sources n" resou on Trans ease the context n USCH, last RL w | ne Con sibility ng of the e may n). Thi nsequ C-RN e to re- the C any n rces a sport (e C-RI nay be and/o when t | mmon to release be two is hance ently it ITI is a elease c-RNTI hore bu nd the Channe NTI or e release or DSC he UE | Trans ease i NTI in o C-R lling h is no llocat one c to be ut use C-RN el Res all the sed, i H) in uses | sport Ch ndividua n the U NTIS al nas bee w clear ed any but of m e releas s dedic NTI but sources e related f the UE the DRI "comm | nannel l al C-RN E was u located in clarifi from th old C-F nultiple ed. Ho ated re retain t Releas d "comr E does NS. non" res | Resource VTIs. Hov unclear a l for one l ied (local ne UL Sig RNTI is re C-RNTIs. wever, if sources the contes se procect not utilise | s vever, nd it w JE dui release nalling leased There the UE here is there is there is there so ources | vas ring se g d. It e is s a he s. In |

- "and" is changed to "and/or" in two places of listing different transport channels.

<u>Consequences if not approved:</u> If this CR is not approved the Common Transport Channel Resources Release procedure is misleading and not as easy to understand (but functionally still workable).

Clauses affected:

Document **R3-003264**

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

| Other specs | Other 3G core specifications | \rightarrow List of CRs: |
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| affected: | Other GSM core specifications | \rightarrow List of CRs: |
| | MS test specifications | \rightarrow List of CRs: |
| | BSS test specifications | \rightarrow List of CRs: |
| | O&M specifications | \rightarrow List of CRs: |
| | | |
| Other | | |

2

<u>Other</u> comments:

8.4.2.2 Successful Operation

| SRI | NC | DRNC |
|-----|---|------|
| | COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST | |

Figure 1: Common Transport Channel Resources Release procedure, Successful Operation

The SRNC initiates the Common Transport Channel Resources Release procedure by sending the message COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST to the DRNC. The SRNC may include the *C*-RNTI-IE in the message to request the release of an individual C RNTI.

At the reception of the message, if the *C*-*RNTI* IE is not present in the message, the DRNC shall release the whole-UE context identified by the D-RNTI and all its related RACH, [FDD - CPCH,] and/or FACH resources, unless the UE is using dedicated resources (DCH, [TDD - USCH,] and/or DSCH) in the DRNS in which case the DRNC shall release only the C-RNTI and all its related RACH, [FDD - CPCH,] and/or FACH resources allocated for the UE.

If the C RNTI IE is included in the message, the DRNC shall release only the indicated C RNTI.

9.1.34 COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------|----------|-------|-----------------------------|--|-------------|-------------------------|
| Message Type | Μ | | 9.2.1.40 | | YES | ignore |
| Transaction ID | Μ | | 9.2.1.59 | | _ | |
| D-RNTI | Μ | | 9.2.1.24 | | YES | ignore |
| C-RNTI | θ | | 9.2.1.14 | Release of an individual C-RNTI. | YES | ignore |

| 9.3.3 | PDU Definitions |
|---|--|
| ****** | *************************************** |
| PDU def | nitions for RNSAP. |
| ****** | *************************************** |
| RNSAP-PDU- DEFINITION | Contents { object identifier to be allocated } GAUTOMATIC TAGS ::= |
| BEGIN | |
| <editor< td=""><td>'s note: Part of the module is skipped.></td></editor<> | 's note: Part of the module is skipped.> |
| ****** | ************************************** |
| COMMON | RANSPORT CHANNEL RESOURCES RELEASE REQUEST |
| ****** | *************************************** |
| CommonTran protoc protoc | portChannelResourcesReleaseRequest ::= SEQUENCE { lIEs ProtocolIE-Container {{CommonTransportChannelResourcesReleaseRequest-IEs}}, lExtensions ProtocolExtensionContainer {{CommonTransportChannelResourcesReleaseRequest-Extensions}} OPTIONAL, |
| } | |
| CommonTran { ID i { ID i | portChannelResourcesReleaseRequest-IEs RNSAP-PROTOCOL-IES ::= { -D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE mandatory }+ -C RNTI CRITICALITY ignore TYPE C RNTI PRESENCE optional }, |
| } | |
| CommonTran | portChannelResourcesReleaseRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= { |
| } | |
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specifications

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

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| | 25.423 CR 207 R2 Current Version: 3.3.0 | | | | | | | | | |
| GSM (AA.BB) or 3G (AA.BBB) specification number 1 1 CR number as allocated by MCC support team | | | | | | | | | | |
| For submission | For submission to: TSG RAN for approval X strategic | | | | | | | | | |
| list expected approval | #10 (for SMG meeting # here for information ↑ for information | | | | | | | | | |
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| Proposed changes (at least one should be r | ge affects: (U)SIM ME UTRAN / Radio X Core Network | | | | | | | | | |
| Source: | R-WG3 Date: October 2000 | | | | | | | | | |
| Subject: | Downlink Power Control correction | | | | | | | | | |
| Work item: | | | | | | | | | | |
| Category:FA(only one categoryshall be markedwith an X)D | CorrectionXRelease:Phase 2Corresponds to a correction in an earlier releaseRelease 96Release 96Addition of featureRelease 97Release 97Functional modification of featureRelease 98Release 99Editorial modificationRelease 00X | | | | | | | | | |
| <u>Reason for</u> change: | R2: Change to the formula now done with the equation editor. | | | | | | | | | |
| | R1: R1 handles the following comments received during R3#16: | | | | | | | | | |
| | In stead of talking about the absolute P[ref] power, the formula is updated to Change formula to P[ref] + P[PCPICH] Remove accuracy requirement changes (handled in other CR) | | | | | | | | | |
| | R0: Correction of the <i>Pinit</i> definition in order to support compressed mode. | | | | | | | | | |
| | In order to have correct behaviour of the synchronised power balancing function we propose that the <i>Pinit</i> , i.e. the downlink code power used in the Downlink Power Control procedure, during a transmission gap shall be set to the code power of the last transmitted slot. | | | | | | | | | |
| | Also the accuracy requirement has been removed since power balancing is performed in the digital domain of the transmitter. Further, a minor clarification is made regarding the definition of <i>Pref</i> . | | | | | | | | | |
| | Consequences if not approved: Synchronised downlink power balancing will not work correctly during compressed mode. | | | | | | | | | |
| Clauses affected | <u>d:</u> 8.3.15 | | | | | | | | | |
| Other specs affected: | Other 3G core specifications $X \rightarrow$ List of CRs:TS 25.433 CR254Other GSM core \rightarrow List of CRs: | | | | | | | | | |

MS test specifications BSS test specifications O&M specifications



<u>Other</u> comments:

8.3.15 Downlink Power Control [FDD]

8.3.15.1 General

The purpose of this procedure is to balance the DL transmission powers of the radio links for one UE.

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

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

8.3.15.2 Successful Operation



Figure 1: Downlink Power Control procedure, Successful Operation

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

The Power Adjustment Type IE defines the characteristic of the power adjustment.

If the value of the *Power Adjustment Type* IE is "Common", the DRNC shall perform the power adjustment (see below) for all radio links for the UE context using a common DL reference power level.

If the value of the *Power Adjustment Type* IE is "Individual", the DRNC shall perform the power adjustment (see below) for all radio links addressed in the message using the given DL Reference Power per RL.

If the value of the *Power Adjustment Type* IE is "None", the DRNS shall suspend on going power adjustments for all radio links for the UE context.

Power Adjustment

The power balancing adjustment superimposed on the inner loop power control adjustment (see Ref. [10]) shall be such that:

$$\sum P_{bal} = (1-r)(P_{ref} + P_{P-CPICH} - P_{init}) + \sum P_{bal} = (1-r)(P_{ref} - P_{init})$$
 with an accuracy of ±0.5 dB

where the sum is performed over an adjustment period corresponding to a number of frames equal to the value of the *Adjustment Period* IE, *Pref* is the value of the *DL Reference Power* IE, $P_{P-CPICH}$ is the power used on the Primary <u>CPICH</u>. *Pinit* is the code power of the last beginning slot of the previous adjustment period and *r* is given by the *Adjustment Ratio* IE. If the last slot of the previous adjustment period is within a transmission gap due to compressed mode, *Pinit* shall be set to the same value as the code power of the slot just before the transmission gap.

The adjustment within one adjustment period shall in any case be performed with the constraints given by the *Max Adjustment Step* IE and the DL TX power range set by the DRNC.

The power adjustments shall be repeated for every adjustment period, until a new DL POWER CONTROL REQUEST message is received or the RL is deleted.

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

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| Source: | R-WG3 | | | | Date: | October 2000 | | | | |
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| Category:F(only one category)Bshall be markedCwith an X)DReason for change: | Correction Corresponds to Addition of fea Functional mo Editorial modif One could argu the sender has measurement again. Since we have problems in the DEDICATED M measurement If this CR is no | o a correction in ture dification of fea ication ue (as was don reported a DE s also terminat a separate ind a reporting mes IEASUREMEN has been terminat | n an earl ture e on the DICATEI red or not ssage, thi IT FAILU nated. | ier release | Release: X er) that it is not 1 MENT FAILURE ase, suddenly rep nporary measure clarifies that whe ON message, the sume incorrect be | Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00 00% clear if, after INDICATION, the ports could appear ement failure en transmitting the e indicated | | | | |
| Clauses affected | <u>d:</u> 8.3.14 | | | | | | | | | |
| Other specs affected: | Other 3G core s Other GSM core specifications MS test specifica BSS test specific O&M specification | X \rightarrow List of CRs:TS 25.433 CR258other GSM core specifications \rightarrow List of CRs: \rightarrow List of CRs:IS test specifications \rightarrow List of CRs: \rightarrow List of CRs:SS test specifications \rightarrow List of CRs: \rightarrow List of CRs: ∂M specifications \rightarrow List of CRs: \rightarrow List of CRs: | | | | | | | | |
| <u>Other</u> comments: | | | | | | | | | | |

8.3.14 Measurement Failure

8.3.14.1 General

This procedure is used by the DRNS to notify the SRNS that a measurement previously requested by the Measurement Initiation procedure can no longer be reported.

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

The DRNC may initiate the Measurement Failure procedure at any time after establishing a Radio Link.

8.3.14.2 Successful Operation



Figure 1: Measurement Failure procedure, Successful Operation

This procedure is initiated with a DEDICATED MEASUREMENT FAILURE INDICATION message, sent from the DRNC to the SRNC, to inform the SRNC that a previously requested measurement <u>can</u> no longer-<u>can</u> be reported. <u>The DRNC has locally terminated the indicated measurement</u>.

Typical cause values are:

Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- O&M Intervention

8.3.14.3 Abnormal Conditions

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| Source: | R-WG3 | | | | | Date: | October 20 | 000 | |
| Subject: | Protocol spec | ification principl | es | | | | | | |
| Work item: | | | | | | | | | |
| Category:FA(only one categoryshall be markedCwith an X)D | Correction Corresponds Addition of fe Functional me Editorial mod | to a correction i ature odification of fea ification | in an ea ature | rlier re | lease | X <u>Release:</u> | Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00 | X | |
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| affected: | Other GSM core specifications \rightarrow List of CRs:MS test specifications \rightarrow List of CRs:BSS test specifications \rightarrow List of CRs:O&M specifications \rightarrow List of CRs: | | | | | | | | |
| Other comments: | | | | | | | | | |

4 General

4.1 Procedure Specification Principles

The principle for specifying the procedure logic is to specify the functional behaviour of the CRNC exactly and completely. The SRNC functional behaviour is left unspecified. The Physical Channel Reconfiguration procedure is an exception from this principle.

The following specification principles have been applied for the procedure text in chapter 8:

- The procedure text discriminates between:

1) Functionality which "shall" be executed

The procedure text indicates that the receiving node "shall" perform a certain function Y under a certain condition. If the receiving node supports procedure X but cannot perform functionality Y requested in the REQUEST message of a Class 1 EP, the receiving node shall respond with the message used to report unsuccessful outcome for this procedure, containing an appropriate cause value.

2) Functionality which "shall, if supported" be executed

The procedure text indicates that the receiving node "shall, if supported," perform a certain function Y under a certain condition. If the receiving node supports procedure X, but does not support functionality Y, the receiving node shall proceed with the execution of the EP, possibly informing the requesting node about the not supported functionality.

- Any required inclusion of an optional IE in a response message is explicitly indicated in the procedure text. If the procedure text does not explicitly indicate that an optional IE shall be included in a response message, the optional IE shall not be included.

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

| CHANGE REQUEST Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. | | | | | | |
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| list expected approval meeting # here for information non-strategic | | | | gic use only) | | |
| Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc | | | | | | |
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| Subject: | Transport channel moc | dification | | | | |
| Work item: | | | | | | |
| Category:FA(only one categoryshall be marked(with an X)D | Correction Corresponds to a corre Addition of feature Functional modification Editorial modification | ection in an ear n of feature | rlier release | X <u>Release:</u> | Phase 2Release 96Release 97Release 98Release 99XRelease 00 | |
| Reason for | R1: Following comments reco | eived at R3#16 | are handled: | | | |
| <u>enunge.</u> | 1. Change "Mult" to "Range" in table: | | | | | |
| | 2. ENUMRATED should be ENUMERATED; | | | | | |
| | R0: This CR clarifies the transport channel modification handling in line with Tdoc2529. | | | | | |
| | If this group of CR's is not accepted, unclearity in the specifications will lead to interoperability problems. | | | | | |
| Clauses affected: 8.3.4, 8.3.5, 8.3.7, 9.1.11, 9.1.16, 9.3.3 | | | | | | |
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| <u>Other</u> comments: | | | | | | |

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 all Radio Links 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 <u>1110</u>: 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 before providing a response to the SRNC.

DCH Modification:

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message 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 RADIO LINK RECONFIGURATION PREPARE message 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 RADIO LINK RECONFIGURATION PREPARE message 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.

If the RADIO LINK RECONFIGURATION PREPARE message includes a *DCHs to Modify* IE with 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 RADIO LINK RECONFIGURATION PREPARE message includes the *UL FP Mode* IE for a DCH or a DCH which belongs to 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 RADIO LINK RECONFIGURATION PREPARE message includes the *ToAWS* IE for a DCH or a DCH which belongs to 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 RADIO LINK RECONFIGURATION PREPARE message includes the *ToAWE* IE for a DCH or a DCH which belongs to 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.

[FDD - If the *DRAC Control* IE is present and set to "requested" in the RADIO LINK RECONFIGURATION PREPARE message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to the Radio Link(s), 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 RADIO LINK RECONFIGURATION PREPARE message includes a DCHs to *Add* IE with 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 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 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 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 the RADIO LINK RECONFIGURATION PREPARE message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

DCH Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be deleted from the Radio Link(s), the DRNS 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 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 the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Uplink Channelisation Code* IEs, the DRNS shall apply the new Uplink Channelisation Code(s) in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes *Number of DL Channelisation Code 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, DRNS shall include the *Transmission Gap Pattern Sequence Information Response IE* in the RADIO LINK RECONFIGURATION READY message in case it 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 - 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 - 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 RADIO LINK RECONFIGURATION PREPARE message includes on the *Diversity Mode* IE, the DRNS shall apply diversity according to the given value.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes on the *UL DPCCH Structure* IE, group the DRNS shall apply the new Uplink DPCCH Structure to the new configuration.]

FDD – If the RADIO LINK RECONFIGURATION PREPARE message 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 RADIO LINK RECONFIGURATION PREPARE message 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] section 5.2.1 for the inner loop DL power control in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message 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.]

[TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes UL/DL CCTrCH to be modified and includes any of *TFCS* IE, *TFCI coding* IE, *Puncture limit* IE, or *TPC CCTrCH ID* IEs the DRNC 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 *Midamble shift and Burst Type* IE, *Time Slot* IE, *TFCI presence* IE or Code information was modified. The DRNC shall include code information if *TDD Channelisation Code* IE was modified.]

[TDD – UL/DL CCTrCH Addition]

[TDD -If the RADIO LINK RECONFIGURATION PREPARE message includes any UL or DL CCTrCH to be added, the DRNC shall include this CCTrCH in the new configuration.]

[TDD – If the DRNC 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.]

[TDD – UL/DL CCTrCH Deletion]

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

SSDT Activation/Deactivation:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message 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 and SSDT Cell Identity Length IE in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the SSDT Indication IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

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 exist 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.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH Information Response* IE group shall be included only for one of the DCHs in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH Information Response* IE group shall be included only for one of the combined Radio Links.

Compressed Mode Preparation:

[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.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern* Sequence Information IE and 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 DRNS shall include the *Transmission Gap Pattern Sequence Information Response IE* to the RADIO LINK RECONFIGURATION READY message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not].

DSCH Addition/Modification/Deletion:

The DRNC shall use any included DSCH information for the DSCHs to be added/modified/deleted in the RADIO LINK RECONFIGURATION PREPARE message, 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.

To add or modify each DSCH, 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 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.

The DRNS shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE of the DSCHs being added or modified.

USCH Addition/Modification/Deletion [TDD]

The DRNC shall use any included USCH information for the USCHs to be added/modified/deleted in the RADIO LINK RECONFIGURATION PREPARE message. 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.

To add or modify each USCH, 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 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.

The DRNS shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE of the USCHs being added or modified.

General

The DRNS shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* 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 set of coordinated DCHs requiring a new transport bearer on Iur, the *DCH Information Response* IE shall be included only for one of the DCH in the set of coordinated DCHs.

8.3.4.3 Unsuccessful Operation



Figure <u>2211</u>: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

If the DRNS cannot reserve the necessary resources for all the new DCHs of a set of co-ordinated DCHs requested to be added, it shall regard the Synchronised Radio Link Reconfiguration procedure as having failed.

- If the requested Synchronised Radio Link Reconfiguration procedure fails for one or more RLs the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

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 Synchronised Radio Link Reconfiguration Preparation procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

In which cases to include only the *Cause* IE on message level and in which cases the *Cause* IE also shall be included for a specific RL is FFS.

[FDD - If the DRNS cannot support the requested number of DL Codes on a permanent basis, the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with the RADIO LINK RECONFIGURATION FAILURE message with the cause value "Number of DL Codes Not Supported".]

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use;
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Requested Configuration not Supported;
- Invalid CM Settings;
- Number of DL codes not supported;
- [TDD- DCH not Supported];

- DSCH not Supported;
- [TDD USCH not Supported];
- [FDD UL Spreading Factor not Supported];
- [FDD DL Spreading Factor not Supported];
- CM not Supported.

Protocol Causes:

- Transaction not Allowed.

Miscellaneous Causes:

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

8.3.4.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the DRNS shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

8.3.5 Synchronised Radio Link Reconfiguration Commit

8.3.5.1 General

This procedure is used to order the DRNS to switch to the new configuration for the Radio Link(s) within the DRNS, previously prepared by the Synchronised Radio Link Preparation procedure.

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

8.3.5.2 Successful Operation



Figure <u>3312</u>: Synchronised Radio Link Reconfiguration Commit procedure, Successful Operation

The DRNS shall switch to the new configuration previously prepared by the Synchronised RL Reconfiguration procedure at the CFN requested by the SRNC when receiving the RADIO LINK RECONFIGURATION COMMIT message from the SRNC. [FDD – The CFN shall be ignored by DRNS if only Transmission Gap Pattern Sequence Information was included in the RL Reconfiguration.] When this procedure has been completed the Prepared Reconfiguration does not exist any more, see subclause 3.1

In the case of a transport channel modification for which a new transport bearer was requested and established, the switch to the new transport bearer shall also take place at the indicated CFN.

[FDD - If the RADIO LINK RECONFIGURATION COMMIT includes the *Active Pattern Sequence Information* IE, the DRNS shall deactivate all the ongoing Transmission Gap Pattern Sequences at the CM Configuration Change CFN. From that moment on all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence Status* IE group repetitions shall be started when the indicated TGCFN elapses. The *CM Configuration Change CFN* in the *Active Pattern Sequence Information* IE and *TGCFN* for each sequence refers to the next coming CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the DRNS shall behave as specified in ref. [26].]

8.3.5.3 Abnormal Conditions

8.3.6 Synchronised Radio Link Reconfiguration Cancellation

8.3.6.1 General

This procedure is used to order the DRNS to release the new configuration for the Radio Link(s) within the DRNS, previously prepared by the Synchronised Radio Link Preparation procedure.

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

8.3.6.2 Successful Operation



Figure <u>4413</u>: Synchronised Radio Link Reconfiguration Cancellation procedure, Successful Operation

The DRNS shall release the new configuration ([FDD – including the new Transmission Gap Pattern Sequence parameters (if existing)]) previously prepared by the Synchronised RL Reconfiguration Preparation procedure and continue using the old configuration when receiving the RADIO LINK RECONFIGURATION CANCEL message from the SRNC. When this procedure has been completed the Prepared Reconfiguration does not exist any more, see subclause 3.1.

8.3.6.3 Abnormal Conditions

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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 5514: 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 before providing a response to the SRNC.

DCH Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this new value when reserving resources for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on 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 RADIO LINK RECONFIGURATION REQUEST message 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 RADIO LINK RECONFIGURATION REQUEST message 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 RADIO LINK RECONFIGURATION REQUEST message includes a *DCHs to Modify* IE with 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 RADIO LINK RECONFIGURATION REQUEST message includes the *UL FP Mode* IE for a DCH or a DCH which belongs to 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 RADIO LINK RECONFIGURATION REQUEST message includes the *ToAWS* IE for a DCH or a DCH which belongs to 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 RADIO LINK RECONFIGURATION REQUEST message includes the *ToAWE* IE for a DCH or a DCH which belongs to 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.

[FDD - If the *DRAC Control* IE is present and set to "requested" in the RADIO LINK RECONFIGURATION REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION RESPONSE message the *Secondary CCPCH Info* IE to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.]

DCH Addition:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be added to the Radio Link(s), 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 RADIO LINK RECONFIGURATION REQUEST message includes a DCHs to *Add* IE with 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 it can 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 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 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-ordiated 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 the RADIO LINK RECONFIGURATION REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION RESPONSE message the *Secondary CCPCH Info* IE and the *Reference to System Information blocks IE* to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.

DCH Deletion:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be deleted from the Radio Link(s), the DRNS 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 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 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 the *TFCS* IE for the DL, the DRNS shall apply the new TFCS in the Downlink of the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message 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] section 5.2.1 for the inner loop DL power control in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message 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.]

[TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes UL/DL CCTrCH to be modified the DRNC shall apply the included *TFCS* IE as the new value.]

[TDD – UL/DL CCTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any UL or DL CCTrCH to be deleted, the DRNC shall remove this CCTrCH in the new configuration.]

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

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s) and 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 RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH Information Response* IE group shall be included only for one of the DCH in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH Information Response* IE group shall be included only for one of the combined Radio Links.

Compressed Mode Preparation:

[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.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transmission Gap Pattern* Sequence Information IE and 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 DRNS shall include the *DL* Code Information IE group in the RADIO LINK RECONFIGURATION RESPONSE message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not.]

General

The DRNS shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Transport Layer* Address IE and the *Binding ID* 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 set of coordinated DCHs requiring a new transport bearer on Iur, the *DCH Information Response* IE shall be included only for one of the DCH in the set of coordinated DCHs.

8.3.7.3 Unsuccessful Operation



Figure <u>6615</u>: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

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 Unsynchronised Radio Link Reconfiguration procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

If the DRNS cannot allocate the necessary resources for all the new DCHs of a set of co-ordinated DCHs requested to be added it shall regard the Unsynchronised Radio Link Reconfiguration procedure as having failed.

If the requested Unsynchronised Radio Link Reconfiguration procedure fails for one or more Radio Link(s) the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use;
- DL Radio Resources not Available;
- UL Radio Resources not Available;

- Requested Configuration not Supported;
- Invalid CM Setting;
- CM not Supported.

Protocol Causes:

- Transaction not Allowed.

Miscellaneous Causes:

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

8.3.7.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the DRNS shall regard the Unsynchronised Radio Link Reconfiguration procedure as having failed and the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message.

9.1.11 RADIO LINK RECONFIGURATION PREPARE

9.1.11.1 FDD Message

| Message Type M 92.1.40 Criticality Message Type M 92.1.40 YES reject Transaction ID M 92.1.59 - reject Allowed Queuing Time O 92.1.52 YES reject VLL DPCH Information 0.1 92.2.53 - - >UL DPCH Information 0 92.2.53 - - >WL UPCH Information 0 92.2.25 - - >Mu UL Channelisation O 92.2.24 - - >Mex Number of UL C- 92.2.24 - - >Puncture Limit O 92.2.163 TFCS for the - >DUPCH Stot Format O 92.2.36 - - >STFES O 92.1.63 TFCS for the - >DL DPCH Information 01 92.2.36 - - >STFCS O 92.1.63 TFCS for the - >DL DPCH Information 01 - - | IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|--|--|------------------|--|-----------------|---------------------|-------------|-------------|
| Message Type M 9.21.40 YES reject Transaction ID M 9.21.59 Allowed Queuing Time 0 9.2.12 YES reject JUL DPCH Information 01 YES reject JUL Strambing Code 0 9.2.253 >UL Strambing Code 0 9.2.126 >Min UL Channelisation 0 9.2.2.63 >Pencture Limit 0 9.2.2.64 >Pencture Limit 0 9.2.2.63 >UPCCH Stot Format 0 9.2.2.63 >UL DPCCH Stot Format 0 9.2.2.86 >DL DPCH Information 01 9.2.1.63 TFCS for the >DL DPCH Information 01 9.2.2.9 >DL DPCH Information 01 9.2.2.66 - >DPCH Information 01 | | | | and | Description | | Criticality |
| Message Type M 9.2.1.40 Tess TopeC Allowed Queuing Time 0 9.2.1.59 - - Allowed Queuing Time 0 9.2.1.59 - - Allowed Queuing Time 0 9.2.1.59 - - VLL DPCH Information 0.1 9.2.2.53 - - >VLL DPCH Information 0 9.2.2.53 - - >Min UL Channelisation 0 9.2.2.24 - - >Max Number of UL C- 9.2.2.25 - - >Max Number of UL C- 9.2.2.41 - - >SPECTURE Limit 0 9.2.2.52 - - >VLD PCCH Stot Format 0 9.2.2.88 - - >SSDT Cell Identity 0 9.2.2.36 - - >SETCS 0 9.2.2.36 - - >DL PCH Information 01 9.2.2.36 - - >DLPCH Stot Format 0 9.2.2.36 <td< th=""><th>Magaga Turpa</th><th>N4</th><th></th><th>Reference</th><th></th><th>VES</th><th>roioot</th></td<> | Magaga Turpa | N4 | | Reference | | VES | roioot |
| Instruction Image: Name of the second s | Transaction ID | M | | 9.2.1.40 | | 163 | Tejeci |
| The Devolution and the constraints Devolution of the constraints The constraints The constraints >JUL SR Target 0 9.2.2.53 - - - >JUL SR Target 0 9.2.1.69 - - - >Min UL Channelisation 0 9.2.2.25 - - - >Max Number of UL C - 9.2.1.64 For the UL - - >Puncture Limit 0 9.2.2.52 - - - >Puncture Limit 0 9.2.2.63 - - - >SDE Cell Identity 0 9.2.2.63 - - - >SDE Cell Identity 0 9.2.2.63 - - - >SDE Cell Identity 0 9.2.2.63 - - - >STFCS 0 9.2.1.63 TFCS for the DL - - - >DE DPCH Information 0.1 9.2.2.6 - - - - >TFCS Signalling Mode 0 9.2.2.6 <td>Allowed Queuing Time</td> <td>0</td> <td></td> <td>9212</td> <td></td> <td>YES</td> <td>reject</td> | Allowed Queuing Time | 0 | | 9212 | | YES | reject |
| JUL Scambling Code 0 9.2.2.53 - >JUL Sign Target 0 Uplink SIR - >Min UL Channelisation 0 9.2.2.53 - Code Length 9.2.2.53 - - >Max Number of UL C - 9.2.2.46 - >Puncture Limit 0 9.2.1.63 TFCS for the - >DPDCHS CodeLen 9.2.1.63 TFCS for the - >JUL Serange 0 9.2.2.8 - - >JUL PCH Slot Format 0 9.2.2.8 - - >JDrestity mode 0 9.2.2.36 - - >DL PCH Information 0 9.2.2.36 - - >DL DPCH Information 0 9.2.2.9 - - >Number of DL 0 9.2.2.6 - - >TFCI Presence C - - - >TFCS 0 9.2.1.63 - - >MutiplexingPosition 0 9.2.1.67 | III DPCH Information | U | 0.1 | 3.2.1.2 | | VES | reject |
| Display Display <t< td=""><td></td><td>0</td><td>01</td><td>92 2 53</td><td></td><td>-</td><td>Tejeot</td></t<> | | 0 | 01 | 92 2 53 | | - | Tejeot |
| >Min UL Channelisation O 9.2.1.63 >Max Number of UL C - 9.2.2.25 - >DPCCHS CodeLen 9.2.2.24 - >Puncture Limit O 9.2.1.46 For the UL. - >PDCHS CodeLen 9.2.1.63 TFCS for the - >UL DPCH Stot Format O 9.2.2.8 - - >Diversity mode O 9.2.2.8 - - >SSDT Cell Identity O 9.2.2.86 - - >DL DPCH Information O 9.2.2.86 - - >DL DPCH Information O 9.2.2.86 - - >Number of DL O 9.2.2.86 - - >Number of DL O 9.2.2.9 - - >Number of DL O 9.2.2.66 - - >TFCI Signalling Mode O 9.2.2.66 - - >Limited Power Increase O 9.2.1.67 - - >UL PPC Mode | SUL SIR Target | 0 | | Unlink SIR | | | |
| →Min UL Channelisation Code Length O 9.2.2.25 >Max Number of UL DPDCHs C- 9.2.2.24 >Puncture Limit O 9.2.1.63 TFCS for the UL >TFCS O 9.2.1.63 TFCS for the UL >DPVersity mode O 9.2.2.8 >SSBOT Cell Identity O 9.2.2.8 >SSTFIGE Length O 9.2.2.66 >SSTFCS O 9.2.1.63 TFCS for the DL >TFCS O 9.2.2.8 >DL DPCH Information 0.1 9.2.1.63 TFCS for the DL >DL DPCH Slot Format O 9.2.2.8 >Number of DL channelisation codes O 9.2.2.6 >TFCI Signalling Mode O 9.2.2.6 - >MuttiplexingPosition O 9.2.1.65 - >Length O | | Ũ | | 9.2.1.69 | | | |
| >Max Number of UL C - 9.2.2.24 - >Puncture Limit O 9.2.1.46 For the UL - >FTCS O 9.2.1.63 TFCS for the - >UL.DPCCH Slot Format O 9.2.2.52 - - >Diversity mode O 9.2.2.8 - - >SSTField Length O 9.2.2.8 - - >SFField Length O 9.2.2.8 - - >SFreid Length O 9.2.2.8 - - >SFreid Length O 9.2.2.8 - - >TCS S O 9.2.1.63 TFCS for the - >DL DPCH Information 01 YES reject >TFCS S O 9.2.2.6 - - >Lincited Power for DL O 9.2.2.66 - - >TFC Signaling Mode O 9.2.2.66 - - >MultiplexingPosition O 9.2.1.67 - - >Li | >Min UL Channelisation Code Length | 0 | | 9.2.2.25 | | - | |
| DPOLHS CodeLen - >Puncture Limit 0 9.2.1.63 TFCS for the UL. - >TFCS 0 9.2.1.63 TFCS for the UL. - >UL DPCCH Slot Format 0 9.2.2.8 - - >SSDT Cell Identity 0 9.2.2.8 - - SSTField Length 0 9.2.2.36 - - DL DPCH Information 0.1 9.2.2.36 - - >TFCS 0 9.2.1.63 TFCS for the DL - >DL DPCH Information 0.1 9.2.2.46 - - >Number of DL 0 9.2.2.46 - - >TFCI Signalling Mode 0 9.2.2.26 - - >TFCI Presence C- 9.2.1.55 - - >Limited Power Increase 0 9.2.1.67 - - >Limited Power Increase 0 9.2.1.67 - - >ToAWE 0 9.2.1.61 1 - | >Max Number of UL | C – | | 9.2.2.24 | | _ | |
| >Puncture Limit O 9.2.1.46 Por the UL. >TFCS 0 9.2.1.63 TFCS for the UL. >Diversity mode 0 9.2.2.8 >SbSDT Cell Identity 0 9.2.2.8 >Length 9.2.2.8 >DL DPCH Information 0.1 9.2.2.36 >TFCS 0 9.2.1.63 TFCS for the >DL DPCH Information 01 YES reject >TFCS 0 9.2.2.9 - >Number of DL 0 9.2.2.6 - >TFCI Signalling Mode 0 9.2.2.6 - >WultiplexingPosition 0 9.2.1.67 - >Limited Power Increase 0 9.2.1.67 - >UL FP Mode 0 9.2.1.67 - - >UL FP Mode 0 9.2.1.67 | | CodeLen | | 0.0.4.40 | | | |
| > IFCS 0 9.2.1.63 IFCS for the UL - > JUL DPCCH Slot Format 0 9.2.2.82 - - > SSDT Cell Identity 0 9.2.2.8 - - > SSDT Cell Identity 0 9.2.2.8 - - > SField Length 0 9.2.2.36 - - > TFCS 0 9.2.1.63 TFCS for the DL - - > TFCS 0 9.2.1.63 TFCS for the DL - - > DL DPCH Slot Format 0 9.2.2.9 - - - > Number of DL channelisation codes 0 9.2.2.6 - - > TFCI Signalling Mode 0 9.2.1.55 - - > MultiplexingPosition 0 9.2.1.67 - - > DCH So Modify 0.< <maxnoof< td=""> GLOBAL reject > JUL FP Mode 0 9.2.1.67 - - > Tansport Bearer Request Indicator M 9.2.1.67 - -</maxnoof<> | >Puncture Limit | 0 | | 9.2.1.46 | For the UL. | _ | |
| SUL DPCCH Slot Format O 9.2.2.52 - >Sbyersity mode O 9.2.2.8 - SSDT Cell Identity O 9.2.2.41 - SSField Length O 9.2.2.36 - DL DPCH Information 0.1 9.2.2.36 - STFCS O 9.2.1.63 TFCS for the - >DL DPCH Slot Format O 9.2.2.9 - - >Number of DL O 9.2.2.6 - - >Number of DL O 9.2.2.46 - - >TFCI Presence C- 9.2.1.55 - - StotFormat 9.2.2.26 - - - >MultiplexingPosition O 9.2.1.67 - - >Limited Power Increase O 9.2.1.67 - - >UL FP Mode O 9.2.1.57 - - >TasAWS O 9.2.1.64 For the UL - >>Tansport Format Set O 9.2.1.64 | >1FCS | 0 | | 9.2.1.63 | UL. | _ | |
| >Diversity mode O 9.2.2.8 >SSDT Cell Identity O 9.2.2.41 Length O 9.2.2.36 >SFField Length O 9.2.2.36 DL DPCH Information 0.1 YES reject >TFCS O 9.2.1.63 TFCS for the DL. >DL DPCH Information O 9.2.2.9 -channelisation codes - >TFCI Signalling Mode O 9.2.2.46 >TFCI Presence C- 9.2.1.55 >Limited Power Increase O 9.2.2.26 >Limited Power Increase O 9.2.1.57 >UFP Mode O 9.2.1.67 >Transport Bearer M 9.2.1.61 >Transport Bearer M 9.2.1.64 For the UL. >>DCH Specific Info | >UL DPCCH Slot Format | 0 | | 9.2.2.52 | | - | |
| SSDT Cell Identity Length 0 9.2.2.41 SS-Field Length 0 9.2.2.36 DL DPCH Information 01 YES reject >TFCS 0 9.2.1.63 TFCS for the DL. >DL DPCH Slot Format 0 9.2.2.9 >Number of DL channelisation codes 0 9.2.2.46 >TFCI Presence C- 9.2.1.55 - >TFCI Presence C- 9.2.1.33 >Limited Power Increase 0 9.2.1.67 - >UL FP Mode 0 9.2.1.67 - >JUL FP Mode 0 9.2.1.67 - >Trasport Baarer M 9.2.1.61 : >Trasport Baarer M 9.2.1.61 : - >DCH Sto Modify 0 9.2.1.61 : - >DCH Sto Modify 0 9.2.1.67 - - >DCH Sto Modify 0 9.2.1.61 : - >DCH Sto Modify <td>>Diversity mode</td> <td>0</td> <td></td> <td>9.2.2.8</td> <td></td> <td>_</td> <td></td> | >Diversity mode | 0 | | 9.2.2.8 | | _ | |
| Length O 9.2.2.36 >SF-Field Length 0 9.2.2.36 DL DPCH Information 0.1 TFCS for the DL >DL DPCH Slot Format 0 9.2.2.63 TFCS for the DL >DL DPCH Slot Format 0 9.2.2.9 >Number of DL 0 9.2.2.46 >TFCI Signalling Mode 0 9.2.2.46 >TFCI Presence C- 9.2.1.55 >MultiplexingPosition 0 9.2.2.26 >Limited Power Increase 0 9.2.1.67 >DCHs to Modify 0. <maxnoof< td=""> GLOBAL reject >UL FP Mode 0 9.2.1.67 - - >ToAWE 0 9.2.1.67 - - >Tarsport Bearer M 9.2.1.61 - - >DCH Specific Info 1emaxnoof - - >>DCH Speciffic Info<td>>SSDT Cell Identity</td><td>0</td><td></td><td>9.2.2.41</td><td></td><td>-</td><td></td></maxnoof<> | >SSDT Cell Identity | 0 | | 9.2.2.41 | | - | |
| >S-Field Length O 9.2.2.36 DL DPCH Information 0.1 YES reject >TFCS 0 9.2.1.63 TFCS for the DL. >DL DPCH Slot Format 0 9.2.2.9 >Number of DL channelisation codes 0 9.2.2.46 >TFCI Signalling Mode 0 9.2.2.26 >TFCI Presence C- 9.2.1.55 >MultiplexingPosition 0 9.2.2.26 >Limited Power Increase 0 9.2.1.33 DCHs to Modify 0 <maxnoof DCHss GLOBAL reject >UL FP Mode 0 9.2.1.67 - - >ToAWE 0 9.2.1.67 - - >Transport Bearer Request Indicator M 9.2.1.61 : - >DCH Specific Info 1<maxnoof DCHs> - - - >DCH Specific Info 1<maxnoof DCHs> - - - >DCH Specific Info 9.2.1.61</maxnoof </maxnoof </maxnoof | Length | | | | | | |
| DL DPCH Information 0.1 YES reject >TFCS 0 9.2.1.63 TFCS for the DL - >DL DPCH Slot Format 0 9.2.2.9 - >Number of DL channelisation codes 0 9.2.2.9 - >TFCI Signalling Mode 0 9.2.2.46 - >TFCI Presence C- SlotFormat 9.2.1.55 - >MultiplexingPosition 0 9.2.2.26 - >Limited Power Increase 0 9.2.1.33 - DCHs to Modify 0 <maxnool DCHs> GLOBAL reject >UL FP Mode 0 9.2.1.67 - - >Trasport Bearer M 9.2.1.61 - - >Trasport Bearer M 9.2.1.61 - - >DCH Specific Info 1<maxnool DCHs> - - - >>DCH Specific Info 1<maxnool DCHs> - - - >>DCH Specific Info 0 9.2.1.64 For the DL - >>Transport Format Set</maxnool </maxnool </maxnool | >S-Field Length | 0 | | 9.2.2.36 | | _ | |
| >TFCS O 9.2.1.63 TFCS for the DL - >DL DPCH Slot Format O 9.2.2.9 - >Number of DL channelisation codes O 9.2.2.46 - >TFCI Signalling Mode O 9.2.1.55 - >TFCI Presence C- 9.2.1.55 - >MultiplexingPosition O 9.2.2.26 - >Limited Power Increase O 9.2.1.33 - DCHs to Modify 0 <max.noof DCHs GLOBAL reject >UL FP Mode O 9.2.1.67 - >Transport Bearer Request Indicator M 9.2.1.61 - >DCH Specific Info 1<max.noof DCHs> - - >DCH Specific Info 1<max.noof DCHs> - - >DCH Specific Info 1<max.noof DCHs> - - >>DCH Specific Info 1<max.noof DCHs> - - >>Transport Format Set O 9.2.1.64 For the UL - >>Transport Format Set O 9.2.1.64 For the DL</max.noof </max.noof </max.noof </max.noof </max.noof | DL DPCH Information | | 01 | | | YES | reject |
| >DL DPCH Slot Format O 9.2.2.9 >Number of DL channelisation codes O 9.2.2.46 - >TFCI Signalling Mode O 9.2.1.55 - >TFCI Presence C- 9.2.1.55 - >MultiplexingPosition O 9.2.2.26 - >Limited Power Increase O 9.2.1.33 - DCHs to Modify 0 9.2.1.67 - >UL FP Mode O 9.2.1.58 - >Transport Bearer Request Indicator M 9.2.1.61 - >DCH Specific Info 1 - - >>DCH Specific Info 1 - - >>Transport Format Set O 9.2.1.64 For the UL >>Transport Format Set O 9.2.1.64 For the DL >>Request Indicator | >TFCS | 0 | | 9.2.1.63 | TFCS for the DL. | - | |
| >Number of DL channelisation codes 0 - - >TFCI Signalling Mode 0 9.2.2.46 - >TFCI Presence C- SlotFormat 9.2.1.55 - >MultiplexingPosition 0 9.2.2.26 - >Limited Power Increase 0 9.2.1.33 - DCHs to Modify 0 <maxnoot DCHs> GLOBAL reject >UL FP Mode 0 9.2.1.67 - >ToAWS 0 9.2.1.58 - >ToAWS 0 9.2.1.61 - >ToAWE 0 9.2.1.61 - >Transport Bearer Request Indicator M 9.2.1.61 - >DCH specific Info 1<maxnoof DCHs> - - >>DCH priority 0 9.2.1.64 For the UL - >>Transport Format Set 0 9.2.1.64 For the DL - >>Transport Format Set 0 9.2.1.29 - - >>Transport Format Set 0 9.2.1.29 - -</maxnoof </maxnoot | >DL DPCH Slot Format | 0 | | 9.2.2.9 | | _ | |
| channelisation codes 0 9.2.2.46 - >TFCI Signalling Mode 0 9.2.1.55 - >MultiplexingPosition 0 9.2.2.26 - >Limited Power Increase 0 9.2.1.33 - DCHs to Modify 0 <maxnoof< td=""> DCHs> GLOBAL reject >UL FP Mode 0 9.2.1.67 - - >ToAWS 0 9.2.1.57 - - >ToAWE 0 9.2.1.61 : - >ToAWE 0 9.2.1.61 : - >ToAWE 0 9.2.1.61 : - >DCH Specific Info 1<maxnoof< td=""> - - >DCH Specific Info 1<maxnoof< td=""> - - >>DCH Specific Info 9.2.1.64 For the UL. - >>Transport Format Set 0 9.2.1.64 For the DL. - >>Transport Format Set 0 9.2.1.64 For the DL. - >>DCH Specific Info 0 9.2.1.29 - - >>Transport Format Set 0 9.2.1.29</maxnoof<></maxnoof<></maxnoof<> | >Number of DL | 0 | | | | _ | |
| > IFCI Signaling Mode 0 9.2.2.46 - >TFCI Presence SlotFormat 9.2.1.55 - >MultiplexingPosition 0 9.2.2.26 - >Limited Power Increase 0 9.2.1.33 - DCHs to Modify 0 <maxnoof DCHs> - - >UL FP Mode 0 9.2.1.67 - >ToAWS 0 9.2.1.58 - >ToAWE 0 9.2.1.67 - >ToAWE 0 9.2.1.61 : >Transport Bearer Request Indicator M 9.2.1.61 : >DCH Specific Info 1<maxnoof DCHs> - - >>DCH Specific Info 1<maxnoof DCHs> - - >>DCH Specific Info 1<maxnoof DCHs> - - >>DCH Specific Info 0 9.2.1.64 For the UL. - >>DCH Specific Info 0 9.2.1.64 For the DL. - >>DCH Specific Info 0 9.2.1.29 - - >>DCH Specific</maxnoof </maxnoof </maxnoof </maxnoof | Channelisation codes | 0 | | 0.0.0.40 | | | |
| > IFCL Presence L- 9.2.1.55 >MultiplexingPosition 0 9.2.2.26 >Limited Power Increase 0 9.2.1.33 - DCHs to Modify 0 <maxnoof DCHs> GLOBAL reject >UL FP Mode 0 9.2.1.67 - >ToAWS 0 9.2.1.57 - >ToAWE 0 9.2.1.61 - >Transport Bearer Request Indicator M 9.2.1.61 - >DCH Specific Info 1<maxnoof DCHs> - - >DCH Specific Info 1<maxnoof DCHs> - - >DCH Specific Info 0 9.2.1.64 For the UL - >>DCH ID M 9.2.1.64 For the UL - >>Transport Format Set 0 9.2.1.64 For the DL - >>Allocation/Retention Priority 0 9.2.1.29 - - >>DRAC Control 0 9.2.1.42 - - Priority 9.2.1.42 - -</maxnoof </maxnoof </maxnoof | >TFCI Signalling Mode | 0 | | 9.2.2.46 | | _ | |
| >MultiplexingPosition O 9.2.2.26 - >Limited Power Increase O 9.2.1.33 - DCHs to Modify 0. <maxnoof DCHs> GLOBAL reject >UL FP Mode O 9.2.1.67 - >ToAWS O 9.2.1.57 - >ToAWE O 9.2.1.57 - >ToAWE O 9.2.1.61 : >DCH Specific Info 1<maxnoof DCHs> - >DCH Specific Info 1<maxnoof DCHs> - >>DCH Specific Info 1<maxnoof DCHs> - >>DCH Specific Info 9.2.1.64 For the UL. >>Transport Format Set O 9.2.1.64 For the DL. >>Transport Format Set O 9.2.1.64 For the DL. >>Transport Format Set O 9.2.1.64 For the DL. >>Frame Handling Priority 0 9.2.1.29 - >>DRAC Control O 9.2.1.29 - Priority SDRAC Control O 9.2.1.42 -</maxnoof </maxnoof </maxnoof </maxnoof | >TFCI Presence | C- SlotFormat | | 9.2.1.55 | | _ | |
| >Limited Power Increase O 9.2.1.33 - DCHs to Modify 0 <maxnoof DCHs> GLOBAL reject >UL FP Mode 0 9.2.1.67 - >ToAWS 0 9.2.1.58 - >ToAWE 0 9.2.1.57 - >Transport Bearer Request Indicator M 9.2.1.61 : >DCH Specific Info 1<maxnoof DCHs> - - >>DCH Specific Info 1<maxnoof DCHs> - - >>DCH Specific Info 1<maxnoof DCHs> - - >>DCH ID M 9.2.1.64 For the UL. - >>Transport Format Set 0 9.2.1.64 For the DL. - >>Allocation/Retention Priority 0 9.2.1.29 - - >>DRAC Control 0 9.2.1.29 - - >>DRAC Control 0 9.2.1.42 - - >Payload CRC Presence Indicator M 9.2.1.67 - - >DQHsecontrol M 9.2.1.6</maxnoof </maxnoof </maxnoof </maxnoof | >MultiplexingPosition | 0 | | 9.2.2.26 | | _ | |
| DCHs to Modify 0 <maxnoof DCHs> GLOBAL reject >UL FP Mode 0 9.2.1.67 - >ToAWS 0 9.2.1.58 - >ToAWE 0 9.2.1.57 - >Transport Bearer Request Indicator M 9.2.1.61 : - >DCH Specific Info 1<maxnoof DCHs> - - - >DCH Specific Info 1<maxnoof DCHs> - - - >DCH Specific Info 1<maxnoof DCHs> - - - >>DCH Specific Info 1<maxnoof DCHs> - - - >>DCH ID M 9.2.1.64 For the UL. - - >>Transport Format Set 0 9.2.1.64 For the DL. - >>Allocation/Retention Priority 0 9.2.1.1 - - >>DRAC Control 0 9.2.1.29 - - - >>DRAC Control 0 9.2.1.42 - - - >Payload CRC Presence Indicator M<td>>Limited Power Increase</td><td>0</td><td></td><td>9.2.1.33</td><td></td><td>_</td><td></td></maxnoof </maxnoof </maxnoof </maxnoof </maxnoof | >Limited Power Increase | 0 | | 9.2.1.33 | | _ | |
| >UL FP Mode O 9.2.1.67 >ToAWS O 9.2.1.58 >ToAWE O 9.2.1.57 >Transport Bearer Request Indicator M 9.2.1.61 >DCH Specific Info 1 <maxnoof DCHs> >DCH Specific Info 1<maxnoof DCHs> >>DCH ID M 9.2.1.64 For the UL. >>Transport Format Set O 9.2.1.64 For the UL. >>Transport Format Set O 9.2.1.64 For the DL. >>Transport Format Set O 9.2.1.64 For the DL. >>Transport Format Set O 9.2.1.29 >>Frame Handling O 9.2.1.29 >>DRAC Control O 9.2.2.13 DCHs to Add 0<maxnoof DCHs> GLOBAL reject >Payload CRC Presence Indicator M 9.2.1.67 - >UL FP Mode</maxnoof </maxnoof </maxnoof | DCHs to Modify | | 0 <maxnoof DCHs></maxnoof | | | GLOBAL | reject |
| >ToAWS O 9.2.1.58 >ToAWE O 9.2.1.57 - >Transport Bearer Request Indicator M 9.2.1.61 - >DCH Specific Info 1 <maxnoof DCHs> - - >DCH Specific Info 1<maxnoof DCHs> - - >>DCH ID M 9.2.1.64 For the UL. - >>Transport Format Set O 9.2.1.64 For the DL. - >>Transport Format Set O 9.2.1.64 For the DL. - >>Allocation/Retention Priority O 9.2.1.29 - - >>Frame Handling Priority O 9.2.1.29 - - >>DRAC Control O 9.2.1.29 - - >>DRAC Control O 9.2.1.42 - - >DCHs to Add 0<maxnoof DCHs> GLOBAL reject >Payload CRC Presence Indicator M 9.2.1.67 - - >UL FP Mode M 9.2.1.58 - -</maxnoof </maxnoof </maxnoof | >UL FP Mode | 0 | | 9.2.1.67 | | _ | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | >ToAWS | 0 | | 9.2.1.58 | | _ | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | >ToAWE | 0 | | 9.2.1.57 | | _ | |
| Indequest mutation1 <maxnoof </maxnoof DCHs>->>DCH Specific Info1 <maxnoof </maxnoof DCHs>->>DCH IDM9.2.1.16->>Transport Format Set09.2.1.64For the UL.>>Allocation/Retention Priority09.2.1.64For the DL.>>Frame Handling Priority09.2.1.29->>DRAC Control09.2.2.13-DCHs to Add0 <maxnoof </maxnoof DCHs>GLOBALreject>Payload CRC Presence IndicatorM9.2.1.67->UL FP ModeM9.2.1.58->ToAWEM9.2.1.57- | >Transport Bearer Request Indicator | M | | <u>9.2.1.61</u> | | Ξ | |
| DefinitionInstruction DCHs>Instruction DCHs>>>DCH IDM9.2.1.16->>Transport Format SetO9.2.1.64For the UL>>Allocation/Retention PriorityO9.2.1.64For the DL>>Frame Handling PriorityO9.2.1.29>>DRAC ControlO9.2.2.13DCHs to Add $ODCHs>GLOBALreject>Payload CRC PresenceIndicatorM9.2.1.67->UL FP ModeM9.2.1.58->ToAWEM9.2.1.57->DCH Specific Info1-$ | >DCH Specific Info | | 1 <maxnoof< td=""><td></td><td></td><td></td><td></td></maxnoof<> | | | | |
| >>DCH ID M 9.2.1.16 - >>Transport Format Set O 9.2.1.64 For the UL. - >>Transport Format Set O 9.2.1.64 For the DL. - >>Allocation/Retention O 9.2.1.64 For the DL. - >>Allocation/Retention O 9.2.1.1 - - >>Frame Handling O 9.2.1.29 - - >>DRAC Control O 9.2.2.13 - - >>DRAC Control O 9.2.2.13 - - >Priority - 0 <maxnoof DCHs GLOBAL reject >Payload CRC Presence M 9.2.1.42 - - >UL FP Mode M 9.2.1.67 - - >ToAWS M 9.2.1.58 - - >DCH Specific Info 1<maxnoof< td=""> - - -</maxnoof<></maxnoof | | | DCHs> | | | | |
| >>Transport Format SetO9.2.1.64For the UL>>Transport Format SetO9.2.1.64For the DL>>Allocation/Retention PriorityO9.2.1.1->>Frame Handling PriorityO9.2.1.29->>DRAC ControlO9.2.2.13-DCHs to AddO <maxnoof </maxnoof DCHs>GLOBALreject>Payload CRC Presence IndicatorM9.2.1.67->UL FP ModeM9.2.1.58->ToAWEM9.2.1.57->DCH Specific Info1 <maxnoof< td="">-</maxnoof<> | >>DCH ID | М | | 9.2.1.16 | | _ | |
| >>Transport Format SetO9.2.1.64For the DL>>Allocation/Retention PriorityO9.2.1.1->>Frame Handling PriorityO9.2.1.29->>DRAC ControlO9.2.2.13-DCHs to AddO <maxnoof </maxnoof DCHs>GLOBALreject>Payload CRC Presence IndicatorM9.2.1.67->UL FP ModeM9.2.1.58->ToAWEM9.2.1.57->DCH Specific Info1 <maxnoof< td="">-</maxnoof<> | >>Transport Format Set | 0 | | 9.2.1.64 | For the UL. | _ | |
| >>Allocation/Retention PriorityO9.2.1.1->>Frame Handling PriorityO9.2.1.29->>DRAC ControlO9.2.2.13-DCHs to AddO <maxnoof </maxnoof DCHs>GLOBALreject>Payload CRC Presence IndicatorM9.2.1.67->UL FP ModeM9.2.1.58->ToAWSM9.2.1.57->DCH Specific Info1 <maxnoof< td="">-</maxnoof<> | >>Transport Format Set | 0 | | 9.2.1.64 | For the DL. | - | |
| >>Frame Handling Priority 0 9.2.1.29 - >>DRAC Control 0 9.2.2.13 - DCHs to Add 0 <maxnoof DCHs> GLOBAL reject >Payload CRC Presence Indicator M 9.2.1.42 - >UL FP Mode M 9.2.1.67 - >ToAWS M 9.2.1.58 - >ToAWE M 9.2.1.57 -</maxnoof | >>Allocation/Retention | 0 | | 9.2.1.1 | | - | |
| PriorityO9.2.2.13>>DRAC ControlO9.2.2.13DCHs to Add0 <maxnoof </maxnoof DCHs>GLOBALreject>Payload CRC Presence IndicatorM9.2.1.42>UL FP ModeM9.2.1.67>ToAWSM9.2.1.58>ToAWEM9.2.1.57>DCH Specific Info1 <maxnoof< td=""></maxnoof<> | >>Frame Handling | 0 | | 9.2.1.29 | | - | |
| >>DRAC Control O 9.2.2.13 DCHs to Add 0 <maxnoof DCHs> GLOBAL reject >Payload CRC Presence Indicator M 9.2.1.42 >UL FP Mode M 9.2.1.67 >ToAWS M 9.2.1.58 >ToAWE M 9.2.1.57 >DCH Specific Info 1<maxnoof< th=""> </maxnoof<></maxnoof | Priority | | | | | | |
| DCHs to Add0 <maxnoof </maxnoof DCHs>GLOBALreject>Payload CRC PresenceM9.2.1.42-Indicator9.2.1.67->UL FP ModeM9.2.1.58->ToAWSM9.2.1.57->DCH Specific Info1 <maxnoof< td="">-</maxnoof<> | >>DRAC Control | 0 | | 9.2.2.13 | | - | |
| >Payload CRC Presence Indicator M 9.2.1.42 - >UL FP Mode M 9.2.1.67 - >ToAWS M 9.2.1.58 - >ToAWE M 9.2.1.57 - >DCH Specific Info 1 <maxnoof< td=""> - -</maxnoof<> | DCHs to Add | | 0 <maxnoof DCHs></maxnoof | | | GLOBAL | reject |
| >UL FP Mode M 9.2.1.67 - >ToAWS M 9.2.1.58 - >ToAWE M 9.2.1.57 - >DCH Specific Info 1 <maxnoof< td=""> - -</maxnoof<> | Payload CRC Presence Indicator | М | | 9.2.1.42 | | _ | |
| >ToAWS M 9.2.1.58 - >ToAWE M 9.2.1.57 - >DCH Specific Info 1 <maxnoof< td=""> -</maxnoof<> | >UL FP Mode | М | | 9.2.1.67 | | _ | |
| >ToAWE M 9.2.1.57 - >DCH Specific Info 1 <maxnoof< td=""> -</maxnoof<> | >ToAWS | M | | 9.2.1.58 | | _ | |
| >DCH Specific Info 1 <maxnoof td="" –<=""><td>>ToAWE</td><td>М</td><td></td><td>9.2.1.57</td><td></td><td>_</td><td> </td></maxnoof> | >ToAWE | М | | 9.2.1.57 | | _ | |
| | >DCH Specific Info | | 1 <maxnoof< td=""><td></td><td></td><td>_</td><td></td></maxnoof<> | | | _ | |

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|---|------------------|---|-----------------|-----------------|-------------|-------------|
| | | | Reference | Description | | Criticality |
| | | DCHs> | | | | |
| >>DCH ID | М | | 9.2.1.16 | | - | |
| >>TrCh Source Statistics | Μ | | 9.2.1.65 | | - | |
| Descriptor | | | 0.0.4.04 | – 4 – 14 | | |
| >> I ransport Format Set | M | | 9.2.1.64 | For the UL. | _ | |
| | | | 9.2.1.04 | For the DL. | _ | |
| | M | | 9.2.1.3 | For the DI | _ | |
| >>Allocation/Retention | M | | 9.2.1.1 | T OF THO DE. | _ | |
| Priority | | | | | | |
| >>Frame Handling | Μ | | 9.2.1.29 | | - | |
| Priority | М | | 921/64 | | _ | |
| >>DRAC Control | M | | 92213 | | _ | |
| DCHs to Delete | | 0 <maxnoof< td=""><td>0.2.2.10</td><td></td><td>GLOBAL</td><td>reiect</td></maxnoof<> | 0.2.2.10 | | GLOBAL | reiect |
| | | DCHs> | | | 0101/11 | |
| >DCH ID | М | | 9.2.1.16 | | _ | |
| DSCH to modify | | 01 | | | YES | reject |
| >DSCH Info | | 0 <maxnoof< td=""><td></td><td></td><td>-</td><td></td></maxnoof<> | | | - | |
| >>DSCH ID | M | 0301152 | | | _ | |
| >>TrCh Source | 0 | | | | | |
| Statistics Descriptor | - | | | | | |
| >>Transport | 0 | | | For DSCH | _ | |
| Format Set | | | | | | |
| >>Allocation/ Retention Priority | 0 | | | | _ | |
| >>Scheduling Priority Indicator | 0 | | | | - | |
| >>BLER | 0 | | | | _ | |
| >>Transport Bearer Request Indicator | M | | <u>9.2.1.61</u> | | Ξ | |
| >PDSCH RL ID | 0 | | RL ID | | - | |
| >Transport Format | 0 | | | For DSCH | - | |
| Combination Set | | 0.4 | | | VE0 | |
| DSCH to add | | 01 | | | YES | reject |
| | | DSCHs> | | | _ | |
| >>DSCH ID | Μ | | | | - | |
| >>TrCh Source | М | | | | - | |
| Statistics | | | | | | |
| Descriptor | | | | | | |
| Sormat Set | IVI | | | FOLDSCH | _ | |
| >>Allocation/ | М | | | | _ | |
| Retention Priority | | | | | | |
| >>Scheduling | М | | | | _ | |
| Priority Indicator | N4 | | | | | |
| >>BLEK | IVI M | | | | | |
| >FDOUTI KL ID | M | | | | | |
| Combination Set | | | | | _ | |
| DSCHs to delete | 1 | 01 | | | YES | reject |
| >DSCH Info | | 1 <maxnoof DSCHs></maxnoof | | | - | |
| >>DSCH ID | М | 200.10 | | | _ | |
| RL Information | 1 | 0 <maxnoof< td=""><td></td><td></td><td>EACH</td><td>reject</td></maxnoof<> | | | EACH | reject |
| | <u> </u> | RLs> | | | | - |
| >RL ID | M | | 9.2.1.49 | | _ | |
| >SSDT Indication | 0 | | 9.2.2.41 | | | ļ |
| >SSD1 Cell Identity | C - SSDTIndON | | 9.2.2.40 | | _ | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|--------------------------|-------|-----------------------------|--------------------------|-------------|-------------------------|
| >Transmit Diversity Indicator | C – Diversity mode | | 9.2.2.50 | | - | |
| Transmission Gap Pattern Sequence Information | 0 | | | | YES | reject |

| Condition | Explanation |
|----------------|--|
| SSDTIndON | The IE may be present if the SSDT Indication is set to |
| | 'SSDT Active in the UE'. |
| CodeLen | This IE is present only if "Min UL Channelisation Code |
| | length" equals to 4. |
| SlotFormat | This IE is only present if the DL DPCH Slot Format is |
| | equal to any of the values 12 to 16. |
| Diversity mode | This IE is present if <i>Diversity Mode</i> IE is present in <i>UL</i> |
| | DPCH Information group, unless it is equal to "none". |

| Range bound | Explanation | | | |
|--------------|-------------------------------------|--|--|--|
| MaxnoofDCHs | Maximum number of DCHs for a UE. | | | |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. | | | |
| MaxnoofRLs | Maximum number of RLs for a UE. | | | |

9.1.11.2 TDD Message

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|----------------------|----------|--|------------|----------------|-------------|-------------|
| | | | and | Description | | Criticality |
| | | | Reference | | | |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | _ | |
| Allowed Queuing Time | 0 | | 9.2.1.2 | | YES | reject |
| UL CCTrCH to add | | 0 <maxno< td=""><td></td><td>For DCH and</td><td>EACH</td><td>notify</td></maxno<> | | For DCH and | EACH | notify |
| | | ofCCTrCH | | USCH | | |
| | | S> | | | | |
| >CCTrCHID | M | | 9.2.3.2 | | _ | |
| >IFCS | M | | 9.2.1.63 | For the UL. | _ | |
| >TFCI Coding | M | - | 9.2.3.11 | | — | |
| >Puncture Limit | М | - | 9.2.1.40 | | - | |
| OL COTICH to modify | | 0 <maxno ofCCTrCH</maxno | | | EACH | notify |
| >CCTrCH ID | М | | | | _ | |
| >TECS | 0 | | | For the UL. | _ | |
| >TFCI Coding | 0 | | | | _ | |
| >Puncture Limit | 0 | | | | _ | |
| UL CCTrCH to delete | | 0 <maxno< td=""><td></td><td></td><td>EACH</td><td>notify</td></maxno<> | | | EACH | notify |
| | | ofCCTrCH s> | | | | ý |
| >CCTrCH ID | М | | | | _ | |
| DL CCTrCH to add | | 0 <maxno< td=""><td></td><td>For DCH and</td><td>EACH</td><td>notify</td></maxno<> | | For DCH and | EACH | notify |
| | | ofCCTrCH | | DSCH | | |
| | | S> | | | | |
| >CCTrCH ID | М | | 9.2.3.2 | | _ | |
| >TFCS | М | | 9.2.1.63 | For the DL. | _ | |
| >TFCI Coding | М | | 9.2.3.11 | | — | |
| >Puncture Limit | М | | 9.2.1.46 | | _ | |
| >TPC CCTrCH List | | 1 to | | List of uplink | _ | |
| | | <maxnoc< td=""><td></td><td>CCTrCH</td><td></td><td></td></maxnoc<> | | CCTrCH | | |
| | | CIrCH> | | which | | |
| | | | 007-011 | provide TPC | | |
| >>TPC CCTrCH ID | | | ID 9232 | | _ | |
| DL CCTrCH to modify | | 0 <maxno< td=""><td>0.2.0.2</td><td></td><td>FACH</td><td>notify</td></maxno<> | 0.2.0.2 | | FACH | notify |
| | | ofCCTrCH s> | | | EXON | Houry |
| >CCTrCH ID | М | | | | _ | |
| >TFCS | 0 | | | For the DL. | _ | |
| >TFCI Coding | 0 | | | | _ | |
| >Puncture Limit | 0 | | | | _ | |
| >TPC CCTrCH List | | 0 to | | List of uplink | _ | |
| | | <maxnoc< td=""><td></td><td>CCTrCH</td><td></td><td></td></maxnoc<> | | CCTrCH | | |
| | | CTrCH> | | which | | |
| | | | | provide TPC | | |
| >>TPC CCTrCH ID | М | | CCTrCH | | - | |
| | | | ID | | | |
| | | - | 9.2.3.3 | | 54011 | |
| DL CCITCH to delete | | 0 <maxno< td=""><td></td><td></td><td>EACH</td><td>notify</td></maxno<> | | | EACH | notify |
| | | | | | | |
| | М | ~~ | | | | |
| DCHs to Modify | 171 | 1 cmayno | | | | reject |
| | | ofDCHs> | | | OLODAL | 10,001 |
| >UL FP Mode | 0 | | 9.2.1.67 | | _ | |
| >ToAWS | 0 | | 9.2.1.58 | | _ | |
| >ToAWE | 0 | 1 | 9.2.1.57 | | — | |
| >Transport Bearer | M | 1 | 9.2.1.61 | | Ę | |
| Request Indicator | | | | | | |
| >DCH Specific Info | | 1 <maxno< td=""><td></td><td></td><td>-</td><td></td></maxno<> | | | - | |

| IF/Group Name | Presence | Range | IF Type | Semantics | Criticality | Assigned |
|--|---------------|------------------------------------|-----------|---|-------------|-------------|
| | 110001100 | intenigo | and | Description | entiounty | Criticality |
| | | | Reference | • | | • |
| | | ofDCHs> | | | | |
| >>DCH ID | Μ | | 9.2.1.16 | | _ | |
| >>CCTrCH ID | 0 | | 9.2.3.2 | UL CCTrCH in which the DCH is mapped. | - | |
| >>CCTrCH ID | 0 | | 9.2.3.2 | DL CCTrCH in which the DCH is mapped | - | |
| >>Transport Format Set | 0 | | 9.2.1.64 | For the UL. | - | |
| >>Transport Format Set | 0 | | 9.2.1.64 | For the DL. | _ | |
| >>Allocation/Retention Priority | 0 | | 9.2.1.1 | | - | |
| >>Frame Handling Priority | 0 | | 9.2.1.29 | | - | |
| DCHs to Add | | 0 <maxno ofDCHs></maxno | | | GLOBAL | reject |
| >Payload CRC Presence Indicator | М | | 9.2.1.42 | | - | |
| >UL FP Mode | Μ | | 9.2.1.67 | | - | |
| >ToAWS | Μ | | 9.2.1.58 | | _ | |
| >ToAWE | Μ | | 9.2.1.57 | | _ | |
| >DCH Specific Info | | 1 <maxno ofDCHs></maxno | | | _ | |
| >>DCH ID | Μ | | 9.2.1.16 | | _ | |
| >>CCTrCH ID | M | | 9.2.3.2 | UL CCTrCH in which the DCH is mapped. | - | |
| >>CCTrCH ID | М | | 9.2.3.2 | DL CCTrCH in which the DCH is mapped | - | |
| >>TrCh Source Statistics Descriptor | М | | 9.2.1.65 | | _ | |
| >>Transport Format Set | Μ | | 9.2.1.64 | For the UL. | _ | |
| >>Transport Format Set | Μ | | 9.2.1.64 | For the DL. | _ | |
| >>BLER | Μ | | 9.2.1.3 | For the UL. | _ | |
| >>BLER | Μ | | 9.2.1.3 | For the DL. | _ | |
| >>Allocation/Retention Priority | М | | 9.2.1.1 | | _ | |
| >>Frame Handling Priority | М | | 9.2.1.29 | | _ | |
| >>QE-Selector | C- CoorDCH | | 9.2.1.46A | | _ | |
| DCHs to Delete | | 0 <maxno ofDCHs></maxno | | | GLOBAL | reject |
| >DCH ID | Μ | | 9.2.1.16 | | _ | |
| DSCHs to Modify | | 0 <maxno ofDSCHs></maxno | | | GLOBAL | reject |
| >DSCH ID | Μ | | | | - | |
| >CCTrCH Id | 0 | | | DL CCTrCH in which the DSCH is mapped. | - | |
| >TrCh Source Statistics Descriptor | 0 | | | | _ | |
| >Transport Format Set | 0 | | | | _ | |
| >Allocation/Retention Priority | 0 | | | | _ | |
| >Scheduling Priority Indicator | 0 | | | | _ | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|---|-----------------------------|--|-------------|-------------------------|
| >BI FR | 0 | | Kelerence | | _ | |
| >Transport Bearer | M | | 9.2.1.61 | | <u>_</u> | |
| Request Indicator | | | | | | |
| DSCHs to Add | | 0 <maxno ofDSCHs></maxno | | | GLOBAL | reject |
| >DSCH ID | М | | | | _ | |
| >CCTrCH ld | М | | | DL CCTrCH in which the DSCH is mapped. | _ | |
| >TrCh Source Statistics Descriptor | Μ | | | | | |
| >Transport Format Set | М | | | | | |
| >Allocation/Retention Priority | Μ | | | | | |
| >Scheduling Priority Indicator | М | | | | | |
| >BLER | М | | | | _ | |
| DSCHs to Delete | | 0 <maxno ofDSCHs></maxno | | | GLOBAL | reject |
| >DSCH ID | М | | | | _ | |
| USCHs to Modify | | 0 <maxno ofUSCHs></maxno | | | GLOBAL | reject |
| >USCH ID | М | | | | - | |
| >CCTrCH ld | 0 | | | <u>UL</u> CCTrCH in which the USCH is mapped. | _ | |
| >TrCh Source Statistics Descriptor | 0 | | | | - | |
| >Transport Format Set | 0 | | | | _ | |
| >Allocation/Retention Priority | 0 | | | | - | |
| >Scheduling Priority Indicator | 0 | | | | - | |
| >BLER | 0 | | | | _ | |
| >Transport Bearer Request Indicator | M | | <u>9.2.1.61</u> | | - | |
| >RB Info | | 1 to <maxnoof RB></maxnoof | | All Radio Bearers using this USCH | - | |
| >>RB Identity | М | | | | _ | |
| USCHs to Add | | 0 <maxno ofUSCHs></maxno | | | GLOBAL | reject |
| >USCH ID | М | | | | _ | |
| >CCTrCH ld | М | | | <u>UL</u> CCTrCH in which the USCH is mapped. | _ | |
| >TrCh Source Statistics Descriptor | М | | | | _ | |
| >Transport Format Set | М | | | | | |
| >Allocation/Retention Priority | М | | | | - | |
| >Scheduling Priority Indicator | М | | | | - | |
| >BLER | M | | | | - | |
| >RB Info | | 1 to <maxnoof RB></maxnoof | | All Radio Bearers using this USCH | - | |
| >>RB Identity | Μ | | | | | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-----------------|----------|------------------------------------|-----------------------------|--------------------------|-------------|-------------------------|
| USCHs to Delete | | 0 <maxno ofUSCHs></maxno | | | GLOBAL | reject |
| >USCH ID | М | | | | _ | |

| Condition | Explanation |
|-----------|---|
| CoorDCH | This IE is present only this DCH is part of a set of coordinated DCHs |
| | (number of instances of DCH Specific Info is greater than 1) |

| 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. |
| MaxnoofRBs | Maximum number of Radio Bearers for one UE. |

9.1.16 RADIO LINK RECONFIGURATION REQUEST

9.1.16.1 FDD Message

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|--|----------|---|------------------|---------------------|-------------|-------------|
| | | | and Reference | Description | | Criticality |
| Message Type | М | | 92140 | | YES | reject |
| Transaction ID | M | | 9.2.1.59 | | | |
| Allowed Queuing Time | 0 | | 9.2.1.2 | | YES | reiect |
| UL DPCH Information | - | 01 | - | | YES | reject |
| >TFCS | 0 | | 9.2.1.63 | TFCS for the | | |
| | | | | UL. | | |
| DL DPCH Information | | 01 | | | YES | reject |
| >TFCS | 0 | | 9.2.1.63 | TFCS for the DL. | - | |
| >TFCI Signalling Mode | 0 | | 9.2.2.46 | | _ | |
| >Limited Power Increase | 0 | | 9.2.1.33 | | - | |
| DCHs to Modify | | 0 <maxno< td=""><td></td><td></td><td>GLOBAL</td><td>reject</td></maxno<> | | | GLOBAL | reject |
| SUL EP Mode | М | 01201132 | 92167 | | | |
| >ToAWS | M | | 9.2.1.58 | | _ | |
| >ToAWE | M | 1 | 9.2.1.57 | | _ | |
| >Transport Bearer Request Indicator | M | | <u>9.2.1.61</u> | | z | |
| >DCH Specific Info | | 1 <maxno< td=""><td></td><td></td><td>_</td><td></td></maxno<> | | | _ | |
| >>DCH ID | М | 012 01 102 | 9.2.1.16 | | | |
| >>Transport Format Set | 0 | | 9.2.1.64 | For the UL. | _ | |
| >>Transport Format Set | 0 | | 9.2.1.64 | For the DL. | _ | |
| >>Allocation/Retention | 0 | | 9.2.1.1 | | - | |
| >>Frame Handling Priority | 0 | | 9.2.1.29 | | - | |
| >>DRAC Control | 0 | | 9.2.2.13 | | | |
| DCHs to add | | 0 <maxno ofDCHs></maxno | | | GLOBAL | reject |
| >Payload CRC Presence Indicator | М | | 9.2.1.42 | | - | |
| >UL FP Mode | М | | 9.2.1.67 | | _ | |
| >ToAWS | М | | 9.2.1.58 | | _ | |
| >ToAWE | М | | 9.2.1.57 | | - | |
| >DCH Specific Info | | 1 <maxno ofDCHs></maxno | | | _ | |
| >>DCH ID | М | | 9.2.1.16 | | _ | |
| >>TrCh Source Statistics Descriptor | М | | 9.2.1.65 | | _ | |
| >>Transport Format Set | М | | 9.2.1.64 | For the UL. | _ | |
| >>Transport Format Set | М | | 9.2.1.64 | For the DL. | - | |
| >>BLER | М | | 9.2.1.3 | For the UL. | _ | |
| >>BLER | М | | 9.2.1.3 | For the DL. | _ | |
| >>Allocation/Retention Priority | М | | 9.2.1.1 | | _ | |
| >>Frame Handling Priority | М | | 9.2.1.29 | | - | |
| >>QE-Selector | М | | 9.2.1.46A | | _ | |
| >>DRAC Control | М | | 9.2.2.13 | | - | |
| DCHs to Delete | | 0 <maxno ofDCHs></maxno | | | GLOBAL | reject |
| >DCH ID | М | | 9.2.1.16 | | _ | |
| Transmission Gap Pattern | 0 | | - | | YES | reject |
| Sequence Information | | | | | | - |

| Range Bound | Explanation | | |
|-------------|----------------------------------|--|--|
| MaxnoofDCHs | Maximum number of DCHs for a UE. | | |

9.1.16.2 TDD Message

| and ReferenceDescriptionMessage TypeM9.2.1.40YESTransaction IDM9.2.1.59-Allowed Queuing TimeO9.2.1.2YESUL COTACUL Information to09.2.1.2YES | Criticality |
|--|-------------|
| ReferenceMessage TypeM9.2.1.40YESTransaction IDM9.2.1.59-Allowed Queuing TimeO9.2.1.2YES | reject |
| Message TypeM9.2.1.40YESTransaction IDM9.2.1.59-Allowed Queuing TimeO9.2.1.2YES | roject |
| Transaction ID M 9.2.1.59 - Allowed Queuing Time O 9.2.1.2 YES | Tejeci |
| Allowed Queuing Time O 9.2.1.2 YES | |
| | reject |
| U. CONTRATION TO U CMAXNOOT EACH | notify |
| modify CCTrCHs> | |
| >CCTrCH ID M 9.2.3.2 - | |
| >TFCS M 9.2.1.63 - | |
| UL CCTrCH Information to U <maxnoof each<="" td=""><td>notity</td></maxnoof> | notity |
| | |
| DL CCTrCH Information to 0 < maxmoof EACH | notify |
| modify CCTrCHs> | notity |
| >CCTrCH ID M 92.3.2 - | |
| >TFCS M 9.2.1.63 - | |
| DL CCTrCH Information to 0 <maxnoof each<="" td=""><td>notify</td></maxnoof> | notify |
| delete CCTrCHs> | |
| >CCTrCH ID M – | |
| DCHs to Modify 0 <maxnoof global<="" td=""><td>reject</td></maxnoof> | reject |
| DCHs> | - |
| >UL FP Mode M 9.2.1.67 – | |
| >ToAWS M 9.2.1.58 – | |
| >ToAWE M 9.2.1.57 – | |
| >Transport Bearer M 9.2.1.61 - | |
| Request Indicator | |
| >DCH Specific Info 1 <maxnoof td="" –<=""><td></td></maxnoof> | |
| | |
| >>DCH ID M 9.2.1.16 - | |
| >>CCITCHID 0 9.2.3.2 UL CCITCH - | |
| | |
| mapped | |
| >>CCTrCH ID O 9.2.3.2 DL CCTrCH – | |
| in which the | |
| DCH is | |
| mapped | |
| >>Transport Format Set O 9.2.1.64 For the UL. – | |
| >>Transport Format Set O 9.2.1.64 For the DL. – | |
| >>Allocation/Retention O 9.2.1.1 – | |
| Priority | |
| >>Frame Handling O 9.2.1.29 – | |
| Priority CLODAL | raiaat |
| | reject |
| | |
| Indicator | |
| >ULEP Mode M 92167 - | |
| >ToAWS M 92158 - | |
| >ToAWE M 92157 - | |
| >DCH Specific Info 1 <maxnoof td="" –<=""><td></td></maxnoof> | |
| DCHs> | |
| >>DCH ID M 9.2.1.16 - | |
| >>TrCh Source Statistics M 9.2.1.65 – | |
| Descriptor | |
| >>CCTrCH ID M 9.2.3.2 UL CCTrCH – | |
| in which the | |
| DCH is | |
| mapped. | |
| >>CC ITCH ID M 9.2.3.2 DL CCTrCH – | |
| | |

| IE/Group Name | Presence | Range | IE Type and | Semantics Description | Criticality | Assigned Criticality |
|------------------------|----------|-------------------------------------|----------------|--------------------------|-------------|-------------------------|
| | | | Reference | | | , |
| | | | | mapped | | |
| >>Transport Format Set | Μ | | 9.2.1.64 | For the UL. | - | |
| >>Transport Format Set | Μ | | 9.2.1.64 | For the DL. | | |
| >>BLER | Μ | | 9.2.1.3 | For the UL. | | |
| >>BLER | Μ | | 9.2.1.3 | For the DL. | - | |
| >>Allocation/Retention | М | | 9.2.1.1 | | — | |
| Priority | | | | | | |
| >>Frame Handling | M | | 9.2.1.29 | | - | |
| Priority | | | | | | |
| >>QE-Selector | C- | | 9.2.1.46A | | _ | |
| | CoorDCH | | | | | |
| DCHs to Delete | | 0 <maxnoof DCHs></maxnoof | | | GLOBAL | reject |
| >DCH ID | Μ | | 9.2.1.16 | | _ | |

| Condition | Explanation | | |
|-----------|---|--|--|
| CoorDCH | This IE is present only this DCH is part of a set of coordinated DCHs | | |
| | (number of instances of DCH Specific Info is greater than 1) | | |

| Range Bound | Explanation | | |
|----------------|-------------------------------------|--|--|
| MaxnoofDCHs | Maximum number of DCHs for a UE. | | |
| MaxnoofCCTrCHs | Maximum number of CCTrCHs for a UE. | | |

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9.2.1.61 Transport Bearer Request Indicator

Indicates whether a <u>new</u> Iur transport bearer needs to be established for carrying the <u>corresponding</u> FACH data stream(s), or whether an existing transport bearer will be used.

| IE/Group Name | Presence | RangeMult | IE type and reference | Semantics description |
|--------------------------|----------|-----------|--------------------------|-----------------------|
| Transport Bearer Request | | | ENUM <u>E</u> RAT | |
| Indicator | | | ED(Bearer | |
| | | | Requested, | |
| | | | Bearer not | |
| | | | Requested) | |

```
**********
_ _
-- RADIO LINK RECONFIGURATION PREPARE FDD
  _
RadioLinkReconfigurationPrepareFDD ::= SEQUENCE {
                                                             {{RadioLinkReconfigurationPrepareFDD-IEs}},
    protocolIEs
                                   ProtocolIE-Container
   protocolExtensions
                                  ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareFDD-Extensions}}
                                                                                                                              OPTIONAL,
    . . .
RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= {
     ID id-AllowedOueuingTime
                                      CRITICALITY reject TYPE AllowedQueuingTime
                                                                                            PRESENCE optional }
     ID id-UL-DPCH-Information-RL-ReconfPrepFDD
                                                         CRITICALITY reject TYPE UL-DPCH-Information-RL-ReconfPrepFDD
                                                                                                                           PRESENCE optional
     ID id-DL-DPCH-Information-RL-ReconfPrepFDD
                                                          CRITICALITY reject TYPE DL-DPCH-Information-RL-ReconfPrepFDD
                                                                                                                           PRESENCE optional }
     ID id-DCH-ModifyList-RL-ReconfPrepFDD
                                              CRITICALITY reject TYPE DCH-ModifyList-RL-ReconfPrepFDD
                                                                                                         PRESENCE optional }
     ID id-DCH-AddList-RL-ReconfPrepFDD
                                              CRITICALITY reject TYPE DCH-AddList-RL-ReconfPrepFDD
                                                                                                      PRESENCE optional }
     ID id-DCH-DeleteList-RL-ReconfPrepFDD
                                              CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfPrepFDD
                                                                                                         PRESENCE optional }
     ID id-DSCH-Modify-RL-ReconfPrepFDD
                                              CRITICALITY reject TYPE DSCH-Modify-RL-ReconfPrepFDD
                                                                                                      PRESENCE optional }
     ID id-DSCH-Add-RL-ReconfPrepFDD
                                              CRITICALITY reject TYPE DSCH-Add-RL-ReconfPrepFDD
                                                                                                      PRESENCE optional
     ID id-DSCH-Delete-RL-ReconfPrepFDD
                                              CRITICALITY reject TYPE DSCH-Delete-RL-ReconfPrepFDD
                                                                                                      PRESENCE optional }
     ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY reject TYPE RL-InformationList-RL-ReconfPrepFDD PRESENCE optional }
     ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE optional
},
    . . .
UL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
   ul-ScramblingCode
                                  UL-ScramblingCode
                                                          OPTIONAL,
   ul-SIRTarget
                                  UL-STR
                                                          OPTIONAL,
   minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength OPTIONAL,
   maxNrOfUL-DPDCHs
                                  MaxNrOfUL-DPCHs
                                                          OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 --,
   ul-PunctureLimit
                                  PunctureLimit
                                                         OPTIONAL,
    tFCS
                                          OPTIONAL,
                                  TFCS
   ul-DPCCH-SlotFormat
                                  UL-DPCCH-SlotFormat
                                                          OPTIONAL,
    diversityMode
                                  DiversityMode
                                                          OPTIONAL,
    sSDT-CellIDLength
                                   SSDT-CellID-Length
                                                          OPTIONAL,
    s-FieldLength
                                  S-FieldLength
                                                          OPTIONAL,
    iE-Extensions
                                  ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    . . .
UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    tFCS
                                  TFCS
                                          OPTIONAL,
```

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    dl-DPCH-SlotFormat
                                    DL-DPCH-SlotFormat
                                                             OPTIONAL,
    nrOfDLchannelisationcodes
                                    NrOfDLchannelisationcodes OPTIONAL,
    tFCI-SignallingMode
                                    TFCI-SignallingMode
                                                             OPTIONAL,
    tFCI-Presence
                                    TFCI-Presence
                                                             OPTIONAL
    -- This IE is present if Slot Format is from 12 to 16 --,
    multiplexingPosition
                                    MultiplexingPosition
                                                                 OPTIONAL
    limitedPowerIncrease
                                    LimitedPowerIncrease
                                                                 OPTIONAL,
                                    ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-ModifyList-RL-ReconfPrepFDD
                                            ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfPrepFDD
DCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
    ul-FP-Mode
                                        UL-FP-Mode
                                                         OPTIONAL,
    toAWS
                                        TOAWS
                                                     OPTIONAL,
    toAWE
                                        TOAWE
                                                     OPTIONAL,
    transportBearerRequestIndicator
                                        TransportBearerRequestIndicator,
    dCH-SpecificInformationList
                                        DCH-ModifySpecificInformationList-RL-ReconfPrepFDD,
    iE-Extensions
                                        ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    . . .
DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-ModifySpecificInformationList-RL-ReconfPrepFDD::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-RL-ReconfPrepFDD
DCH-ModifySpecificItem-RL-ReconfPrepFDD::= SEQUENCE {
    dCH-ID
                                    DCH-ID,
    ul-TransportformatSet
                                    TransportFormatSet
                                                             OPTIONAL,
    dl-TransportformatSet
                                    TransportFormatSet
                                                             OPTIONAL,
    allocationRetentionPriority
                                    AllocationRetentionPriority
                                                                     OPTIONAL,
    frameHandlingPriority
                                    FrameHandlingPriority
                                                                 OPTIONAL,
    dRACControl
                                    DRACControl
                                                     OPTIONAL,
    iE-Extensions
                                    ProtocolExtensionContainer { {DCH-ModifySpecificItem-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    . . .
DCH-ModifySpecificItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-AddList-RL-ReconfPrepFDD
                                            ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfPrepFDD
DCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE
    payloadCRC-PresenceIndicator
                                         PayloadCRC-PresenceIndicator,
```

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```
ul-FP-Mode
                                        UL-FP-Mode,
                                        TOAWS,
    toAWS
                                         TOAWE.
    t.oAWE
    dCH-SpecificInformationList
                                        DCH-AddSpecificInformationList-RL-ReconfPrepFDD,
    iE-Extensions
                                        ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL.
    . . .
DCH-AddItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DCH-AddSpecificInformationList-RL-ReconfPrepFDD::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddSpecificItem-RL-ReconfPrepFDD
DCH-AddSpecificItem-RL-ReconfPrepFDD::= SEQUENCE {
    dCH-ID
                                         DCH-ID,
    trCH-SrcStatisticsDescr
                                         TrCH-SrcStatisticsDescr.
    ul-TransportformatSet
                                        TransportFormatSet,
    dl-TransportformatSet
                                        TransportFormatSet,
    ul-BLER
                                        BLER,
    dl-BLER
                                        BLER,
    allocationRetentionPriority
                                        AllocationRetentionPriority,
    frameHandlingPriority
                                         FrameHandlingPriority,
    qE-Selector
                                        QE-Selector,
    dRACControl
                                        DRACControl,
    iE-Extensions
                                        ProtocolExtensionContainer { {DCH-AddSpecificItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    . . .
DCH-AddSpecificItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DCH-DeleteList-RL-ReconfPrepFDD
                                             ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepFDD
DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID
                                     DCH-ID,
                                     ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DSCH-Modify-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-Information
                                         DSCH-ModifyInfo-RL-ReconfPrepFDD
                                                                             OPTIONAL,
    pdSCH-RL-ID
                                        RL-ID
                                                                     OPTIONAL,
    tFCS
                                        TFCS
                                                                     OPTIONAL,
    iE-Extensions
                                        ProtocolExtensionContainer { {DSCH-Modify-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    . . .
```

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DSCH-Modify-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
ļ
DSCH-ModifyInfo-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-ModifyInformationItem-RL-ReconfPrepFDD
DSCH-ModifyInformationItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-ID
                                        DSCH-ID,
    trChSourceStatisticsDescriptor
                                         TrCH-SrcStatisticsDescr OPTIONAL,
    transportFormatSet
                                         TransportFormatSet
                                                                          OPTIONAL,
    allocationRetentionPriority
                                        AllocationRetentionPriority
                                                                          OPTIONAL,
                                         SchedulingPriorityIndicator
    schedulingPriorityIndicator
                                                                          OPTIONAL,
    bler
                                        BLER
                                                                          OPTIONAL,
                                        TransportBearerRequestIndicator,
    transportBearerRequestIndicator
    iE-Extensions
                                        ProtocolExtensionContainer { {DSCH-ModifyInformationItem-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    . . .
DSCH-ModifyInformationItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DSCH-Add-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-Information
                                         DSCH-AddInfo-RL-ReconfPrepFDD,
    pdSCH-RL-ID
                                        RL-ID,
    tFCS
                                        TFCS.
    iE-Extensions
                                         ProtocolExtensionContainer { {DSCH-Add-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    . . .
DSCH-Add-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DSCH-AddInfo-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(1..maxNoOfDSCHs)) OF DSCH-AddInformationItem-RL-ReconfPrepFDD
DSCH-AddInformationItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dSCH-ID
                                         DSCH-ID,
    trChSourceStatisticsDescriptor
                                        TrCH-SrcStatisticsDescr,
    transportFormatSet
                                        TransportFormatSet,
                                        AllocationRetentionPriority,
    allocationRetentionPriority
    schedulingPriorityIndicator
                                         SchedulingPriorityIndicator,
    bler
                                        BLER,
    iE-Extensions
                                         ProtocolExtensionContainer { {DSCH-AddInformationItem-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    . . .
DSCH-AddInformationItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
```

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DSCH-Delete-RL-ReconfPrepFDD ::= SEOUENCE {
   dSCH-Information
                                       DSCH-Info-Delete-RL-ReconfPrepFDD,
   iE-Extensions
                                       ProtocolExtensionContainer { {DSCH-Delete-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    . . .
DSCH-Delete-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DSCH-Info-Delete-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(1..maxNoOfDSCHs)) OF DSCH-DeleteInformationItem-RL-REconfPrepFDD
DSCH-DeleteInformationItem-RL-REconfPrepFDD ::= SEQUENCE {
   dSCH-ID
                                       DSCH-ID,
                                   ProtocolExtensionContainer { {DSCH-DeleteInformationItem-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
   iE-Extensions
    . . .
DSCH-DeleteInformationItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
                                          ::= RL-IE-ContainerList0 { {RL-Information-RL-ReconfPrepFDD-IEs} }
RL-InformationList-RL-ReconfPrepFDD
RL-Information-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
                                                                                                           PRESENCE mandatory
   { ID id-RL-Information-RL-ReconfPrepFDD
                                            CRITICALITY reject TYPE RL-Information-RL-ReconfPrepFDD
                                                                                                                              },
    . . .
}
RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
   rL-ID
                               RL-ID,
   sSDT-Indication
                                   SSDT-Indication
                                                       OPTIONAL,
   sSDT-CellIdentity
                                   SSDT-CellID
                                                   OPTIONAL
    -- The IE may be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
    transmitDiversityIndicator
                                   TransmitDiversityIndicator
                                                                  OPTIONAL,
    -- This IE is present if Diversity Mode IE in UL DPCH Information group is present, unless it is equal to "none"
                                   ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
   iE-Extensions
    . . .
RL-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
RadioLinkReconfigurationPrepareFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
     _ _
-- RADIO LINK RECONFIGURATION PREPARE TDD
_ _
```

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RadioLinkReconfigurationPrepareTDD ::= SEQUENCE { {{RadioLinkReconfigurationPrepareTDD-IEs}}, protocolIEs ProtocolIE-Container protocolExtensions ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareTDD-Extensions}} OPTIONAL. . . . RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= { ID id-AllowedOueuingTime CRITICALITY reject TYPE AllowedOueuingTime 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-DCH-ModifyList-RL-ReconfPrepTDD CRITICALITY reject TYPE DCH-ModifyList-RL-ReconfPrepTDD PRESENCE optional } ID id-DCH-AddList-RL-ReconfPrepTDD CRITICALITY reject TYPE DCH-AddList-RL-ReconfPrepTDD PRESENCE optional } ID id-DCH-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfPrepTDD PRESENCE optional } PRESENCE optional ID id-DSCH-ModifyList-RL-ReconfPrepTDD CRITICALITY reject TYPE DSCH-ModifyList-RL-ReconfPrepTDD ID id-DSCH-AddList-RL-ReconfPrepTDD CRITICALITY reject TYPE DSCH-AddList-RL-ReconfPrepTDD 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-USCH-AddList-RL-ReconfPrepTDD CRITICALITY reject TYPE USCH-AddList-RL-ReconfPrepTDD PRESENCE optional { ID id-USCH-DeleteList-RL-ReconfPrepTDD CRITICALITY reject TYPE USCH-DeleteList-RL-ReconfPrepTDD PRESENCE optional }, . . . ::= CCTrCH-IE-ContainerList0 { {UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-IEs} } UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD 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, ProtocolExtensionContainer { { UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL, iE-Extensions . . . UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

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```
UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD
                                                      ::= CCTrCH-IE-ContainerList0 { {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,
                                    ProtocolExtensionContainer { {UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
                                                        ::= CCTrCH-IE-ContainerList0 { {UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD-IEs} }
UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
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
                                                    ::= CCTrCH-IE-ContainerList0 { {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, ProtocolExtensionContainer { {DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL, iE-Extensions . . . DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { . . . } CCTrCH-TPCAddList-RL-ReconfPrepTDD ::= SEOUENCE (SIZE (1..maxNrOfCCTrCHs)) OF CCTrCH-TPCAddItem-RL-ReconfPrepTDD CCTrCH-TPCAddItem-RL-ReconfPrepTDD ::= SEQUENCE { cCTrCH-ID CCTrCH-ID, ProtocolExtensionContainer { { CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL, iE-Extensions . . . CCTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { . . . DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList0 { {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 OPTIONAL. tFCI-Coding punctureLimit PunctureLimit OPTIONAL, CCTrCH-TPCModifyList-RL-ReconfPrepTDD cCTrCH-TPCList 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 (0..maxNrOfCCTrCHs)) OF CCTrCH-TPCModifyItem-RL-ReconfPrepTDD CCTrCH-TPCModifyItem-RL-ReconfPrepTDD ::= SEQUENCE { cCTrCH-ID CCTrCH-ID, ProtocolExtensionContainer { { CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL, iE-Extensions . . .

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CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
                                                        ::= CCTrCH-IE-ContainerList0 { {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,
                                    ProtocolExtensionContainer { {DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-ModifyList-RL-ReconfPrepTDD
                                            ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfPrepTDD
DCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    ul-FP-Mode
                                        UL-FP-Mode
                                                         OPTIONAL,
    toAWS
                                        TOAWS
                                                    OPTIONAL,
    t.oAWE
                                        TOAWE
                                                    OPTIONAL,
    transportBearerRequestIndicator
                                        TransportBearerRequestIndicator,
    dCH-SpecificInformationList
                                        DCH-ModifySpecificInformationList-RL-ReconfPrepTDD,
                                        ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
DCH-ModifySpecificInformationList-RL-ReconfPrepTDD::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-RL-ReconfPrepTDD
DCH-ModifySpecificItem-RL-ReconfPrepTDD::= SEQUENCE {
    dCH-ID
                                    DCH-ID,
    ul-CCTrCH-ID
                                    CCTrCH-ID
                                                    OPTIONAL,
    dl-CCTrCH-ID
                                    CCTrCH-ID
                                                    OPTIONAL,
    ul-TransportformatSet
                                    TransportFormatSet OPTIONAL,
    dl-TransportformatSet
                                    TransportFormatSet OPTIONAL,
    allocationRetentionPriority
                                    AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority
                                    FrameHandlingPriority OPTIONAL,
                                    ProtocolExtensionContainer { {DCH-ModifySpecificItem-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
```

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```
DCH-ModifySpecificItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
ļ
DCH-AddList-RL-ReconfPrepTDD
                                            ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfPrepTDD
DCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    pavloadCRC-PresenceIndicator
                                        PavloadCRC-PresenceIndicator,
    ul-FP-Mode
                                        UL-FP-Mode,
    toAWS
                                        TOAWS,
    TOAWE
                                        TOAWE.
    dCH-SpecificInformationList
                                        DCH-AddSpecificInformationList-RL-ReconfPrepTDD,
                                        ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DCH-AddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-AddSpecificInformationList-RL-ReconfPrepTDD::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddSpecificItem-RL-ReconfPrepTDD
DCH-AddSpecificItem-RL-ReconfPrepTDD::= SEQUENCE {
    dCH-ID
                                        DCH-ID,
    ul-CCTrCH-ID
                                        CCTrCH-ID,
    dl-CCTrCH-ID
                                        CCTrCH-ID,
                                        TrCH-SrcStatisticsDescr,
    trCH-SrcStatisticsDescr
    ul-TransportformatSet
                                        TransportFormatSet,
    dl-TransportformatSet
                                        TransportFormatSet,
    ul-BLER
                                        BLER,
    dl-BLER
                                        BLER,
    allocationRetentionPriority
                                        AllocationRetentionPriority,
    frameHandlingPriority
                                        FrameHandlingPriority,
    qE-Selector
                                        OE-Selector
                                                             OPTIONAL,
    -- This IE is present only if DCH is part of set of Coordinated DCHs
                                        ProtocolExtensionContainer { {DCH-AddSpecificItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DCH-AddSpecificItem-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,
                                ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
```

. . .

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```
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-AddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCH-AddItem-RL-ReconfPrepTDD
DSCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID
                                        DSCH-ID,
    dl-ccTrCHID
                                        CCTrCH-ID,
    trChSourceStatisticsDescriptor
                                        TrCH-SrcStatisticsDescr,
    transportFormatSet
                                        TransportFormatSet,
    allocationRetentionPriority
                                        AllocationRetentionPriority,
    schedulingPriorityIndicator
                                        SchedulingPriorityIndicator,
    bler
                                        BLER,
    iE-Extensions
                                    ProtocolExtensionContainer { {DSCH-AddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
DSCH-AddItem-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 {
-- R#-1972.CR161r2
    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,
                                        ProtocolExtensionContainer { {USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
USCH-AddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCH-AddItem-RL-ReconfPrepTDD
USCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID
                                         USCH-ID,
    ul-ccTrCHID
                                         CCTrCH-ID,
    trChSourceStatisticsDescriptor
                                        TrCH-SrcStatisticsDescr,
    transportFormatSet
                                         TransportFormatSet,
    allocationRetentionPriority
                                        AllocationRetentionPriority,
    schedulingPriorityIndicator
                                         SchedulingPrioritvIndicator,
    bler
                                        BLER,
    rb-Info
                                        RB-Info,
    iE-Extensions
                                     ProtocolExtensionContainer { {USCH-AddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    . . .
USCH-AddItem-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 ::= {
 ...

}

Release 99 254 3G TS 25.423 V3.3.0 (2000-09) ____ -- RADIO LINK RECONFIGURATION REQUEST FDD RadioLinkReconfigurationRequestFDD ::= SEQUENCE { {{RadioLinkReconfigurationRequestFDD-IEs}}, protocolIEs ProtocolIE-Container ProtocolExtensionContainer {{RadioLinkReconfigurationRequestFDD-Extensions}} protocolExtensions OPTIONAL, . . . } RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime PRESENCE optional } | ID id-UL-DPCH-Information-RL-ReconfRqstFDD CRITICALITY reject TYPE UL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } ID id-DL-DPCH-Information-RL-ReconfRqstFDD CRITICALITY reject TYPE DL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } ID id-DCH-ModifyList-RL-ReconfRqstFDD CRITICALITY reject TYPE DCH-ModifyList-RL-ReconfRqstFDD PRESENCE optional } ID id-DCH-AddList-RL-ReconfRqstFDD CRITICALITY reject TYPE DCH-AddList-RL-ReconfRqstFDD PRESENCE optional } ID id-DCH-DeleteList-RL-ReconfRqstFDD CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfRqstFDD PRESENCE optional }| ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE optional }, . . . UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE { tFCS TFCS OPTIONAL, ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs } } OPTIONAL, iE-Extensions . . . UL-DPCH-Information-RL-ReconfRgstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { . . . DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE { tFCS TFCS OPTIONAL, tFCI-SignallingMode TFCI-SignallingMode OPTIONAL, limitedPowerIncrease LimitedPowerIncrease OPTIONAL. iE-Extensions ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL, . . . DL-DPCH-Information-RL-ReconfRgstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { . . . } DCH-ModifyList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfRqstFDD DCH-ModifyItem-RL-ReconfRqstFDD ::= SEQUENCE { ul-FP-Mode UL-FP-Mode, TOAWS, toAWS toAWE TOAWE,

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transportBearerRequestIndicator
                                        TransportBearerRequestIndicator,
    dCH-SpecificInformationList
                                        DCH-ModifySpecificInformationList-RL-ReconfRqstFDD,
    iE-Extensions
                                        ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRgstFDD-ExtIEs} } OPTIONAL,
    . . .
DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-ModifySpecificInformationList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-RL-ReconfRqstFDD
DCH-ModifySpecificItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID
                                    DCH-ID,
    ul-TransportformatSet
                                    TransportFormatSet OPTIONAL,
    dl-TransportformatSet
                                    TransportFormatSet OPTIONAL,
    allocationRetentionPriority
                                    AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority
                                    FrameHandlingPriority OPTIONAL,
    dRACControl
                                    DRACControl
                                                     OPTIONAL,
                                    ProtocolExtensionContainer { {DCH-ModifySpecificItem-RL-ReconfRgstFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
DCH-ModifySpecificItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-AddList-RL-ReconfRqstFDD
                                             ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfRqstFDD
DCH-AddItem-RL-ReconfRqstFDD ::= SEQUENCE
    payloadCRC-PresenceIndicator
                                         PavloadCRC-PresenceIndicator,
    ul-FP-Mode
                                        UL-FP-Mode,
    toAWS
                                        TOAWS,
    toAWE
                                        TOAWE,
    dCH-SpecificInformationList
                                        DCH-AddSpecificInformationList-RL-ReconfRqstFDD,
                                        ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
DCH-AddItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
ļ
DCH-AddSpecificInformationList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddSpecificItem-RL-ReconfRqstFDD
DCH-AddSpecificItem-RL-ReconfRqstFDD ::=
                                            SEQUENCE {
    dCH-ID
                                        DCH-ID,
    trCH-SrcStatisticsDescr
                                        TrCH-SrcStatisticsDescr,
    ul-TransportformatSet
                                        TransportFormatSet,
    dl-TransportformatSet
                                        TransportFormatSet,
    ul-BLER
                                        BLER,
    dl-BLER
                                        BLER,
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    allocationRetentionPriority
                                      AllocationRetentionPriority,
    frameHandlingPriority
                                      FrameHandlingPriority,
    qE-Selector
                                      OE-Selector,
    dRACControl
                                      DRACControl,
    iE-Extensions
                                      ProtocolExtensionContainer { {DCH-AddSpecificItem-RL-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    . . .
DCH-AddSpecificItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-DeleteList-RL-ReconfRqstFDD
                                          ::= SEQUENCE (SIZE (0..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstFDD
DCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
   dCH-ID
                                  DCH-ID.
    iE-Extensions
                                  ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    . . .
DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
RadioLinkReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
     _ _
-- RADIO LINK RECONFIGURATION REQUEST TDD
  **********
RadioLinkReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs
                                  ProtocolIE-Container
                                                            {{RadioLinkReconfigurationRequestTDD-IEs}},
                                  ProtocolExtensionContainer {{RadioLinkReconfigurationRequestTDD-Extensions}}
   protocolExtensions
                                                                                                                             OPTIONAL,
    . . .
RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedOueuingTime
                                                                                           PRESENCE optional }
                                      CRITICALITY reject TYPE AllowedQueuingTime
    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-DCH-ModifyList-RL-ReconfRqstTDD
                                                                                                        PRESENCE optional }
                                             CRITICALITY reject TYPE DCH-ModifyList-RL-ReconfRqstTDD
    { ID id-DCH-AddList-RL-ReconfRqstTDD
                                             CRITICALITY reject TYPE DCH-AddList-RL-ReconfRqstTDD
                                                                                                      PRESENCE optional } |
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    { ID id-DCH-DeleteList-RL-ReconfRastTDD
                                                CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfRgstTDD
                                                                                                              PRESENCE optional },
    . . .
}
UL-CCTrCH-InformationModifyList-RL-ReconfRgstTDD
                                                      ::= CCTrCH-IE-ContainerList0 { {UL-CCTrCH-InformationModifyList-RL-ReconfRgstTDD-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.
                                    ProtocolExtensionContainer { {UL-CCTrCH-InformationModifyItem-RL-ReconfRgstTDD-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
UL-CCTrCH-InformationModifyItem-RL-ReconfRgstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
                                                       ::= CCTrCH-IE-ContainerList0 { {UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs} }
UL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD
UL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD CRITICALITY notify TYPE UL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD PRESENCE
mandatory },
    . . .
UL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD ::= 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
                                                       ::= CCTrCH-IE-ContainerList0 { {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,
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                                    ProtocolExtensionContainer { {DL-CCTrCH-InformationModifyItem-RL-ReconfRgstTDD-ExtIEs } } OPTIONAL.
    iE-Extensions
    . . .
DL-CCTrCH-InformationModifyItem-RL-ReconfRgstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD
                                                        ::= CCTrCH-IE-ContainerList0 { {DL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD-IEs} }
DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD CRITICALITY notify TYPE DL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD PRESENCE
mandatory },
    . . .
DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
                                CCTrCH-ID,
    cCTrCH-ID
    iE-Extensions
                                    ProtocolExtensionContainer { {DL-CCTrCH-InformationDeleteItem-RL-ReconfRgstTDD-ExtIEs } } OPTIONAL,
    . . .
DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-ModifyList-RL-ReconfRqstTDD
                                            ::= SEQUENCE (SIZE(0..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfRqstTDD
DCH-ModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    ul-FP-Mode
                                        UL-FP-Mode,
    toAWS
                                        TOAWS,
    toAWE
                                        TOAWE,
    transportBearerRequestIndicator
                                        TransportBearerRequestIndicator,
    dCH-SpecificInformationList
                                        DCH-ModifySpecificInformationList-RL-ReconfRqstTDD,
                                        ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-ModifySpecificInformationList-RL-ReconfRgstTDD ::= SEOUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-RL-ReconfRgstTDD
DCH-ModifySpecificItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-TD
                                    DCH-ID,
    ul-CCTrCH-ID
                                    CCTrCH-ID
                                                     OPTIONAL,
    dl-CCTrCH-ID
                                    CCTrCH-ID
                                                     OPTIONAL,
    ul-TransportformatSet
                                    TransportFormatSet OPTIONAL,
    dl-TransportformatSet
                                    TransportFormatSet OPTIONAL,
    allocationRetentionPriority
                                    AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority
                                    FrameHandlingPriority OPTIONAL,
```

```
Release 99
                                                                          259
                                                                                                                         3G TS 25.423 V3.3.0 (2000-09)
                                     ProtocolExtensionContainer { {DCH-ModifySpecificItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
ļ
DCH-ModifySpecificItem-RL-ReconfRgstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
1
DCH-AddList-RL-ReconfRqstTDD
                                             ::= SEOUENCE (SIZE(0..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfRqstTDD
DCH-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
    payloadCRC-PresenceIndicator
                                         PayloadCRC-PresenceIndicator,
    ul-FP-Mode
                                        UL-FP-Mode,
    toAWS
                                        TOAWS,
    toAWE
                                         TOAWE,
    dCH-SpecificInformationList
                                        DCH-AddSpecificInformationList-RL-ReconfRqstTDD,
    iE-Extensions
                                     ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    . . .
DCH-AddItem-RL-ReconfRgstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
DCH-AddSpecificInformationList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddSpecificItem-RL-ReconfRqstTDD
DCH-AddSpecificItem-RL-ReconfRqstTDD ::=
                                            SEOUENCE {
    dCH-ID
                                    DCH-ID,
    trCH-SrcStatisticsDescr
                                     TrCH-SrcStatisticsDescr,
    ul-CCTrCH-ID
                                     CCTrCH-ID,
    dl-CCTrCH-ID
                                     CCTrCH-ID,
    ul-TransportformatSet
                                    TransportFormatSet,
    dl-TransportformatSet
                                    TransportFormatSet,
    ul-BLER
                                    BLER,
    dl-BLER
                                     BLER,
    allocationRetentionPriority
                                    AllocationRetentionPriority,
    frameHandlingPriority
                                     FrameHandlingPriority,
    qE-Selector
                                     OE-Selector
                                                         OPTIONAL.
    -- This IE is present only if DCH is part of set of Coordinated DCHs
    iE-Extensions
                                     ProtocolExtensionContainer { {DCH-AddSpecificItem-RL-ReconfRqstTDD-ExtIEs } } OPTIONAL,
    . . .
DCH-AddSpecificItem-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 ::= {
Document R3-002739 e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

| | CHANGE REQUEST Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. |
|---|--|
| | 25.423 CR 212 R1 Current Version: 3.3.0 |
| GSM (AA.BB) or 3G (| AA.BBB) specification number 1 |
| For submission to | o: TSG RAN for approval X strategic |
| list expected approval m | #10 (for SMG heeting # here for information non-strategic use only) ↑ |
| Forn | m: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc |
| Proposed change (at least one should be ma | e affects: (U)SIM ME UTRAN / Radio X Core Network arked with an X) |
| Source: | R-WG3 Date: October 2000 |
| Subject: | Explanation of cause values |
| Work item: | |
| Category:FA(only one categoryshall be markedwith an X)D | CorrectionXRelease:Phase 2Corresponds to a correction in an earlier releaseRelease 96Release 96Addition of featureRelease 97Release 97Functional modification of featureRelease 98Release 98Editorial modificationRelease 00X |
| <u>change:</u> | Following comments received during R3#16 are taken into account: 2 columns Temp/Perm were removed; Cell not available: rephrased to "concerning cell". General change of "indicated" to "concerning"; General description added that "not supported" means the capability is not present, and that "not available" means that the capability is supported but currently insufficient resources were present to perform the requested action; Common transport channel type: clarified that it concerns "RACH/FACH/CPCH"; Transport resource resources unavailable: meaning changed to "transport resources are not available"; Measurement not supported: meaning changed to "At least one of the concerning cells does not support the measurement on the indicated object type"; R0: In the last meeting, Ericsson took the action point of introducing a clarification table for explaining the different cause values. This is the resulting CR for RNSAP. For all cause values, an explanation on when to use this value is provided. In those cases where text in the unsuccesful procedure case only included this same information, the text in the procedure text is proposed to be removed. The following cause values are proposed to be removed: |

resources unavailable.

- Transaction not allowed: assumed to have the same meaning as the cause value: Message not compatible with receiver state.

For alignment purposes (with NBAP), the following cause values are added:

- combining not supported
- RL already activated/allocated

As a general principle:

- permanent failures ("not supported") are put on cell level: it is not usefull to try the same request again on the same cell without any operations and maintenance intervention. However, another cell might support the requested functionality.
- temporary failures ("not available") are put on node level: this makes sure that the requester can make no assumptions on when the resources should become available (e.g. could be when resources are freed in another cell).

If this CR is not approved, implementations could misinterprete cause values.

Clauses affected: 8.3.1.3; 8.3.2.3; 8.3.4.3; 8.3.7.3; 8.4.1.3; 9.2.1.5; 9.3.3.

| Other specs | Other 3G core specifications | Х | \rightarrow List of CRs: | |
|-------------|---|---|---|--|
| affected: | Other GSM core specifications | | \rightarrow List of CRs: | |
| | MS test specifications BSS test specifications O&M specifications | | $\begin{array}{l} \rightarrow \mbox{ List of CRs:} \\ \rightarrow \mbox{ List of CRs:} \\ \rightarrow \mbox{ List of CRs:} \\ \rightarrow \mbox{ List of CRs:} \end{array}$ | |
| | | | | |

Other comments:

8.3.1.3 Unsuccessful Operation



Figure 1: Radio Link Setup procedure: Unsuccessful Operation

In unsuccessful case (i.e. one or more RLs can not be setup) 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 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 the DRNS cannot support the requested number of DL Codes on a permanent basis, the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with the RADIO LINK SETUP FAILURE message with the cause value "Number of DL Codes Not Supported".]

Typical cause values are:

Radio Network Layer Causes:

- RL Already Activated/Allocated
- [FDD UL Scrambling Code Already in Use];
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Unknown C-ID;
- [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;
- Invalid CM Settings;
- Number of DL codes not supported;
- Dedicated Transport ChannelH Type not Supported;
- DL Shared CHhannel Type not Supported;
- [TDD -_ UL Shared CHhannel Type not Supported];
- [FDD UL Spreading Factor not Supported];
- [FDD DL Spreading Factor not Supported];
- CM not Supported.

Transport Layer Causes:

- Transport Link Failure Transport Resource Unavailable

Protocol Causes:

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

8.3.2.3 Unsuccessful Operation



Figure 2: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one RL is unsuccessful, the DRNC shall send a RADIO LINK ADDITION FAILURE as response.

If some RL(s) were established successfully, the DRNC 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 message includes the *Active Pattern Sequence Information* IE and the DRNS cannot provide the requested CM measurements, or if the *Transmission Gap Pattern Sequence Status* IE group repetitions in the *Active Pattern Sequence Information* IE do not address exactly all ongoing compressed mode patterns the DRNS 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 RADIO LINK ADDITION REQUEST is used to terminate the on going compressed mode measurement in the new RLs (as specified above), but at least one new RL is setup in one cell that has the same UARCFN of at least one cell with an already existing RL, the DRNS 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".]

If the DRNS is not able to establish the requested RLs due to that the DRNS has received a RADIO LINK RECONFIGURATION COMMIT and the indicated reconfiguration CFN has not yet elapsed, the DRNS shall indicate this with the cause value "Reconfiguration CFN not elapsed" in the RADIO LINK ADDITION FAILURE message.

[FDD If the DRNS cannot support the requested number of DL Codes on a permanent basis, the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with the RADIO LINK ADDITION FAILURE message with the cause value "Number of DL Codes Not Supported".]

Typical cause values are:

Radio Network Layer Causes:

- RL Already Activated/Allocated
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Unknown C-ID;
- Combining Resources not Available ;

- Combining not Supported

- Cell not Available;
- [FDD Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- Invalid CM Settings;
- CM not Supported;
- Reconfiguration CFN not <u>Elapsed</u>elapsed;
- Number of DL Codes codes not Supported supported.

Transport Layer Causes:

- Transport Link Failure. Transport Resource Unavailable

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

8.3.4.3 Unsuccessful Operation



Figure 3: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

If the DRNS cannot reserve the necessary resources for all the new DCHs of a set of co-ordinated DCHs requested to be added, it shall regard the Synchronised Radio Link Reconfiguration procedure as having failed.

If the requested Synchronised Radio Link Reconfiguration procedure fails for one or more RLs the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

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 Synchronised Radio Link Reconfiguration Preparation procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

In which cases to include only the *Cause* IE on message level and in which cases the *Cause* IE also shall be included for a specific RL is FFS.

[FDD—If the DRNS cannot support the requested number of DL Codes on a permanent basis, the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with the RADIO LINK RECONFIGURATION FAILURE message with the cause value "Number of DL Codes Not Supported".]

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use;
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Requested Configuration not Supported;
- Invalid CM Settings;
- Number of DL Codes codes not Supported supported;
- [TDD Dedicated Transport Channel H Type not Supported];
- DL Shared Chhannel Type not Supported;
- [TDD UL Shared CHhannel Type not Supported];
- [FDD UL Spreading Factor not Supported];
- [FDD DL Spreading Factor not Supported];
- CM not Supported.

Protocol Causes:

- Transaction not Allowed.

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

8.3.7.3 Unsuccessful Operation



Figure 4: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

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 Unsynchronised Radio Link Reconfiguration procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

If the DRNS cannot allocate the necessary resources for all the new DCHs of a set of co-ordinated DCHs requested to be added it shall regard the Unsynchronised Radio Link Reconfiguration procedure as having failed.

If the requested Unsynchronised Radio Link Reconfiguration procedure fails for one or more Radio Link(s) the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

Typical cause values are:

Radio Network Layer Causes:

- UL Scrambling Code Already in Use;
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Requested Configuration not Supported;
- Invalid CM Setting;
- CM not Supported.

Protocol Causes:

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

8.4.1.3 Unsuccessful Operation

| SR | NC | DRNC |
|----|---|------|
| | COMMON TRANSPORT CHANNEL RESOURCES REQUEST | |
| | COMMON TRANSPORT CHANNEL RESOURCES FAILURE | |
| | | |

Figure 5: Common Transport Channel Resources Initialisation procedure, Unsuccessful Operation

If the *Transport Bearer Request Indicator* IE is set to "Bearer Requested" and the DRNC is not able to provide a Transport Bearer, the DRNC shall respond to the SRNC with the COMMON TRANSPORT CHANNEL RESOURCES FAILURE message, indicating the cause of the failure.

Typical cause values are:

Radio Network Layer Causes:

- RACH/FACH/CPCH-Common Transport Channel Type not Supported.

9.2.1.5 Cause

The purpose of the cause information element is to indicate the reason for a particular event for the whole protocol.

I

| | | |

| IE/Group Name | Presence | Range | IE type and reference | Semantics |
|--|----------|-------|---|-----------|
| CHOICE cause group | | | | |
| >Radio Network Laver | | | | |
| >Radio Network Layer >>Radio Network Layer Cause | M | | ENUMERATED (Unknown C-ID, Cell not Available, Power Level not Supported, UL Scrambling Code Already in Use, DL Radio Resources not Available, UL Radio Resources not Available, RL Already Activated/Allocated, Measurement not Supported For The Object, Combining Resources Not Available, <u>Combining Resources Not Available,</u> Combining Resources Not Available, <u>Combining not Supported,</u> Reconfiguration not Allowed, Requested Configuration not Supported, Synchronisation Failure, Requested Tx Diversity Mode not Supported, Measurement Temporarily not Available, Unspecified, Invalid CM Settings, Reconfiguration CFN not <u>Elapsedelapsed</u> , Number of DL Codes Not Supported, D <u>edicated Transport ChHannel Type</u> not Supported, UL Shared ChHannel Type not Supported, UL Shared ChHannel Type not Supported, UL Spreading Factor not Supported, DL Spreading Factor not Supported, CM not Supported, DL Spreading Factor not Supported, CM not Supported, UL Spreading Factor not Supported, DL Spreading Factor not Supported by Destination Node B,) | |
| >Transport Layer | | | | |
| >>Transport Layer Cause | М | | ENUMERATED (Transport Link Failure, Transmission Port not Available, Transport Resource Unavailable, Unspecified,) | |
| >Protocol | | | | |
| >>Protocol Cause | | | ENUMERATED (Transaction not Allowed, Transfer Syntax Error, Abstract Syntax Error (Reject), Abstract Syntax Error (Ignore and Notify), Message not Compatible with Receiver State, Semantic Error, Unspecified, Abstract Syntax Error (Falsely Constructed Message),) | |
| >IMISC | | | | |
| >>Miscellaneous Cause | М | | ENUMERATED (Control Processing Overload, Hardware Failure, O&M Intervention, Not enough User Plane Processing Resources, Unspecified) | |

The meaning of the different cause values is described in the following table. In general, "not supported" cause values indicate that the concerning capability is missing. On the other hand, "not available" cause values indicate that the concerning capability is present, but insufficient resources were available to perform the requested action.

| Radio Network Layer cause | Meaning |
|--|---|
| Cell not Available, | The concerning cell is not available |
| Combining not Supported | The DRNS does not support the RL combining for the concerning cells |
| Combining Resources Not | The value of the received Diversity Control Field IE was set to 'Must', |
| Available | but the DRNS cannot perform the requested combining |
| CM not Supported | The concerning cell(s) do not support Compressed Mode |
| Common Transport Channel Type | The concerning cell(s) do not support the RACH and/or FACH and/or |
| not Supported | CPCH Common Transport Channel Type |
| Dedicated Transport Channel Type | The concerning cell(s) do not support the Dedicated Transport Channel |
| not Supported | Type |
| DL Radio Resources not Available | The DRNS does not have sufficient DL radio resources available |
| DL SF not Supported | The concerning cell(s) do not support the requested DL SF |
| DL Shared Channel Type not | The concerning cell(s) do not support the Downlink Shared Channel |
| Supported | Type |
| Invalid CM Settings | The concerning cell(s) consider the requested Compressed Mode settings |
| | invalid |
| Measurement not Supported For | At least one of the concerning cell(s) does not support the requested |
| The Object | measurement on the concerning object type |
| Measurement Temporarily not | The DRNS can temporarily not provide the requested measurement value |
| Available | |
| Number of DL Codes not | The concerning cell(s) do not support the requested number of DL codes |
| Supported | |
| Power Level not Supported | A DL power level was requested which the concerning cell(s) do not |
| | support |
| Reconfiguration CFN not Elapsed | The requested action cannot be performed due to that a COMMIT |
| | message was received previously, but the concerning CFN has not yet |
| | elapsed |
| Reconfiguration not Allowed | The SRNC does currently not allow the requested reconfiguration |
| Requested Configuration not | The concerning cell(s) do not support the requested configuration i.e. |
| <u>Supported</u> | power levels, Transport Formats, physical channel parameters, |
| Requested Tx Diversity mode not | The concerning cell(s) do not support the requested transmit diversity |
| Supported | mode |
| <u>RL Already Activated/ Allocated</u> | The DRNS has already allocated an RL with the requested RL ID for this |
| | UE Context |
| Synchronisation Failure | Loss of UL Uu synchronisation |
| Transaction not Supported by | The requested action cannot be performed due to lack of support of the |
| Destination Node B | corresponding action in the destination Node B |
| UL Radio Resources not Available | The DRNS does not have sufficient UL radio resources available |
| UL Scrambling Code Already in | The concerning UL scrambling code is already in use for another UE |
| Use | |
| UL SF not Supported | The concerning cell(s) do not support the requested UL SF |
| UL Shared Channel Type not | The concerning cell(s) do not support the Uplink Shared Channel Type |
| Supported | |
| Unknown C-ID | The DRNS is not aware of a cell with the provided C-Id |
| Unspecified | Sent when none of the above cause values applies but still the cause is |
| | Radio Network Layer related |

| Transport Network Layer cause | Meaning | | | |
|--------------------------------|---|--|--|--|
| Transport resource unavailable | The required transport resources are not available | | | |
| Unspecified | Sent when none of the above cause values applies but still the cause is | | | |
| | Transport Network Layer related | | | |

| Protocol cause | Meaning |
|----------------|---------|
| | |

| Abstract Syntax Error (Reject) | The received message included an abstract syntax error and the |
|-----------------------------------|---|
| | concerning criticality indicated "reject" (see subclause 10.3) |
| Abstract Syntax Error (Ignore and | The received message included an abstract syntax error and the |
| <u>Notify)</u> | concerning criticality indicated "ignore and notify" (see subclause 10.3) |
| Abstract syntax error (falsely | The received message contained IEs or IE groups in wrong order or with |
| constructed message) | too many occurrences (see subclause 10.3) |
| Message not Compatible with | The received message was not compatible with the receiver state (see |
| Receiver State | subclause 10.4) |
| Semantic Error | The received message included a semantic error (see subclause 10.4) |
| Transfer Syntax Error | The received message included a transfer syntax error (see section 10.2) |
| Unspecified | Sent when none of the above cause values applies but still the cause is |
| | Protocol related |

| Miscellaneous cause | Meaning | | |
|----------------------------------|---|--|--|
| Control Processing Overload | DRNS control processing overload | | |
| Hardware Failure | DRNS hardware failure | | |
| Not enough User Plane Processing | DRNS has insufficient user plane processing resources available | | |
| Resources | | | |
| O&M Intervention | Operation and Maintenance intervention related to DRNS equipment | | |
| Unspecified | Sent when none of the above cause values applies and the cause is not | | |
| | related to any of the categories Radio Network Layer, Transport Network | | |
| | Layer or Protocol. | | |

-- C Cause ::= CHOICE { radioNetwork CauseRadioNetwork, transport CauseTransport, protocol CauseProtocol, CauseMisc, misc . . . } CauseMisc ::= ENUMERATED { control-processing-overload, hardware-failure, om-intervention, not-enough-user-plane-processing-resources, unspecified, } CauseProtocol ::= ENUMERATED { -transaction-not-allowed, transfer-syntax-error, abstract-syntax-error-reject, abstract-syntax-error-ignore-and-notify, message-not-compatible-with-receiver-state, semantic-error, unspecified, abstract-syntax-error-falsely-constructed-message, } CauseRadioNetwork ::= ENUMERATED { unknown-C-ID, cell-not-available, power-level-not-supported, ul-scrambling-code-already-in-use, dl-radio-resources-not-available, ul-radio-resources-not-available, measurement-not-supported-for-the-object, combining-resources-not-available, combining-not-supported, reconfiguration-not-allowed, requested-configuration-not-supported, synchronisation-failure, requested-tx-diversity-mode-not-supported, measurement-temporaily-not-available, unspecified, invalid-CM-settings, reconfiguration-CFN-not-elapsed, number-of-DL-codes-not-supported, ${\tt d\underline{edicated-transport-channel-type-not-supported},}$ dl-shared-channnel-type-not-supported, ul-shared-channel-type-not-supported, rach-fach-cpchcommon-transport-channel-type-not-supported, ul-spreading-factor-not-supported, dl-spreading-factor-not-supported, cm-not-supported, transaction-not-supported-by-destination-node-b, rl-already-activated-or-alocated, . . . } CauseTransport ::= ENUMERATED { transmission-link-failure, transmission-port-not-available, transport-resource-unavailable, unspecified, . . . } // partly skipped

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

| | С | HANGE F | REQUES | Please see embedded l page for instructions on | help file at the bottom of this how to fill in this form correctly. |
|---|--|--|--|--|---|
| | | 25,423 | CR 21 | Current Ve | ersion: 3.3.0 |
| GSM (AA.BB) or 3G | (AA.BBB) specification | number ↑ | | ↑ CR number as allocated by N | ACC support team |
| For submission | to: TSG- | for ap | oproval X | str | rategic |
| list expected approval | meeting # here | for infor | mation | non-str | rategic (10/ SMG use only) |
| Fc | orm: CR cover sheet, version | n 2 for 3GPP and SMG | The latest version o | f this form is available from: ftp://ftp.3 | Bgpp.org/Information/CR-Form-v2.doc |
| Proposed change (at least one should be i | ge affects: marked with an X) | (U)SIM | ME | UTRAN / Radio 🛛 🗙 | Core Network |
| Source: | R-WG3 | | | Da | te: October 2000 |
| Subject: | Handling of op | <mark>tional IE's in RI</mark> | NSAP RL_SE | TUP / RL_ADDITION | |
| Work item: | | | | | |
| Category:FA(only one categoryshall be marked(with an X) | Correction Corresponds t Addition of fea Functional mo Editorial modified | o a correction i iture dification of fea ication | in an earlier re ature | lease Releas | ee: Phase 2 Release 96 Release 97 Release 98 Release 99 Release 99 Release 00 |
| <u>Reason for</u> <u>change:</u> | During R3#15, handling of op the output of th Main input was SETUP: - D-RNTI: clari - Uplink SIR Ta - SSDT cell ide - DSCH inform - Propagation SETUP RESP - CN domain ir - Cell individua ADDITION: - Primary CPIC - CN domain ir - Cell individua Futhermore, T 1) RADIO LIN level being SETUP RE 2) The DSCH removed. | Ericsson took tional IE's in the his activity. Tdoc 2292, wi fication include arget: currently entity length: cu ation: clarificati delay: new para ONSE: ndicators: clarifie I offset: clarifie CH/CCPCH pown dicators: curre I offset: clarifie doc 2292 listed NK SETUP: The g (possibly) rece EQUEST mess I text is current | an action poir e RNSAP RL_ hich listed the d (descriptive included irrently included agraph added agraph added ied "only if not d "if available" wer: currently intly included d "if available" the following e TDD radio line eived, but no s age => Optior | t related to clarifying t SETUP/ RL_ADDITIC following optional IE's paragraph removed) ed DRNC" ncluded issues: hk setup procedure related such IE is present in the removed in procedure 0 – why ? => Seems in | fers to a DL TX power be RADIO LINK e text. hcorrect: tagging |

message incorrectly has a presence indicator => Removed.

- 4) The neighbour cell information group in the FDD RADIO LINK FAILURE message incorrectly has a presence indicator => Removed.
- 5) RADIO LINK ADDITION: The procedure text describes the PRIMARY CCPCH Ec/No IE in the FDD RADIO LINK ADDITION REQUEST message and the message contains PRIMARY CPICH Ec/No => Corrected to CPICH.

If this contribution is not accepted, the indicated corrections will remain erronuous leading to incorrect implementations.

Clauses affected: 8.3.1; 8.3.2; 9.1.4.2; 9.1.5.1

Other specs affected: Other 3G core specifications Other GSM core specifications MS test specifications BSS test specifications O&M specifications

| \rightarrow | List of CRs | |
|---------------|-------------|---|
| \rightarrow | List of CRs | - |
| | | |
| \rightarrow | List of CRs | - |
| \rightarrow | List of CRs | |
| \rightarrow | List of CRs | |

<u>Other</u> <u>comments:</u> It is further recognised that the procedure text description would benefit from a "reshuffling" as is already performed for other procedures like the NBAP RL Reconfiguration.



<----- double-click here for help and instructions on how to create a CR.

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 1: 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 RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message includes the S RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D RNTI. 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.

[FDD - The *First RLS Indicator* IE indicates if the concerning RL shall be considered part of the first RLS established towards this UE. If the *First RLS indicator* IE is set to "first RLS", the DRNS shall use a TPC pattern of n*"01" + "1" in the DL of the concerning RL and all RLs which are part of the same RLS, until UL synchronisation is achieved on the Uu. The TPC pattern shall continuously be repeated but shall be restarted at the beginning of every frame with CFNmod4=0. For all other RLs, the DRNS shall use a TPC pattern of all "1"'s in the DL until UL synchronisation is achieved on the Uu.]

[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 on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then 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.]

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

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

[FDD - If the *Initial DL TX Power* IE and *Uplink SIR Target* IE are present 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.]

[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 *DL Timeslot ISCP* IE are present, the DRNC should use the indicated values when deciding the Initial DL TX Power.]

[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] section 5.2.1 for the inner loop DL power control.]

[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 for the concerning RLS or a DL POWER CONTROL REQUEST message is received. No innerloop 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) with DPC_MODE=0 and the power control procedure (see 8.3.7).]

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[TDD – 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 and on each Time Slot of a RL until UL synchronisation is achieved for the concerning RL. No innerloop 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 SETUP REQUEST message includes a *DCH Info* IE with multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCH Info* 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 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 *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH and DSCH (if any).

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the SSDT Cell Identity 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 *Transmission Gap Pattern Sequence Information* IE, the DRNS shall store the information about the Transmission Gap Pattern Sequences to be used when those are activated.]

[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 immediately activate the indicated Transmisson Gap Pattern Sequences: for each sequence the *TGCFN* refers to latest passed CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the DRNS shall behave as specified in ref. [26].]

[TDD – The DRNS shall use the *RB Identity* IE list inside the USCH information group to map each *RB Identity* IE to the corresponding USCH.]

At the reception of the RADIO LINK SETUP REQUEST message, 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 setup.

[TDD____. If the DSCH Information is included in the RADIO LINK SETUP REQUEST message, <u>the DRNC shall</u> establish the requested DSCH's [FDD - on the RL indicated by the PDSCH RL ID IE]. In addition, the DRNC shall send a valid set of *Scheduling Priority* IE and *MAC-c/sh SDU lengths* IE parameters to the SRNC in the message RADIO LINK SETUP RESPONSE message].

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

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[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 – 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 - In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference *RL ID* IE shall be included to indicate with which RL the combination is performed. The Reference *RL ID* IE shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.]

[FDD - In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the *Diversity Indication* IE that no combining is performed. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH and DSCH of the RL in the RADIO LINK SETUP RESPONSE message.]

[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 [TDD – and USCH] of the RL.]

In case of a set of coordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

[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.]

For any cell neighbouring a cell in which a RL was established, the DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id), the Frequency Number, the [FDD-Primary Scrambling Code], the [TDD-Cell Parameter ID, the Sync Case, the SCH Time Slot information, the Block STTD Indicator] of the neighbouring cells to the cell(s) where the radio link(s) are addedand the node identification of the CN nodes connected to the RNC controling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the [FDD-CPICH Power level, cell individual offset]/[TDD-PCCPCH Power level, DPCH Constant Value] and Frame Offset of the neighbouring cell.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC and CN domain nodes) of the RNC controlling the neighbouring cell. [FDD – If the information is available, the DRNC shall include the *Tx Diversity Indicator* IE and Tx diversity capability (i.e. *STTD Support Indicator* IE, *Closed Loop Mode1 Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE) in *Per FDD Cell Information* IE].

If there was no <u>D-RNTI IE was included in UE context for this UE in the DRNS before</u> the RADIO LINK SETUP REQUEST message, was received 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 *DRAC Control* IE is set to "requested" in the RADIO LINK SETUP REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info IE* to be received on FACH, for each added Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell and the UTRAN access point position for each of the established RLs in the RADIO LINK SETUP RESPONSE message.

After sending of the RADIO LINK SETUP RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [3].

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

[FDD- If the *Downlink compressed mode method* 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 Information Response* IE in the RADIO LINK SETUP RESPONSE message indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

8.3.1.3 Unsuccessful Operation



Figure 2: Radio Link Setup procedure: Unsuccessful Operation

In unsuccessful case (i.e. one or more RLs can not be setup) 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 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 the DRNS cannot support the requested number of DL Codes on a permanent basis, the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with the RADIO LINK SETUP FAILURE message with the cause value "Number of DL Codes Not Supported".]

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;
- Unknown C-ID;
- [FDD Combining Resources not available];
- Requested Configuration not Supported;
- Cell not Available;
- [FDD Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- Invalid CM Settings;
- Number of DL codes not supported;
- DCH not Supported;

- DSCH not Supported;
- [TDD USCH not Supported];
- [FDD UL Spreading Factor not Supported];
- [FDD DL Spreading Factor not Supported];
- CM not Supported.

Transport Layer Causes:

- Transport Link Failure

Protocol Causes:

- Transaction not Allowed

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.

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 concerning 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 3: 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.

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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), then 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.

[FDD - If the *Primary CCPICH Ec/No* IE measured by the UE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power. If the *Primary CCPICH Ec/No* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.]

[TDD - If the *Primary CCPCH RSCP* IE and/or the *DL Timeslot ISCP* 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 *DL Timeslot ISCP* IE are not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.]

[FDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved for that RLS or a DL POWER CONTROL REQUEST message is received. No innerloop 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) with DPC_MODE=0 and the power control procedure (see 8.3.7)].

[TDD – The Initial DL TX Power shall be applied until UL synchronisation is achieved for that RL. No innerloop 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 - The DRNS shall use the provided Uplink SIR Target value as the current target for the inner-loop power control.]

[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.]

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

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *Active Pattern Sequence Information* IE, the DRNS shall use the information to immediately activate all ongoing Transmission Gap Pattern Sequence(s) also in the new RL. For each sequence the *TGCFN* refers to latest passed CFN with that value. If *Active Pattern Sequence Information* IE is not included, the DRNS shall not activate the on going CM pattern in the new RLs, but the on going pattern in the existing RL are maintained.]

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

[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 – 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.]

In the case of combining an RL with existing RL(s) the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that the RL is combined. In this case the Reference RL ID shall be included to indicate 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 DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH, DSCH [TDD – and USCH] of the RL in the RADIO LINK ADDITION RESPONSE message.

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

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

[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.]

- For any cell neighbouring of a cell in which a RL was added, the DRNC shall provide in the RADIO LINK ADDITION RESPONSE message the UTRAN Cell Identifier (UC-Id), the Frequency Number, the [FDD Primary Scrambling Code], the [TDD Cell Parameter Id, the Sync Case, the SCH Time slot information, the Block STTD Indicator] and the node identification of CN nodes connected to the RNC controlling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the [FDD-
- Primary CPICH Power IE, <u>Cell Individual Offset IE</u>]/[TDD PCCPCH Power IE, DPCH Constant Value IE], Frame Offset IE, [FDD Tx Diversity Indicator IE, and Tx diversity capability, i.e. STTD Support Indicator IE, Closed Loop Model Support Indicator IE, and Closed Loop Mode2 Support Indicator IE] of the neighbouring cell.

The DRNC shall also provide the configured uplink 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 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.

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

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell and the UTRAN access point position for each of the added RLs in the RADIO LINK SETUP RESPONSE message.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [4].

[FDD - If the UE has been allocated one or several DCH controlled by DRAC (*DRAC Control* IE was set to "requested" in the RADIO LINK ADDITION REQUEST message for at least one DCH) and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message the *Secondary CCPCH Info* IE to be received on FACH, for each added Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK ADDITION RESPONSE message.]

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

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

[FDD – After addition of the new RL, the UL out-of-sync algorithm defined in [10] shall use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the DRNC cells supporting the radio links of the RL Set].

8.3.2.3 Unsuccessful Operation



Figure 4: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one RL is unsuccessful, the DRNC shall send a RADIO LINK ADDITION FAILURE as response.

If some RL(s) were established successfully, the DRNC 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 message includes the *Active Pattern Sequence Information* IE and the DRNS cannot provide the requested CM measurements, or if the *Transmission Gap Pattern Sequence Status* IE group repetitions in the *Active Pattern Sequence Information* IE do not address exactly all ongoing compressed mode patterns the DRNS 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 RADIO LINK ADDITION REQUEST is used to terminate the on going compressed mode measurement in the new RLs (as specified above), but at least one new RL is setup in one cell that has the same UARCFN of at least one cell with an already existing RL, the DRNS 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".]

If the DRNS is not able to establish the requested RLs due to that the DRNS has received a RADIO LINK RECONFIGURATION COMMIT and the indicated reconfiguration CFN has not yet elapsed, the DRNS shall indicate this with the cause value "Reconfiguration CFN not elapsed" in the RADIO LINK ADDITION FAILURE message.

[FDD - If the DRNS cannot support the requested number of DL Codes on a permanent basis, the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with the RADIO LINK ADDITION FAILURE message with the cause value "Number of DL Codes Not Supported".]

Typical cause values are:

Radio Network Layer Causes:

- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Unknown C-ID;
- Combining Resources not available ;
- Cell not Available;
- [FDD Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- Invalid CM Settings;
- CM not Supported;
- Reconfiguration CFN not elapsed;
- Number of DL codes not supported.

Transport Layer Causes:

- Transport Link Failure.

Miscellaneous Causes:

- Control Processing Overload;
- HW Failure;

-

- Not enough User Plane Processing Resources.

8.3.2.4 Abnormal Conditions

9.1.4.2 TDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|---------------------------|----------|--|-----------|--------------|-------------|-------------|
| | | | and | description | | Criticality |
| | | | reference | | | |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | - | |
| D-RNTI | 0 | | 9.2.1.24 | | YES | ignore |
| CN PS Domain Identifier | 0 | | 9.2.1.12 | | YES | ignore |
| CN CS Domain Identifier | 0 | | 9.2.1.11 | | YES | ignore |
| RL Information Response | | 1 | | | YES | ignore |
| >RL ID | M | | 9.2.1.49 | | _ | |
| >URA ID | M | | 9.2.1.70 | | — | |
| >SAI | M | | 9.2.1.52 | | — | |
| >Cell GAI | 0 | | | | _ | |
| >UTRAN Access Point | 0 | | | | — | |
| Position | | | | | | |
| >UL Interference per Time | | 1 | | Interference | — | |
| Slot | | <maxnoof< td=""><td></td><td>Level for</td><td></td><td></td></maxnoof<> | | Level for | | |
| | | ULts> | | each UL | | |
| | | | | time slot | | |
| | | | | Within the | | |
| La Time Slat | NA | - | 0.0.1.56 | Radio Link | | |
| >>TIME SIOL | IVI M | | 9.2.1.30 | | | |
| >>UL TIMESIOLISCP | | - | 9.2.3.13A | | | |
| >Maximum Uplink SIR | IVI | | | | _ | |
| Minimum Unlink SIP | M | - | 9.2.1.09 | | | |
| | IVI | | | | — | |
| Maximum Allowed III Tx | M | | 9.2.1.09 | | | |
| | IVI | | 9.2.1.35 | | — | |
| | М | | | | | |
| | IVI | | 92210 | | _ | |
| | М | | DL Power | | | |
| | 101 | | 92210 | | | |
| Timing Adjustment | М | | 923124 | | | |
| Required | 101 | | 0.2.0.12/ | | | |
| >UL CCTrCH Information | | 0 <maxno< td=""><td></td><td>For DCH</td><td>GLOBAL</td><td>ianore</td></maxno<> | | For DCH | GLOBAL | ianore |
| | | ofCCTrCH | | 1012011 | 0202/12 | ignore |
| | | S> | | | | |
| >>CCTrCH ID | М | | 9.2.3.2 | | _ | |
| >>UL DPCH Information | | 01 | | | YES | ianore |
| >>>Repetition Period | М | | 9.2.3.7 | | _ | <u> </u> |
| >>>Repetition Length | M | | 9.2.3.6 | | _ | |
| >>>TDD DPCH Offset | Μ | | 9.2.3.8A | | _ | |
| >>>UL Timeslot | | 1 to | | | _ | |
| Information | | <maxnoof< td=""><td></td><td></td><td></td><td></td></maxnoof<> | | | | |
| | | TS | | | | |
| >>>>Time Slot | М | | 9.2.1.56 | | _ | |
| >>>>Midamble Shift | Μ | | 9.2.3.4 | | — | |
| and Burst Type | | | | | | |
| >>>TFCI Presence | Μ | | 9.2.1.55 | | _ | |
| >>>>UL Code | | 1 to | | | _ | |
| Information | | <maxnoof< td=""><td></td><td></td><td></td><td></td></maxnoof<> | | | | |
| | | DPCH> | | | | |
| >>>>DPCH ID | М | | 9.2.3.3 | | _ | |
| >>>>TDD | M | | 9.2.3.8 | | - | |
| Channelisation | | | | | | |
| Code | | | | | | |
| >DL CCTrCH Information | | 0 <maxno< td=""><td></td><td>For DCH</td><td>GLOBAL</td><td>ignore</td></maxno<> | | For DCH | GLOBAL | ignore |
| | | ofCCTrCH | | | | |
| | | S> | ļ | | | |
| >>CCTrCH ID | М | | 9.2.3.2 | - | _ | |
| >>DL DPCH Information | | 01 | ļ | | YES | ignore |
| >>>Repetition Period | М | | 9.2.3.7 | | — | |
| >>>Repetition Length | M | | 9.2.3.6 | | _ | |

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|-----------------------------|----------|---|----------|--------------------|-------------|-------------|
| | | | and | description | | Criticality |
| | M | | 923v | | | |
| >>>DL Timeslot | 101 | 1 to | 3.2.3.X | | | |
| Information | | <maxnoof< td=""><td></td><td></td><td></td><td></td></maxnoof<> | | | | |
| | | TS | | | | |
| >>>>Time Slot | Μ | | 9.2.1.56 | | - | |
| >>>>Midamble Shift | М | | 9.2.3.4 | | — | |
| and Burst Type | | | 0.0.4.55 | | | |
| >>>>TFCI Presence | IM | 1 to | 9.2.1.55 | | | |
| Information | | T 10 ∠maynoOf | | | — | |
| information | | DPCH> | | | | |
| >>>>DPCH ID | М | | 9.2.3.3 | | _ | |
| >>>>TDD | М | | 9.2.3.8 | | _ | |
| Channelisation | | | | | | |
| Code | | | | | | |
| >DCH Information | | 1 <maxno< td=""><td></td><td>Only one</td><td>GLOBAL</td><td>ignore</td></maxno<> | | Only one | GLOBAL | ignore |
| Response | | ofDCHs> | | DCH per set | | |
| | | | | 01 co-ordinated | | |
| | | | | DCHs shall | | |
| | | | | be included. | | |
| >>DCH ID | М | | 9.2.1.16 | | _ | |
| >>Binding ID | М | | 9.2.1.3 | | _ | |
| >>Transport Layer | М | | 9.2.1.62 | | - | |
| Address | | | | | | - |
| >DSCH Information | | 0 | | | GLOBAL | ignore |
| Response | | <iviaxnoot< td=""><td></td><td></td><td></td><td></td></iviaxnoot<> | | | | |
| | М | 0301152 | | | | |
| >>Priority Indicator | | 116 | | Provide | _ | |
| | | | | Information | | |
| | | | | for each | | |
| | | | | priority class | | |
| | | | | used | | |
| >>>Scheduling Priority | М | | | For DSCH | — | |
| | | 1 -MaxNb | | | | |
| l ength | | MAC- | | | _ | |
| _0g | | c/shSDUL | | | | |
| | | ength> | | | | |
| >>>MAC-c/sh SDU | М | | | | - | |
| Length | | | | | | |
| >>Binding ID | M | | | | _ | |
| >> I ransport Layer Address | M | | | | _ | |
| >> i ransport Format | IVI | | | | — | |
| | | 0 | | | GLOBAL | ignore |
| Response | | <maxnoof< td=""><td></td><td></td><td>GLOBAL</td><td>ignore</td></maxnoof<> | | | GLOBAL | ignore |
| | | USCHs> | | | | |
| >>USCH ID | М | | | | _ | |
| >>Binding ID | Μ | | | | _ | |
| >>Transport Layer | М | | | | _ | |
| Address | | | | | | |
| >>Transport Format | М | | | | — | |
| | 0 | 0 | | | EACU | ionara |
| Information | ∀ | ofneighbo | | | EACH | ignore |
| | | uringRNCs | | | | |
| | | > | | | | |
| >>RNC-Id | M | | 9.2.1.50 | | _ | |
| >>CN PS Domain | 0 | | 9.2.1.12 | | _ | |
| Identifier | _ | | | | | |
| >>CN CS Domain | 0 | | 9.2.1.11 | | — | |
| Identifier | | | | | | |

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|--|----------|---|------------------------|-------------------------------------|-------------|-------------|
| | | | reference | description | | Criticality |
| >>Per FDD Cell Information | | 0 <maxno ofFDDneig hbours></maxno | | | | |
| >>>C-Id | М | | 9.2.1.6 | | - | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nu in ref. [6] | _ | |
| >>>UARFCN | M | | 9.2.1.66 | Corresponds to Nd in ref. [6] | _ | |
| >>>Frame Offset | 0 | | 9.2.1.30 | | - | |
| >>>Primary Scrambling Code | М | | 9.2.1.45 | | - | |
| >>>Cell Individual Offset | 0 | | 9.2.1.7 | | _ | |
| >>>Primary CPICH Power | 0 | | 9.2.1.44 | | - | |
| >>>Tx Diversity Indicator | М | | 9.2.2.50 | | | |
| >>>STTD Support Indicator | 0 | | 9.2.2.45 | | - | |
| >>>Closed Loop Mode1 Support Indicator | 0 | | 9.2.2.2 | | - | |
| >>>Closed Loop Mode2 Support Indicator | 0 | | 9.2.2.3 | | - | |
| >>Per TDD Cell Information | | 0 <maxno ofTDDneig hbours></maxno | | | - | |
| >>>C-ld | Μ | | 9.2.1.6 | | _ | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nt in ref. [7] | - | |
| >>>Frame Offset | 0 | | 9.2.1.30 | | - | |
| >>>Cell Parameter ID | Μ | | 9.2.1.8 | | _ | |
| >>>Sync Case | М | | 9.2.1.54 | | _ | |
| >>>Time Slot | C-Case1 | | 9.2.1.56 | | - | |
| >>>SCH Time Slot | C-Case2 | | 9.2.1.51 | | - | |
| >>>Block STTD Indicator | М | | | | - | |
| >>>Cell Individual Offset | 0 | | 9.2.1.7 | | - | |
| >>>DPCH Constant Value | 0 | | 9.2.1.23 | | _ | |
| >>>PCCPCH Power | 0 | | 9.2.1.43 | | _ | |
| Uplink SIR Target | М | | Uplink SIR 9.2.1.69 | | - | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|-----------|---|
| Case1 | This IE is present only if Sync Case = Case1. |
| Case2 | This IE is present only if Sync Case = Case2. |

| Range bound | Explanation |
|-------------------------|--|
| MaxnoofDPCHs | Maximum number of DPCHs for one CCTrCH. |
| MaxnoofDCHs | Maximum number of DCHs for one UE. |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofUSCHs | Maximum number of USCHs for one UE. |
| MaxNbMAC-c/shSDULength | Maximum number of different MAC-c/sh SDU lengths |
| MaxnoofneighbouringRNCs | Maximum number of neighbouring RNCs |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell |
| MaxnoofCCTrCHs | Maximum number of CCTrCH for one UE. |
| MaxnoofULts | Maximum number of Uplink time slots per Radio Link |
| MaxnoofTS | Maximum number of Timeslots for a UE |

9.1.5.1 FDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|-----------------------------------|----------|---|------------|---------------|-------------|-------------|
| | | | and | description | | Criticality |
| _ | | | reference | | | |
| Message Type | M | | 9.2.1.40 | | YES | reject |
| I ransaction ID | M | | 9.2.1.59 | | - | |
| D-RNII ON DO Domoin Identifier | 0 | | 9.2.1.24 | | YES | ignore |
| CN PS Domain Identifier | 0 | | 9.2.1.12 | | YES | Ignore |
| | 0 | | 9.2.1.11 | | TES | Ignore |
| CHOICE Cause level | | | | | Voc | ignoro |
| | NA | | | | Tes | Ignore |
| >PL specific | 171 | | | | Ves | ignore |
| | | 1 <maxn< td=""><td></td><td></td><td>FACH</td><td>ignore</td></maxn<> | | | FACH | ignore |
| Information Response | | oofRI s> | | | LAON | ignore |
| >>>RL ID | М | 00111202 | 92149 | | _ | |
| >>>Cause | M | | 9.2.1.5 | | _ | |
| >>Successful RL | | 0 <maxno< td=""><td>0.20</td><td></td><td>EACH</td><td>ianore</td></maxno<> | 0.20 | | EACH | ianore |
| Information Response | | ofRLs-1> | | | | ·griere |
| >>>RL ID | М | | 9.2.1.49 | | _ | |
| >>>RL Set ID | М | | 9.2.2.35 | | - | |
| >>>URA ID | М | | 9.2.1.70 | | _ | |
| >>>SAI | М | | 9.2.1.52 | | _ | |
| >>>RSSI | М | | 9.2.2.35A | | _ | |
| >>>DL Code | | 1 <maxno< td=""><td></td><td></td><td>GLOBAL</td><td>ignore</td></maxno<> | | | GLOBAL | ignore |
| Information | | ofDLCode | | | | - |
| | | S | | | | |
| >>>>DL Scrambling | Μ | | 9.2.2.8 | | - | |
| Code | | | | | | |
| >>>FDD DL | Μ | | 9.2.2.14 | | - | |
| Channelisation Code | | | | | | |
| | 0 | | 0.0.0.47D | | | |
| >>>> Transmission Gap | 0 | | 9.2.2.47B | | _ | |
| Information Response | | | | | | |
| | М | | 9227 | | | |
| >>>CHOICE diversity | 101 | | 0.2.2.1 | | _ | |
| Indication | | | | | | |
| >>>Combining | | | | | YES | ignore |
| >>>>RL ID | М | | 9.2.1.49 | Reference | _ | Ŭ |
| | | | | RL ID for the | | |
| | | | | combining | | |
| >>>Non Combining | | | | | YES | ignore |
| First RL | | | | | | |
| >>>>DCH | | 0 <maxno< td=""><td></td><td>Only one</td><td>-</td><td></td></maxno<> | | Only one | - | |
| Information | | ofDCHs> | | DCH per set | | |
| Response | | | | of | | |
| | | | | co-ordinated | | |
| | | | | DCHS Shall | | |
| | N/L | | 0.2.1.16 | be included. | | |
| >>>>>Binding ID | M | | 9.2.1.10 | | | |
| | M | | 9.2.1.5 | | | |
| Laver Address | | | 0.2.1.02 | | | |
| >>>SSDT Support | М | | 9.2.2.43 | | _ | |
| Indicator | | | | | | |
| >>>Maximum Uplink SIR | М | | Uplink SIR | | - | |
| | | | 9.2.1.69 | | | |
| >>>Minimum Uplink SIR | М | | Uplink SIR | | _ | |
| · | | | 9.2.1.69 | | | |
| >>>Closed loop timing | 0 | | | | - | |
| adjustment mode | | | | | | |
| >>>Maximum Allowed | М | | 9.2.1.35 | | - | |
| UL Tx Power | | | | | | |
| >>>Maximum DL TX | Μ | | DL Power | | — | [|

| | IE/Group Name | Presence | Range | IE type and | Semantics description | Criticality | Assigned Criticality |
|---|---|----------|---|----------------|-------------------------------------|-------------|-------------------------|
| | Power | | | 92210 | | | |
| | >>>Minimum DL TX | М | | DL Power | | _ | |
| | Power | | | 9.2.2.10 | | | |
| | >>>DSCH Information | | 0 <maxno< td=""><td></td><td></td><td>GLOBAL</td><td>ignore</td></maxno<> | | | GLOBAL | ignore |
| | Response | | ofDSCHs> | | | | |
| | >>>>DSCH ID | M | | | | _ | |
| | >>>Binding ID | M | | | | - | |
| | >>>> ransport Layer | IVI | | | | _ | |
| 1 | >>>Neighbouring Cell Information | θ | 0 <maxnoof neighbourin aRNCs></maxnoof | | | EACH | ignore |
| | >>>>RNC-Id | М | 5 | 9.2.1.50 | | - | |
| | >>>>CN PS Domain | 0 | | 9.2.1.12 | | - | |
| | Identifier | | | | | | |
| | >>>>CN CS Domain Identifier | 0 | | 9.2.1.11 | | _ | |
| | >>>>Per FDD Cell Information | | 0 <maxno ofFDDneig hbours></maxno | | | _ | |
| | >>>>C-ld | М | | 9.2.1.6 | | | |
| | >>>>UARFCN | М | | 9.2.1.66 | Corresponds to Nu in ref. [6] | _ | |
| | >>>>UARFCN | Μ | | 9.2.1.66 | Corresponds to Nd in ref. [6] | _ | |
| | >>>>Frame Offset | 0 | | 9.2.1.30 | | _ | |
| | >>>>Primary Scrambling Code | М | | 9.2.1.45 | | — | |
| | >>>>Primary CPICH Power | 0 | | 9.2.1.44 | | - | |
| | >>>>Cell Individual Offset | 0 | | 9.2.1.7 | | _ | |
| | >>>>Tx Diversity Indicator | М | | 9.2.2.50 | | _ | |
| | >>>>STTD Support | 0 | | 9.2.2.45 | | - | |
| | >>>>Closed Loop Mode1 Support Indicator | 0 | | 9.2.2.2 | | _ | |
| | >>>>Closed Loop Mode2 Support Indicator | 0 | | 9.2.2.3 | | - | |
| | >>>>Per TDD Cell Information | | 0 <maxno ofTDDneig hbours></maxno | | | _ | |
| | >>>>C-ld | M | | 9.2.1.6 | | | ļ |
| | >>>>UARFCN | М | | 9.2.1.66 | Corresponds to Nt in ref. [7] | - | |
| | >>>>Frame Offset | 0 | | 9.2.1.30 | | | |
| | >>>>Cell Parameter | М | | 9.2.1.8 | | - | |
| | >>>>Sync Case | M | | 9.2.1.54 | | | |
| | >>>>Time Slot | C-Case1 | | 9.2.1.56 | | | |
| | >>>>SCH Time Slot | C-Case2 | | 9.2.1.51 | | _ | |
| | >>>>BIOCK STID | | | | | _ | |
| | >>>>Cell Individual Offset | 0 | | 9.2.1.7 | | - | |
| | >>>>DPCH Constant Value | 0 | | 9.2.1.23 | | - | |
| | >>>>PCCPCH | 0 | | 9.2.1.43 | | | |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------------|-----------------------|-------------|-------------------------|
| Power | | | | | | |
| Uplink SIR Target | 0 | | Uplink SIR 9.2.1.69 | | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|-----------|---|
| Case1 | This IE is present only if Sync Case = Case1. |
| Case2 | This IE is present only if Sync Case = Case2. |

| Range bound | Explanation |
|-------------------------|--|
| MaxnoofRLs | Maximum number of RLs for one UE. |
| MaxnoofDCHs | Maximum number of DCHs for one UE. |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofneighbouringRNCs | Maximum number of neighbouring RNCs |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell |

TSG-RAN Working Group 3 Meeting #17 Chicago, USA, 20th –24th November 2000

Document **R3-002990**

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

| | CHANGE REQUEST Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. | | | | |
|--|---|--|--|--|--|
| | 25.423 CR 214r4 Current Version: 3.3.0 | | | | |
| GSM (AA.BB) or 3G | (AA.BBB) specification number ↑ | | | | |
| For submission t list expected approval r | to: TSG RAN #10 for approval X strategic (for SMG use only) ↑ for information | | | | |
| For | m: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc | | | | |
| Proposed chang (at least one should be m | le affects: (U)SIM ME UTRAN / Radio X Core Network | | | | |
| Source: | R-WG3 Date: November 2000 | | | | |
| Subject: | CFN in measurement reporting | | | | |
| Work item: | | | | | |
| Category:FA(only one categoryshall be markedCwith an X)D | CorrectionXRelease:Phase 2Corresponds to a correction in an earlier releaseRelease 96Release 96Addition of featureRelease 97Release 97Functional modification of featureRelease 98Release 98Editorial modificationRelease 90X | | | | |
| <u>Reason for</u> <u>change:</u> | In 25.423 the reporting of CFN in the dedicated measurement reports are optional. It is currently not clear when the CFN shall be reported. Also the CFN included in the measurement report is related to the measurement report itself and not the actual reported value, i.e. in the case when multiple measurement values are reported in one measurement report currently only one CFN is reported. This CR will clarify these issues. More over, Common and Dedicated Measurements need to specify and/or request the CFN/SFN that a measurement is taken in. This is currently missing from the Request messages, and text needs to be added to describe the optionality. Minor changes: the note in the semantics description of Transaction Id in Ded. Meas. Init. Resp. is removed; "first working assumption" is also removed from the Report | | | | |
| | R4: in 9.3.4 an erroneus space was removed. | | | | |
| Clauses affected | 1: 8.3.11, 9.1.28, 9.1.29, 9.1.31, 9.2.1.48, 9.2.1.x (new), 9.3.3, 9.3.4, 9.3.6 | | | | |
| Other specs affected: | Other 3G core specifications $X \rightarrow List of CRs:$ TS 25.433 CR264r2Other GSM core specifications $\rightarrow List of CRs:$ $\rightarrow List of CRs:$ MS test specifications $\rightarrow List of CRs:$ $\rightarrow List of CRs:$ BSS test specifications $\rightarrow List of CRs:$ $\rightarrow List of CRs:$ O&M specifications $\rightarrow List of CRs:$ | | | | |
| Other comments: | | | | | |

1

8.3.11 Measurement Initiation

8.3.11.1 General

This procedure is used by an SRNS to request the initiation of measurements in a DRNS.

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

The Measurement Initiation procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

8.3.11.2 Successful Operation



Figure 1: Measurement Initiation procedure, Successful Operation

The procedure is initiated with a DEDICATED MEASUREMENT INITIATION REQUEST message sent from the SRNC to the DRNC.

Upon reception, the DRNC shall initiate the requested measurement according to the parameters given in the request. Unless specified below, the meaning of the parameters are given in other specifications.

If the *Dedicated Measurement Object Type* IE is set to "RL", measurement results shall be reported for all of the indicated Radio Links.

[FDD - If the *Dedicated Measurement Object Type* IE is set to "RLS", measurement results shall be reported for all of the indicated Radio Link Sets.]

If the *Dedicated Measurement Object Type* IE is set to "ALL RL", measurement results shall be reported for all current and future Radio Links within the UE Context.

[FDD - If the *Dedicated Measurement Object Type* IE is set to "ALL RLS", measurement results shall be reported for all the existing and future Radio Link Sets within the UE Context.]

If the *CFN Reporting Indicator* IE is set to "FN Reporting Required", the *CFN* IE shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. The reported CFN shall be the CFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [26].

If the *CFN* IE is provided, it indicates the frame for which the first measurement shall be provided. The provided measurement value shall be the one reported by the layer 3 filter referred to as point C in the measurement model [26].

Report characteristics

The Report Characteristics IE indicates how the reporting of the measurement shall be performed.

If the Report Characteristics IE is set to 'On-Demand', the DRNS shall report the measurement result immediately.

If the *Report Characteristics* IE is set to 'Periodic', the DRNS shall periodically initiate a Measurement Report procedure for this measurement, with the requested report periodicity.

If the *Report Characteristics* IE is set to 'Event A', the DRNS shall initiate a Measurement Reporting procedure when the measured entity rises above the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event B', the DRNS shall initiate a Measurement Reporting procedure when the measured entity falls below the requested threshold and stays there for the requested hysteresis time. If no hysteresis time is given, the DRNC shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the DRNS shall initiate a Measurement Reporting procedure when the measured entity rises more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event D', the DRNS shall initiate a Measurement Reporting procedure when the measured entity falls more than the requested threshold within the requested time.

If the *Report Characteristics* IE is set to 'Event E', the DRNS shall initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The DRNS shall also initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity* IE is provided, the DRNS shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

If the *Report Characteristics* IE is set to 'Event F', the DRNS shall initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The DRNS shall also initiate a Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time' (Report B). If the *Report Periodicity* IE is provided, the DRNS shall initiate Measurement Reporting procedures periodically, with the requested frequency, between Report A and Report B. If 'Measurement Threshold 2' is not present, the DRNS shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the DRNC shall use the value zero as hysteresis times for both Report A and Report B.

If at the start of the measurement, the reporting criteria are fulfilled for any of Event A, Event B, Event E or Event F, the DRNS shall initiate a Measurement Reporting procedure immediately, and then continue with the measurements as specified in the DEDICATED MEASUREMENT INITIATION REQUEST message.

Higher layer filtering

The *Measurement Filter Coefficient* IE indicates how filtering of the measurement values shall be performed before measurement event evaluation and reporting.

The averaging shall be performed according to the following formula.

 $F_n = (1-a) \cdot F_{n-1} + a \cdot M_n$

The variables in the formula are defined as follows:

 F_n is the updated filtered measurement result

 F_{n-1} is the old filtered measurement result

 M_n is the latest received measurement result from physical layer measurements

 $a = 1/2^{(k/2)}$, where k is the parameter received in the *Measurement Filter Coefficient* IE. If the *Measurement Filter Coefficient* IE is not present, *a* shall be set to 1 (no filtering)

In order to initialise the averaging filter, F_0 is set to M_1 when the first measurement result from the physical layer measurement is received.

Response message

If the DRNS was able to initiate the measurement requested by the SRNS it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message. The message shall include the same Measurement Id that was used in the measurement request.

Only in the case when the *Report Characteristics* IE is set to "On-Demand", the DEDICATED MEASUREMENT INITIATION RESPONSE message shall contain the measurement result. In this case also the *Dedicated Measurement Object* IE shall be included if it was included in the request message.

9.1.28 DEDICATED MEASUREMENT INITIATION REQUEST

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|----------|---|--|--------------------------|-------------|-------------------------|
| Message Type | Μ | | 9.2.1.40 | | YES | reject |
| Transaction ID | Μ | | 9.2.1.59 | | - | |
| Measurement Id | Μ | | 9.2.1.37 | | YES | reject |
| Dedicated Measurement Object Type | М | | 9.2.1.17 | | YES | reject |
| CHOICE Dedicated Measurement Object Type | | | | | YES | ignore |
| >"RL" | | | | | YES | reject |
| >>RL Information | | 1 <maxn oofRLs></maxn | | | EACH | reject |
| >>>RL-ID | М | | 9.2.1.49 | | _ | |
| >>>DPCH ID | 0 | | 9.2.3.3 | TDD only | - | |
| >"RLS" | | | | FDD only | YES | reject |
| >>RL Set Information | | 1 <maxn oofRLSet s></maxn | | | EACH | reject |
| >>>RL-Set-ID | М | | 9.2.2.35 | | - | |
| Dedicated Measurement Type | Μ | | 9.2.1.18 | | YES | reject |
| Measurement Filter Coefficient | 0 | | 9.2.1.36 | | YES | reject |
| Report Characteristics | Μ | | 9.2.1.48 | | YES | reject |
| CFN reporting indicator | M | | <u>FN</u> reporting indicator 9.2.1.X | | YES | reject |
| CFN | 0 | | 9.2.1.9 | | YES | reject |

| Range bound | Explanation |
|---------------|---|
| MaxnoofRLs | Maximum number of individual RLs a measurement can be started on. |
| MaxnoofRLSets | Maximum number of individual RL Sets a measurement can be started |
| | on. |
9.1.29 DEDICATED MEASUREMENT INITIATION RESPONSE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-------------------------------------|-----------------------------|--|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | M | | 9.2.1.59 | Are both transaction id and Measuremen t id needed ? | _ | |
| Measurement Id | Μ | | 9.2.1.37 | | YES | ignore |
| CHOICE Dedicated Measurement Object Type | 0 | | | Dedicated Measurement Object Type the measurement was initiated with | YES | ignore |
| >"RL" or "ALL RL" | | | | | YES | ignore |
| >>RL Information | | 1 <maxno ofRLs></maxno | | | EACH | ignore |
| >>>RL ID | М | | 9.2.1.49 | | - | |
| >>>DPCH ID | 0 | | 9.2.3.3 | TDD only | - | |
| >>>Dedicated Measurement Value | М | | 9.2.1.19 | | Ι | |
| >>>CFN | <u>0</u> | | <u>9.2.1.9</u> | Dedicated Measuremen t Time Reference | _ | |
| >"RLS" or "ALL RLS" | | | | FDD only | YES | ignore |
| >>RL Set Information | | 1 <maxno ofRLSets></maxno | | | EACH | ignore |
| >>>RL Set ID | М | | 9.2.2.35 | | - | |
| >>>Dedicated Measurement Value | Μ | | 9.2.1.19 | | - | |
| >>>CFN | <u>0</u> | | 9.2.1.9 | Dedicated Measuremen t Time Reference | - | |
| CEN | θ | | 9.2.1.9 | Dedicated Measuremen t-Time Reference | YES | ignoro |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Range bound | Explanation |
|---------------|---|
| MaxnoofRLs | Maximum number of individual RLs the measurement can be started on. |
| MaxnoofRLSets | Maximum number of individual RL Sets the measurement can be started |
| | on. |

9.1.30 DEDICATED MEASUREMENT INITIATION FAILURE

| IE/Group Name | Presence | Range | IE Type and | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|----------------|--------------------------|-------------|-------------------------|
| | | | Reference | | | |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | - | |
| Measurement Id | М | | 9.2.1.37 | | YES | ignore |
| Cause | М | | 9.2.1.5 | | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

9.1.31 DEDICATED MEASUREMENT REPORT

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|--|----------|--------------------------------------|--------------------|---|-------------|-------------------|
| | | | and Reference | Description | | Criticality |
| Message Type | М | | 92140 | | YES | ianore |
| Transaction ID | M | | 92159 | | - | ignore |
| Measurement Id | M | | 9.2.1.37 | | YES | ianore |
| CHOICE Dedicated | | | 0.20 | Dedicated | YES | ignore |
| Measurement Object Type | | | | Measurement Object Type the measurement was initiated with | | |
| >"RL" or "ALL RL" | | | | | YES | ignore |
| >>RL Information | | 1 <maxnoo fRLs></maxnoo | | | EACH | ignore |
| >>>RL-ID | М | | 9.2.1.49 | | _ | |
| >>>DPCH ID | 0 | | 9.2.3.3 | TDD only | - | |
| >>>CHOICE Measurement Availability Indicator | | | | | | |
| >>>"Measurement Available" | | | | | YES | ignore |
| >>>>Dedicated Measurement Value | М | | 9.2.1.19 | | - | |
| <u>>>>>CFN</u> | <u>0</u> | | <u>9.2.1.9</u> | Dedicated Measuremen t Time Reference | - | |
| >>>>"Measurement not Available" | | NULL | | | YES | ignore |
| >"RLS" or "ALL RLS" | | | | FDD only | YES | ignore |
| >>RL Set Information | | 1 <maxnoo fRLSets></maxnoo | | | EACH | ignore |
| >>>RL Set ID | М | | 9.2.2.35 | | - | |
| >>>CHOICE Measurement Availability Indicator | | | | | | |
| >>>"Measurement Available" | | | | | YES | ignore |
| >>>>Dedicated Measurement Value | M | | 9.2.1.19 | | - | |
| >>>>CFN | <u>0</u> | | <u>9.2.1.9</u> | Dedicated Measuremen t Time Reference | _ | |
| >>>"Measurement not Available" | | NULL | | | | |
| CEN | θ | | 9.2.1.9 | Dedicated Measuremen t Time Reference | YES | ignore |

| Range bound | Explanation |
|---------------|---|
| MaxnoofRLs | Maximum number of individual RLs the measurement can be started |
| | on. |
| MaxnoofRLSets | Maximum number of individual RL Sets the measurement can be started on. |

9.2.1.48 Report Characteristics

The Report Characteristics, defines how the reporting shall be performed.

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
|--|-----------------|-------|--|---|
| Report Characteristics | | | Reference | |
| >Report Characteristics type | | | ENUMERAT ED(On Demand, Periodic, Event A, Event B, Event B, Event C, Event D, Event E, Event F,) | |
| >Periodic Report Information | C – Periodic | | | |
| >>Report Periodicity | М | | ENUMERAT ED (10ms1min,) step 10ms, (1min1hr,) step 1min | The periodicity with which the DRNS shall send measurement reports. First working assumption! |
| >Event A | C – Event | | | |
| >>Measurement Threshold | M | | Measurement Threshold | The threshold for which the DRNS shall trigger a measurement report. |
| >>Measurement Hysteresis Time | 0 | | ENUMERAT ED (10ms1min,) step 10ms | |
| >Event B | C – Event B | | | |
| >>Measurement Threshold | М | | Measurement Threshold | The threshold for which the DRNS shall trigger a measurement report. |
| >>Measurement Hysteresis Time | 0 | | ENUMERAT ED (10ms1min,) step 10ms | |
| >Event C | C – Event | | 10113, | |
| >> Measurement Increase/Decrease Threshold | M | | Measurement Increase/Decr ease Threshold | |
| >>Measurement Change Time | М | | ENUMERAT ED (10ms1min,) step 10ms, | The time within which the measurement entity shall rise, in order to trigger a measurement report. |
| >Event D | C – Event D | | | |
| >> Measurement Increase/Decrease Threshold | М | | Measurement Increase/Decr ease Threshold | |
| >>Measurement Change Time | M | | ENUMERAT ED (10ms1min,) step 10ms, | The time within which the measurement entity shall fall, in order to trigger a measurement report. |
| >Event E | C – Event E | | | |
| >Measurement Threshold 1 | М | | Measurement Threshold | |

| IE/Group Name | Presence | Range | IE Type and | Semantics Description |
|----------------------|-----------|-------|--------------|----------------------------|
| - | | _ | Reference | _ |
| >>Measurement | 0 | | Measurement | |
| Threshold 2 | | | Threshold | |
| >>Measurement | 0 | | ENUMERAT | The hysteresis time in ms |
| Hysteresis Time | | | ED | |
| | | | (10ms1min, | |
| | | |) | |
| | | | step 10ms, | |
| >>Report Periodicity | 0 | | ENUMERAT | The periodicity with which |
| | | | ED | the DRNS shall send |
| | | | (10ms1min, | measurement reports. |
| | | |) step | |
| | | | 10ms, | |
| | | | (1min1hr, | |
| | | |) step 1min, | |
| >Event F | C – Event | | | |
| | F | | | |
| >>Measurement | М | | Measurement | |
| Threshold 1 | | | Threshold | |
| >>Measurement | 0 | | Measurement | |
| Threshold 2 | | | Threshold | |
| >>Measurement | 0 | | ENUMERAT | The hysteresis time in ms |
| Hysteresis Time | | | ED | |
| | | | (10ms1min, | |
| | | |) | |
| | - | | step 10ms, | |
| >Report Periodicity | 0 | | ENUMERAT | The periodicity with which |
| | | | ED | the DRNS shall send |
| | | | (10ms1min, | measurement reports. |
| | | |) step | |
| | | | 10ms, | |
| | | | (1min1hr, | |
| | | |) step 1min, | |

| Condition | Explanation |
|------------|--|
| C-Periodic | Valid if Report Characteristics Type IE indicates "periodic" |
| C-Event A | Valid if Report Characteristics Type IE indicates "Event A" |
| C-Event B | Valid if Report Characteristics Type IE indicates "Event B" |
| C-Event C | Valid if Report Characteristics Type IE indicates "Event C" |
| C-Event D | Valid if Report Characteristics Type IE indicates "Event D" |
| C-Event E | Valid if Report Characteristics Type IE indicates "Event E" |
| C-Event F | Valid if Report Characteristics Type IE indicates "Event F" |

9.2.1.X FN reporting indicator

Frame Number reporting indicator.

Indicates if the CFN shall be included together with the reported measurement value.

| IE/Group Name | Presence | <u>Range</u> | IE type and reference | Semantics description |
|------------------------|----------|--------------|--------------------------|-----------------------|
| FN reporting indicator | | | ENUMERAT FD(FN | |
| | | | reporting | |
| | | | reporting not | |

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, BLER, Block-STTD-Indicator, BindingID, C-ID, C-RNTI, CCTrCH-ID, CellIndividualOffset, CFN, ClosedLoopModel-SupportIndicator, ClosedLoopMode2-SupportIndicator, Closedlooptimingadjustmentmode, CN-CS-DomainIdentifier, CN-PS-DomainIdentifier, Cause, CellParameterID, ChipOffset, CriticalityDiagnostics, D-RNTI,

D-RNTI, D-RNTI-ReleaseIndication, DCH-ID, DL-DPCH-SlotFormat, DL-TimeslotISCP, DL-Power, DL-ScramblingCode,

DPCHConstantValue, DPCH-ID, DRACControl, DRXCycleLengthCoefficient, DedicatedMeasurementType, DedicatedMeasurementValue, DiversityControlField, DiversityMode, DSCH-ID, FACH-InitialWindowSize, SchedulingPriorityIndicator, FDD-DL-ChannelisationCodeNumber, FDD-S-CCPCH-Offset, FDD-TPC-DownlinkStepSize, FirstRLS-Indicator, FNReportingIndicator, FrameHandlingPriority, FrameOffset, GA-AccessPointPosition, GA-Cell, IB-SG-POS, IB-SG-REP, IMSI, L3-Information, LimitedPowerIncrease, MAC-c-sh-SDU-Length, MaximumAllowedULTxPower, MaxNrDLPhysicalchannels, MaxNrOfUL-DPCHs, MaxNrTimeslots, MaxNrULPhysicalchannels, MeasurementFilterCoefficient, MeasurementID, MidambleShiftAndBurstType, MinimumSpreadingFactor, MinUL-ChannelisationCodeLength, MultipleURAsIndicator, MultiplexingPosition, NrOfDLchannelisationcodes, PDSCHCodeMapping, PayloadCRC-PresenceIndicator, PCCPCH-Power, PowerAdjustmentType, PowerOffset, PRACH-Midamble, PRACH-MinimumSpreadingFactor, PreambleSignatures, PrimaryCCPCH-RSCP, PrimaryCPICH-EcNo, PrimaryCPICH-Power, PrimaryScramblingCode, PropagationDelay,

PunctureLimit, QE-Selector, RACH-SubChannelNumbers. RANAP-RelocationInformation, RB-Identity, RL-ID, RL-Set-ID, RNC-ID, RepetitionLength, RepetitionPeriod, ReportCharacteristics, RSSI, S-FieldLength, S-RNTI, SCH-TimeSlot, SAI, SN. SSDT-CellID, SSDT-CellID-Length, SSDT-Indication, SSDT-SupportIndicator, STTD-Indicator, STTD-SupportIndicator, AdjustmentPeriod, ScaledAdjustmentRatio, MaxAdjustmentStep, ScramblingCodeNumber, SecondaryCCPCH-SlotFormat, SyncCase, TDD-ChannelisationCode, TDD-DPCHOffset, TDD-PhysicalChannelOffset, TDD-TPC-DownlinkStepSize, TFCI-Coding, TFCI-Presence, TFCI-SignallingMode, TimeSlot, TimingAdjustmentRequired, TOAWE, TOAWS, TransmitDiversityIndicator, TransportBearerID, TransportBearerRequestIndicator, TFCS, Transmission-Gap-Pattern-Sequence-Information, Transmission-Gap-Pattern-Sequence-Information-Response, TransportFormatManagement, TransportFormatSet, TransportLayerAddress, TrCH-SrcStatisticsDescr,

TxDiversityIndicator,

UARFCN,

UC-ID, UL-DPCCH-SlotFormat, UL-SIR, UL-FP-Mode, UL-ScramblingCode, UL-TimeslotISCP, URA-ID, USCH-ID FROM RNSAP-IEs PrivateIE-Container{}, ProtocolExtensionContainer{}, ProtocolIE-ContainerList{}, ProtocolIE-ContainerPair{}, ProtocolIE-ContainerPairList{}, ProtocolIE-Container{}, ProtocolIE-Single-Container{}, RNSAP-PRIVATE-IES, RNSAP-PROTOCOL-EXTENSION, RNSAP-PROTOCOL-IES, RNSAP-PROTOCOL-IES-PAIR FROM RNSAP-Containers maxNoOfDSCHs, maxNoOfRB, maxNoOfUSCHs, maxNrOfCCTrCHs, maxNrOfDCHs, maxNrOfTS, maxNrOfDL-Codes, maxNrOfDPCHs, maxNrOfMACcshSDU-Length, maxNrOfRLs, maxNrOfRLSets, maxNrOfRLs-1, maxNrOfRLs-2, maxNrOfSCCPCHs, maxNrOfULTs, maxNrOfDLTs, maxRNCinURA-1, maxNrOfNeighbouringRNCs, maxNrOfFDDNeighboursPerRNC, maxNrOfTDDNeighboursPerRNC, maxFACHCountPlus1, maxIBSEG,

> id-Active-Pattern-Sequence-Information, id-AdjustmentRatio, id-All-RLItem-DM-Rqst, id-All-RLItem-Set-DM-Rqst, id-AllowedQueuingTime, id-BindingID,

id-C-ID, id-C-RNTI, id-CFN, id-CFN, id-CFNReportingIndicator, id-CN-CS-DomainIdentifier, id-CN-PS-DomainIdentifier, id-Cause, id-CauseLevel-RL-AdditionFailureFDD, id-CauseLevel-RL-AdditionFailureTDD, id-CauseLevel-RL-ReconfFailure,

----TEXT HAS BEEN OMITTED----

```
_ _
-- DEDICATED MEASUREMENT INITIATION REQUEST
  DedicatedMeasurementInitiationRequest ::= SEQUENCE {
    protocolIEs
                                  ProtocolIE-Container
                                                            {{DedicatedMeasurementInitiationRequest-IEs}},
                                  ProtocolExtensionContainer {{DedicatedMeasurementInitiationRequest-Extensions}}
   protocolExtensions
                                                                                                                               OPTIONAL,
    . . .
DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::=
     ID id-MeasurementID
                                     CRITICALITY reject TYPE MeasurementID
                                                                                       PRESENCE mandatory }
    { ID id-DedicatedMeasurementObjectType-DM-Rgst CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rgst PRESENCE mandatory } |
    -- This IE represents both the Dedicated Measurement Object Type IE and the choice based on the Dedicated Measurement Object Type
    -- as described in the tabular message format in subclause 9.1.
    { ID id-DedicatedMeasurementType
                                                                                                  PRESENCE mandatory } |
                                             CRITICALITY reject TYPE DedicatedMeasurementType
     ID id-MeasurementFilterCoefficient
                                             CRITICALITY reject TYPE MeasurementFilterCoefficient
                                                                                                       PRESENCE optional }
     ID id-ReportCharacteristics
                                         CRITICALITY reject TYPE ReportCharacteristics
                                                                                            PRESENCE mandatory
                                                                                                                } - |
     ID id-CFNReportingIndicator
                                         CRITICALITY reject TYPE FNReportingIndicator
                                                                                             PRESENCE mandatory
     ID id-CFN
                                         CRITICALITY reject TYPE CFN
                                                                                             PRESENCE optional
    . . .
DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
   rL
                          RL-DM-Rqst,
   rLS
                          RL-Set-DM-Rqst,
    allRL
                          All-RL-DM-Rqst,
                          All-RL-Set-DM-Rgst,
   allRLS
    . . .
RL-DM-Rqst ::= ProtocolIE-Single-Container { { RLIE-DM-Rqst } }
RLIE-DM-Rqst RNSAP-PROTOCOL-IES ::= {
    { ID id-RLItem-DM-Rqst
                                                                        PRESENCE mandatory }
                              CRITICALITY reject TYPE RLItem-DM-Rqst
RLItem-DM-Rgst ::= SEQUENCE {
   rL-InformationList-DM-Rqst
                                  RL-InformationList-DM-Rqst,
   iE-Extensions
                                  ProtocolExtensionContainer { { RLItem-DM-Rqst-ExtIEs } } OPTIONAL,
       . . .
RLItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
                                         ::= RL-IE-ContainerList1 { {RL-Information-DM-Rqst-IEs } }
RL-InformationList-DM-Rqst
```

```
RL-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rqst
                                            CRITICALITY reject TYPE RL-InformationItem-DM-Rqst
                                                                                                      PRESENCE mandatory
                                                                                                                           }.
    . . .
1
RL-InformationItem-DM-Rgst ::= SEQUENCE {
    rL-ID
                                RL-ID.
    dPCH-ID
                                DPCH-ID
                                            OPTIONAL,
   iE-Extensions
                                    ProtocolExtensionContainer { {RL-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL,
    . . .
RL-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
RL-Set-DM-Rqst ::= ProtocolIE-Single-Container { { RL-SetIE-DM-Rqst } }
RL-SetIE-DM-Rqst RNSAP-PROTOCOL-IES ::= {
                                    CRITICALITY reject TYPE RL-SetItem-DM-Rqst
    { ID id-RL-SetItem-DM-Rgst
                                                                                     PRESENCE mandatory }
RL-SetItem-DM-Rqst ::= SEQUENCE {
    rL-Set-InformationList-DM-Rqst RL-Set-InformationList-DM-Rqst,
                                    ProtocolExtensionContainer { { RL-SetItem-DM-Rqst-ExtIEs } } OPTIONAL,
    iE-Extensions
        . . .
RL-SetItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
l
RL-Set-InformationList-DM-Rqst
                                                ::= RL-Set-IE-ContainerList { {RL-Set-Information-DM-Rqst-IEs} }
RL-Set-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rqst
                                                CRITICALITY ignore TYPE RL-Set-InformationItem-DM-Rqst
                                                                                                               PRESENCE mandatory },
    . . .
}
RL-Set-InformationItem-DM-Rqst ::= SEQUENCE {
    rL-Set-ID
                                    RL-Set-ID,
                                    ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rqst-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
RL-Set-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
All-RL-DM-Rqst ::= ProtocolIE-Single-Container {{ All-RLIE-DM-Rqst }}
All-RLIE-DM-Rgst RNSAP-PROTOCOL-IES ::= {
```

```
Release 99
                                                                   278
                                                                                                                3G TS 25.423 V3.3.0 (2000-09)
   { ID id-All-RLItem-DM-Rqst CRITICALITY ignore TYPE All-RLItem-DM-Rqst
                                                                         PRESENCE mandatory }
All-RLItem-DM-Rgst ::= NULL
All-RL-Set-DM-Rgst ::= ProtocolIE-Single-Container {{ All-RLIE-Set-DM-Rgst }}
All-RLIE-Set-DM-Rqst RNSAP-PROTOCOL-IES ::= {
   { ID id-All-RLItem-Set-DM-Rgst CRITICALITY ignore
                                                      TYPE All-RLItem-Set-DM-Rgst
                                                                                        PRESENCE mandatory }
}
All-RLItem-Set-DM-Rgst ::= NULL
DedicatedMeasurementInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
     _ _
-- DEDICATED MEASUREMENT INITIATION RESPONSE
DedicatedMeasurementInitiationResponse ::= SEQUENCE {
                                                          {{DedicatedMeasurementInitiationResponse-IEs}},
   protocolIEs
                                ProtocolIE-Container
   protocolExtensions
                                ProtocolExtensionContainer {{DedicatedMeasurementInitiationResponse-Extensions}}
                                                                                                                            OPTIONAL,
   . . .
}
DedicatedMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
     ID id-MeasurementID
                                    CRITICALITY ignore TYPE MeasurementID
                                                                                   PRESENCE mandatory }
     ID id-DedicatedMeasurementObjectType-DM-Rsp CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rsp PRESENCE optional }
                                 CRITICALITY ignore TYPE CriticalityDiagnostics
     ID id-CriticalityDiagnostics
                                                                                         PRESENCE optional }+
   -{ ID id CFN
                                      - CRITICALITY ignore TYPE CFN PRESENCE optional },
   . . .
DedicatedMeasurementObjectType-DM-Rsp ::= CHOICE {
   rLs
                         RL-DM-Rsp,
   rLS
                         RL-Set-DM-Rsp,
   allRL
                         RL-DM-Rsp,
   allRLS
                         RL-Set-DM-Rsp,
   . . .
RL-DM-Rsp ::= ProtocolIE-Single-Container {{ RLIE-DM-Rsp }}
RLIE-DM-Rsp RNSAP-PROTOCOL-IES ::= {
   { ID id-RLItem-DM-Rsp
                             CRITICALITY ignore
                                                   TYPE
                                                          RLItem-DM-Rsp
                                                                             PRESENCE
                                                                                        mandatory }
RLItem-DM-Rsp ::= SEQUENCE {
```

```
rL-InformationList-DM-Rsp
                                    RL-InformationList-DM-Rsp,
    iE-Extensions
                                    ProtocolExtensionContainer { { RLItem-DM-Rsp-ExtIEs } } OPTIONAL,
    . . .
RLItem-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
RL-Set-DM-Rsp ::= ProtocolIE-Single-Container {{ RL-SetIE-DM-Rsp }}
RL-SetIE-DM-Rsp RNSAP-PROTOCOL-IES ::= {
                                    CRITICALITY ignore
    { ID id-RL-SetItem-DM-Rsp
                                                             TYPE
                                                                     RL-SetItem-DM-Rsp
                                                                                              PRESENCE mandatory }
RL-SetItem-DM-Rsp ::= SEQUENCE {
    rL-Set-InformationList-DM-Rsp
                                    RL-Set-InformationList-DM-Rsp,
    iE-Extensions
                                    ProtocolExtensionContainer { { RL-SetItem-DM-Rsp-ExtIEs } } OPTIONAL,
    . . .
l
RL-SetItem-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
RL-InformationList-DM-Rsp
                                            ::= RL-IE-ContainerList1 { {RL-Information-DM-Rsp-IEs} }
RL-Information-DM-Rsp-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rsp
                                            CRITICALITY ignore TYPE RL-InformationItem-DM-Rsp
                                                                                                 PRESENCE mandatory },
    . . .
}
RL-InformationItem-DM-Rsp ::= SEQUENCE {
    rL-ID
                                RL-ID,
    dPCH-ID
                                DPCH-ID
                                                     OPTIONAL,
    dedicatedMeasurementValue
                                        DedicatedMeasurementValue,
                                                     OPTIONAL,
    cFN
                                CFN
    iE-Extensions
                                     ProtocolExtensionContainer { {RL-InformationItem-DM-Rsp-ExtIEs} } OPTIONAL,
    . . .
RL-InformationItem-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
                                                 ::= RL-Set-IE-ContainerList { {RL-Set-Information-DM-Rsp-IEs} }
RL-Set-InformationList-DM-Rsp
RL-Set-Information-DM-Rsp-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rsp
                                                 CRITICALITY ignore TYPE RL-Set-InformationItem-DM-Rsp
                                                                                                             PRESENCE mandatory },
    . . .
```

```
RL-Set-InformationItem-DM-Rsp ::= SEQUENCE {
   rL-Set-ID
                               RL-Set-ID,
   dedicatedMeasurementValue
                               DedicatedMeasurementValue.
   CFN
                               CFN
                                                        OPTIONAL.
   iE-Extensions
                               ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rspns-ExtIEs} } OPTIONAL,
   . . .
RL-Set-InformationItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
DedicatedMeasurementInitiationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
}
   **********
_ _
-- DEDICATED MEASUREMENT INITIATION FAILURE
  ___
DedicatedMeasurementInitiationFailure ::= SEQUENCE {
   protocolIEs
                               ProtocolIE-Container
                                                       {{DedicatedMeasurementInitiationFailure-IEs}},
                               ProtocolExtensionContainer {{DedicatedMeasurementInitiationFailure-Extensions}}
   protocolExtensions
                                                                                                                     OPTIONAL,
   . . .
DedicatedMeasurementInitiationFailure-IEs RNSAP-PROTOCOL-IES ::= {
                                  CRITICALITY ignore TYPE MeasurementID
    { ID id-MeasurementID
                                                                                PRESENCE mandatory } |
     ID id-Cause
                               CRITICALITY ignore TYPE Cause
                                                                         PRESENCE mandatory }
   { ID id-CriticalityDiagnostics
                                      CRITICALITY ignore TYPE CriticalityDiagnostics
                                                                                     PRESENCE optional },
       . . .
}
DedicatedMeasurementInitiationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
     _ _
-- DEDICATED MEASUREMENT REPORT
  DedicatedMeasurementReport ::= SEQUENCE {
                                                       {{DedicatedMeasurementReport-IEs}},
   protocolIEs
                               ProtocolIE-Container
   protocolExtensions
                               ProtocolExtensionContainer {{DedicatedMeasurementReport-Extensions}}
                                                                                                           OPTIONAL,
   . . .
```

```
DedicatedMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
     ID id-MeasurementID
                                        CRITICALITY ignore TYPE MeasurementID
                                                                                            PRESENCE mandatory }
     ID id-DedicatedMeasurementObjectType-DM-Rprt CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rprt PRESENCE mandatory } +
    { ID id CFN
                                      <u>CRITICALITY ignore TYPE CEN PRESENCE optional</u>.
    . . .
DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
    rLs
                            RL-DM-Rprt,
    rLS
                            RL-Set-DM-Rprt,
                           RL-DM-Rprt,
    allRL
    allRLS
                            RL-Set-DM-Rprt,
    . . .
RL-DM-Rprt ::= ProtocolIE-Single-Container {{ RLIE-DM-Rprt }}
RLIE-DM-Rprt RNSAP-PROTOCOL-IES ::= {
    { ID id-RLItem-DM-Rprt
                                CRITICALITY ignore
                                                        TYPE
                                                                RLItem-DM-Rprt
                                                                                     PRESENCE
                                                                                                mandatory }
RLItem-DM-Rprt ::= SEQUENCE {
    rL-InformationList-DM-Rprt
                                    RL-InformationList-DM-Rprt,
                                    ProtocolExtensionContainer { { RLItem-DM-Rprt-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
RLItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
RL-Set-DM-Rprt ::= ProtocolIE-Single-Container {{ RL-SetIE-DM-Rprt }}
RL-SetIE-DM-Rprt RNSAP-PROTOCOL-IES ::= {
                                    CRITICALITY ignore
    { ID id-RL-SetItem-DM-Rprt
                                                            TYPE
                                                                    RL-SetItem-DM-Rprt
                                                                                            PRESENCE mandatory
RL-SetItem-DM-Rprt ::= SEQUENCE {
    rL-Set-InformationList-DM-Rprt RL-Set-InformationList-DM-Rprt,
    iE-Extensions
                                    ProtocolExtensionContainer { { RL-SetItem-DM-Rprt-ExtIEs } } OPTIONAL,
    . . .
RL-SetItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
                                            ::= RL-IE-ContainerList1 { {RL-Information-DM-Rprt-IEs} }
RL-InformationList-DM-Rprt
RL-Information-DM-Rprt-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rprt
                                            CRITICALITY ignore TYPE RL-InformationItem-DM-Rprt
                                                                                                     PRESENCE mandatory
                                                                                                                          },
```

```
. . .
RL-InformationItem-DM-Rprt ::= SEQUENCE {
    rL-ID
                                RL-ID.
    dPCH-ID
                                DPCH-ID
                                                     OPTIONAL.
    measurementAvailabilityIndicator
                                       MeasurementAvailabilityIndicator-DedicatedMeasurementReport,
    iE-Extensions
                                    ProtocolExtensionContainer { {RL-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
    . . .
RL-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
                                                ::= RL-Set-IE-ContainerList { {RL-Set-Information-DM-Rprt-IEs} }
RL-Set-InformationList-DM-Rprt
RL-Set-Information-DM-Rprt-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rprt
                                                CRITICALITY ignore TYPE RL-Set-InformationItem-DM-Rprt
                                                                                                               PRESENCE mandatory
                                                                                                                                    }.
    . . .
}
RL-Set-InformationItem-DM-Rprt ::= SEQUENCE
    rL-Set-ID
                                    RL-Set-ID,
    measurementAvailabilityIndicator MeasurementAvailabilityIndicator-DedicatedMeasurementReport,
                                    ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rprt-ExtIEs } } OPTIONAL,
    iE-Extensions
    . . .
RL-Set-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
MeasurementAvailabilityIndicator-DedicatedMeasurementReport::= CHOICE {
    measurementAvailable
                                MeasurementAvailable-DedicatedMeasurementReport,
    measurementnotAvailable
                                MeasurementnotAvailable-DedicatedMeasurementReport,
    . . .
MeasurementAvailable-DedicatedMeasurementReport::= ProtocollE-Single-Container {{ MeasurementAvailableIE-DedicatedMeasurementReport }}
MeasurementAvailableIE-DedicatedMeasurementReport RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementAvailableItem-DedicatedMeasurementReport CRITICALITY ignore TYPE MeasurementAvailableItem-DedicatedMeasurementReport
    PRESENCE mandatory }
}
MeasurementAvailableItem-DedicatedMeasurementReport ::= SEQUENCE
    dedicatedmeasurementValue
                                    DedicatedMeasurementValue,
    CFN
                                     CFN
                                                             OPTIONAL,
                                    ProtocolExtensionContainer { { MeasurementAvailableItem-DedicatedMeasurementReport-ExTIEs} } 
    ie-Extensions
                                                                                                                                           OPTIONAL,
    . . .
```

```
MeasurementAvailableItem-DedicatedMeasurementReport-EXTIES RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
MeasurementnotAvailable-DedicatedMeasurementReport ::= ProtocolIE-Single-Container {{ MeasurementnotAvailableIE-DedicatedMeasurementReport }}
MeasurementnotAvailableIE-DedicatedMeasurementReport RNSAP-PROTOCOL-IES ::= {
      { ID id-MeasurementnotAvailableItem-DedicatedMeasurementReport CRITICALITY ignore TYPE MeasurementnotAvailableItem-DedicatedMeasurementReport PRESENCE mandatory }
MeasurementnotAvailableItem-DedicatedMeasurementReport ::= NULL
DedicatedMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
      ...
}
```

----TEXT HAS BEEN OMITTED----

9.3.4 Information Element Definitions

----TEXT HAS BEEN OMITTED----

```
Release 99
```

```
-- F
FACH-InitialWindowSize
                                ::= INTEGER { unlimited(255) } (0..255)
-- Number of frames MAC-c-sh SDUs.
-- 255 = Unlimited number of FACH data frames
FDD-DL-ChannelisationCodeNumber
                                    ::= INTEGER (0..511)
-- According to the mapping in [27]. The maximum value is equal to the DL spreading factor -1--
FDD-S-CCPCH-Offset
                            ::= INTEGER (0..149)
FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-sizel,
    step-size1-5,
    step-size2,
    . . .
SchedulingPriorityIndicator
                                        ::= INTEGER { lowest(0), highest(15) } (0..15)
FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS
}
FNReportingIndicator ::= ENUMERATED {
    fN-reporting-required,
    fN-reporting-not-required
FrameHandlingPriority
                                ::= INTEGER { lowest(0), highest(15) } (0..15)
FrameOffset
                        ::= INTEGER (0..255)
-- Frames
```

9.3.6 Constant Definitions

| ************************************ | * * * * * * * * |
|---|------------------|
| | |
| Constant definitions | |
| | |
| ************************************ | * * * * * * * |
| | |
| RNSAP-Constants { | |
| itu-t (0) identified-organization (4) etsi (0) mobileDoma | in (0) |
| umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap | -Constants (4) } |
| | |
| DEFINITIONS AUTOMATIC TAGS ::= | |
| BEGIN | |
| | |
| ************************************ | * * * * * * * * |
| | |
| Elementary Procedures | |
| | |
| ************************************ | * * * * * * * * |
| id_commonTransportChannelPegourgegInitiationFDD | TNTECED ··- 0 |
| id-commonTransportChannelResourcesInitiationTDD | INTEGER ::= 1 |
| id-commonTransportChannelResourcesRelease | INTEGER $::= 2$ |
| id-compressedModeCommandEDD | INTEGER ::= 4 |
| id-downlinkPowerControl | INTEGER ::= 6 |
| id-downlinkSignallingTransfer | INTEGER $::= 7$ |
| id-errorIndication | INTEGER ::= 8 |
| id-measurementFailure | INTEGER $::= 9$ |
| id-measurementInitiation | INTEGER $::= 10$ |
| id-measurementReporting | INTEGER $::= 11$ |
| id-measurementTermination | INTEGER ::= 12 |
| id-pagingRequest | INTEGER ::= 13 |
| id-physicalChannelReconfiguration | INTEGER ::= 14 |
| id-privateMessage | INTEGER ::= 15 |
| id-radioLinkAddition | INTEGER ::= 16 |
| id-radioLinkDeletion | INTEGER ::= 17 |
| id-radioLinkFailure | INTEGER ::= 18 |
| id-radioLinkRestoration | INTEGER ::= 19 |
| id-radioLinkSetup | INTEGER ::= 20 |
| id-srnsRelocationCommit | INTEGER ::= 21 |
| id-synchronisedRadioLinkReconfigurationCancellation | INTEGER ::= 22 |
| id-synchronisedRadioLinkReconfigurationCommit | INTEGER ::= 23 |
| id-synchronisedRadioLinkReconfigurationPrepare | INTEGER ::= 24 |
| id-unSynchronisedRadioLinkReconfiguration | INTEGER ::= 25 |
| id-uplinkSignallingTransferFDD | INTEGER ::= 26 |
| id-uplinkSignallingTransferTDD | INTEGER ::= 27 |

| ************************************ | * |
|--------------------------------------|---|
| | |
| Extension constants | |
| | |
| ********** | * |
| | |
| maxPrivateIEs | INTEGER ::= 65535 |
| maxProtocolExtensions | INTEGER ::= 65535 |
| maxProtocolIEs | INTEGER ::= 65535 |
| | |
| ************************************ | * |
| | |
| Lists | |
| | |
| ************************************ | * |
| | |
| maxCodeNumComp-1 | INTEGER ::= 255 |
| maxRateMatching | INTEGER ::= 256 |
| maxNoCodeGroups | INTEGER ::= 256 |
| maxNoOfDSCHs | INTEGER ::= 10 |
| maxNoOfRB | INTEGER ::= 32 |
| maxNoOfUSCHs | INTEGER ::= 10 |
| maxNoTFCIGroups | INTEGER ::= 256 |
| maxNrOfTFCs | INTEGER ::= 1024 |
| maxNrOfTFs | INTEGER ::= 32 |
| maxNrOfCCTrCHs | INTEGER ::= 16 |
| maxNrOfDCHs | INTEGER ::= 128 |
| maxNrOfDL-Codes | INTEGER ::= 8 |
| maxNrOfDPCHs | INTEGER ::= 240 |
| maxNrOfErrors | INTEGER ::= 256 |
| maxNrOfMACcshSDU-Length | INTEGER ::= 16 |
| maxNrOfPoints | INTEGER ::= 15 |
| maxNrOfRLs | INTEGER ::= 16 |
| maxNrOfRLSets | INTEGER ::= maxNrOfRLs |
| maxNrOfRLs-1 | INTEGER ::= 15 maxNrOfRLs - 1 |
| maxNrOfRLs-2 | INTEGER ::= 14 maxNrOfRLs - 2 |
| maxNrOfSCCPCHs | INTEGER ::= 10 |
| maxNrOfULTs | INTEGER ::= 15 |
| maxNrOfDLTs | INTEGER ::= 15 |
| maxRNCinURA-1 | INTEGER ::= 15 |
| maxTTI-Count | INTEGER ::= 4 |
| maxCTFC | INTEGER ::= 16777215 |
| maxNrOfNeighbouringRNCs | INTEGER ::= 10 |
| maxNrOfFDDNeighboursPerRNC | INTEGER ::= 256 |
| maxNrOfTDDNeighboursPerRNC | INTEGER ::= 256 |
| maxFACHCountPlus1 | INTEGER ::= 10 |
| maxIBSEG | INTEGER ::= 16 |
| maxTFCI1Combs | INTEGER ::= 512 |
| maxTFCI2Combs | INTEGER ::= 1024 |
| maxTFCI2Combs-1 | INTEGER ::= 1023 |
| maxTGPS | INTEGER ::= 6 |

maxNrOfTS

INTEGER ::= 15

- --
- -- IEs --

---TEXT HAS BEEN OMITTED---

id-CFNReportingIndicator INTEGER ::= xxx

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| | e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx |
|---|--|
| Т | Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. |

| | CHANGE REQUEST Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. |
|--|---|
| | 25.423 CR 216r2 Current Version: 3.3.0 |
| GSM (AA.BB) or 3G (| (AA.BBB) specification number 1 |
| For submission t | o: TSG for approval X strategic |
| list expected approval n | neeting # here for information for informatio |
| For | m: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc |
| Proposed chang (at least one should be m | e affects: (U)SIM ME UTRAN / Radio X Core Network arked with an X) |
| Source: | R-WG3 Date: Nov. 2000 |
| Subject: | Clarifications to Compressed Mode signalling. |
| Work item: | |
| Category:FA(only one categoryshall be markedCwith an X)D | CorrectionXRelease:Phase 2Corresponds to a correction in an earlier releaseRelease 96Release 96Addition of featureRelease 97Release 97Functional modification of featureRelease 98Release 99Editorial modificationRelease 00X |
| <u>Reason for</u> <u>change:</u> | In the current specification it is not explicitly stated in the Compressed Mode Command procedure description that the procedure can be used also for deactivating ongoing compressed mode measurements without activating any new compressed mode configuration. |
| | In addition the 'lifetime' of compressed mode configuration is clarified. Compressed mode configuration shall be valid until the next Compressed Mode Configuration is configured in the DRNS or UE Context is deleted. |
| | With these two clarification it is possible to use COMPRESSED MODE COMMAND as triggering message to activate and deactivate the same compressed mode configuration without re-signalling the unchanged Transmission Gap Pattern Sequence parameters. |
| | Revision 1 notes Corrections to CM Configuration Change CFN rejected (no changes needed for chapters 9.2.2.A and 9.3.4). Procedure name in table 3 corrected. The correct procedure name is Compressed Mode Command as used in procedural. Unnecessary chapters where no corrections were addressed removed. |
| | Revision 2 notes Term UE context is replaced with the term last Radio Link, since it is not the intention to mandate the DRNS to maintain CM configuration also for UEs using Common Transport Channel resources. Changes are highlighted with yellow colour. |
| | <u>Consequences for not accepting this CR:</u> If this Cr is not accepted unchanged Transmission Gap Pattern Sequence parameters need to be re-signalled to DRNS when the same compressed mode configuration is |

| | reactivated. | | |
|---------------------------|---|-----------|-----------------------------|
| Clauses affect | ed: 8.1, 8.3.1, 8.3.4, 8.3.7 an | nd 8.3.16 | |
| Other specs affected: | Other 3G core specifications Other GSM core specifications MS test specifications BSS test specifications O&M specifications | | R3-002730/Cr268r1 in 25.433 |
| <u>Other</u> comments: | | | |
| 1 marine | | | |

help.doc

<----- double-click here for help and instructions on how to create a CR.

8 RNSAP Procedures

8.1 Elementary Procedures

In the following tables, all EPs are divided into Class 1 and Class 2 EPs.

| Table | 2: C | lass 1 |
|-------|------|--------|
|-------|------|--------|

| Elementary | Initiating Message | Successful Outcome | tcome Unsuccessful Outcom | |
|--|--|---|--|-------|
| Procedure | | Response message | Response message | Timer |
| Radio Link Setup | RADIO LINK SETUP REQUEST | RADIO LINK SETUP RESPONSE | RADIO LINK SETUP FAILURE | |
| Radio Link Addition | RADIO LINK ADDITION REQUEST | RADIO LINK ADDITION RESPONSE | RADIO LINK ADDITION FAILURE | |
| Radio Link Deletion | RADIO LINK DELETION REQUEST | RADIO LINK DELETION RESPONSE | | |
| Synchronised Radio Link Reconfiguration Preparation | RADIO LINK RECONFIGURATION PREPARE | RADIO LINK RECONFIGURATION READY | RADIO LINK RECONFIGURATION FAILURE | |
| Unsynchronised Radio Link Reconfiguration | RADIO LINK RECONFIGURATION REQUEST | RADIO LINK RECONFIGURATION RESPONSE | RADIO LINK RECONFIGURATION FAILURE | |
| Physical Channel Reconfiguration | PHYSICAL CHANNEL RECONFIGURATION REQUEST | PHYSICAL CHANNEL RECONFIGURATION COMMAND | PHYSICAL CHANNEL RECONFIGURATION FAILURE | |
| Measurement Initiation | DEDICATED MEASUREMENT INITIATION REQUEST | DEDICATED MEASUREMENT INITIATION RESPONSE | DEDICATED MEASUREMENT INITIATION FAILURE | |
| Compressed Mode Preparation [FDD] | COMPRESSED MODE PREPARE | COMPRESSED MODE READY | COMPRESSED MODE FAILURE | |
| Common Transport Channel Resources Initiation | COMMON TRANSPORT CHANNEL RESOURCES REQUEST | COMMON TRANSPORT CHANNEL RESOURCES RESPONSE | COMMON TRANSPORT CHANNEL RESOURCES FAILURE | |

The need for Timers will be defined on a per procedure basis. The content of this column is thus FFS.

| Elementary Procedure | Initiating Message | | |
|------------------------------|-------------------------------|--|--|
| Uplink Signalling Transfer | UPLINK SIGNALLING TRANSFER | | |
| | INDICATION | | |
| Downlink Signalling Transfer | DOWNLINK SIGNALLING | | |
| | TRANSFER REQUEST | | |
| SRNS Relocation Commit | SRNS RELOCATION COMMIT | | |
| Paging | PAGING REQUEST | | |
| Synchronised Radio Link | RADIO LINK RECONFIGURATION | | |
| Reconfiguration Commit | COMMIT | | |
| Synchronised Radio Link | RADIO LINK RECONFIGURATION | | |
| Reconfiguration Cancellation | CANCEL | | |
| Radio Link Failure | RADIO LINK FAILURE INDICATION | | |
| Radio Link Restoration | RADIO LINK RESTORE INDICATION | | |
| Measurement Reporting | DEDICATED MEASUREMENT | | |
| | REPORT | | |
| Measurement Termination | DEDICATED MEASUREMENT | | |
| | TERMINATION REQUEST | | |
| Measurement Failure | DEDICATED MEASUREMENT | | |
| | FAILURE INDICATION | | |
| Downlink Power Control [FDD] | DL POWER CONTROL REQUEST | | |
| Compressed Mode Commandit | COMPRESSED MODE COMMAND | | |
| [FDD] | | | |
| Compressed Mode Cancellation | COMPRESSED MODE CANCEL | | |
| [FDD] | | | |
| Common Transport Channel | COMMON TRANSPORT CHANNEL | | |
| Resources Release | RESOURCES RELEASE REQUEST | | |
| Error Indication | ERROR INDICATION | | |

Table 3: Class 2

22

8.3 DCH procedures

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 1: 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 RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The *First RLS Indicator* IE indicates if the concerning RL shall be considered part of the first RLS established towards this UE. If the *First RLS indicator* IE is set to "first RLS", the DRNS shall use a TPC pattern of n*"01" + "1" in the DL of the concerning RL and all RLs which are part of the same RLS, until UL synchronisation is achieved on the Uu. The TPC pattern shall continuously be repeated but shall be restarted at the beginning of every frame with CFNmod4=0. For all other RLs, the DRNS shall use a TPC pattern of all "1"'s in the DL until UL synchronisation is achieved on the Uu.]

[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 on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then 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 RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

[FDD - If the *Initial DL TX Power* IE and *Uplink SIR Target* IE are present 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.]

[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 *DL Timeslot ISCP* IE are present, the DRNC should use the indicated values when deciding the Initial DL TX Power.]

[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] section 5.2.1 for the inner loop DL power control.]

[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 for the concerning RLS or a DL POWER CONTROL REQUEST message is received. No innerloop 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) with DPC_MODE=0 and the power control procedure (see 8.3.7).]

[TDD – 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 and on each Time Slot of a RL until UL synchronisation is achieved for the concerning RL. No innerloop 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 SETUP REQUEST message includes a *DCH Info* IE with multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCH Info* 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 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 *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH and DSCH (if any).

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the SSDT Cell Identity 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 *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 last Radio Link is deleted. to be used when those are activated.]

[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 immediately activate the indicated Transmission Gap Pattern Sequences: for each sequence the *TGCFN* refers to latest passed CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the DRNS shall behave as specified in ref. [26].]

[TDD – The DRNS shall use the *RB Identity* IE list inside the USCH information group to map each *RB Identity* IE to the corresponding USCH.]

At the reception of the RADIO LINK SETUP REQUEST message, 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 setup.

[TDD –. If the DSCH Information is included in the RADIO LINK SETUP REQUEST message, the DRNC shall send a valid set of *Scheduling Priority* IE and *MAC-c/sh SDU lengths* IE parameters to the SRNC in the message RADIO LINK SETUP RESPONSE message].

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

[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 – 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 - In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference *RL ID* IE shall be included to indicate with which RL the combination is performed. The Reference *RL ID* IE shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.]

[FDD - In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the *Diversity Indication* IE that no combining is performed. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH and DSCH of the RL in the RADIO LINK SETUP RESPONSE message.]

[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 [TDD – and USCH] of the RL.]

In case of a set of coordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

[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.]

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id), the Frequency Number, the [FDD-Primary Scrambling Code], the [TDD-Cell Parameter ID, the Sync Case, the SCH Time Slot information, the Block STTD Indicator] of the neighbouring cells to the cell(s) where the radio link(s) are added. In addition, if the information is available, the DRNC shall also provide the [FDD-CPICH Power level]/[TDD-PCCPCH Power level, DPCH Constant Value] and Frame Offset of the neighbouring cell.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC and CN domain nodes) of the RNC controlling the neighbouring cell. [FDD – If the information is available, the DRNC shall include the *Tx Diversity Indicator* IE and Tx diversity capability (i.e. *STTD Support Indicator* IE, *Closed Loop Mode1 Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE) in *Per FDD Cell Information* IE].

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received 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 *DRAC Control* IE is set to "requested" in the RADIO LINK SETUP REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info IE* to be received on FACH, for each added Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell and the UTRAN access point position for each of the established RLs in the RADIO LINK SETUP RESPONSE message.

After sending of the RADIO LINK SETUP RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [3].

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

[FDD- If the *Downlink compressed mode method* 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 Information Response* IE in the RADIO LINK SETUP RESPONSE message indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

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 all Radio Links 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 2: 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 before providing a response to the SRNC.

DCH Modification:

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message 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 RADIO LINK RECONFIGURATION PREPARE message 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 RADIO LINK RECONFIGURATION PREPARE message 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.

If the RADIO LINK RECONFIGURATION PREPARE message includes a *DCHs to Modify* IE with 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 RADIO LINK RECONFIGURATION PREPARE message includes the *UL FP Mode* IE for a DCH or a DCH which belongs to 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 RADIO LINK RECONFIGURATION PREPARE message includes the *ToAWS* IE for a DCH or a DCH which belongs to 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 RADIO LINK RECONFIGURATION PREPARE message includes the *ToAWE* IE for a DCH or a DCH which belongs to 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.

[FDD - If the *DRAC Control* IE is present and set to "requested" in the RADIO LINK RECONFIGURATION PREPARE message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

DCH Addition:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to the Radio Link(s), 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 RADIO LINK RECONFIGURATION PREPARE message includes a DCHs to *Add* IE with 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 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 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 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 the RADIO LINK RECONFIGURATION PREPARE message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

DCH Deletion:

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be deleted from the Radio Link(s), the DRNS 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 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 the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Uplink Channelisation Code* IEs, the DRNS shall apply the new Uplink Channelisation Code(s) in the new configuration.]
[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes *Number of DL Channelisation Code 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, DRNS shall include the *Transmission Gap Pattern Sequence Information Response IE* in the RADIO LINK RECONFIGURATION READY message in case it 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 - 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 - 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 RADIO LINK RECONFIGURATION PREPARE message includes on the *Diversity Mode* IE, the DRNS shall apply diversity according to the given value.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes on the *UL DPCCH Structure* IE, group the DRNS shall apply the new Uplink DPCCH Structure to the new configuration.]

FDD – If the RADIO LINK RECONFIGURATION PREPARE message 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 RADIO LINK RECONFIGURATION PREPARE message 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] section 5.2.1 for the inner loop DL power control in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION PREPARE message 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.]

[TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes UL/DL CCTrCH to be modified and includes any of *TFCS* IE, *TFCI coding* IE, *Puncture limit* IE, or *TPC CCTrCH ID* IEs the DRNC 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 *Midamble shift and Burst Type* IE, *Time Slot* IE, *TFCI presence* IE or Code information was modified. The DRNC shall include code information if *TDD Channelisation Code* IE was modified.]

[TDD – UL/DL CCTrCH Addition]

[TDD -If the RADIO LINK RECONFIGURATION PREPARE message includes any UL or DL CCTrCH to be added, the DRNC shall include this CCTrCH in the new configuration.]

[TDD – If the DRNC 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.]

[TDD – UL/DL CCTrCH Deletion]

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

SSDT Activation/Deactivation:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message 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 and SSDT Cell Identity Length IE in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the SSDT Indication IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

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 exist 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.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH Information Response* IE group shall be included only for one of the DCHs in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH Information Response* IE group shall be included only for one of the combined Radio Links.

Compressed Mode Preparation:

[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. <u>This new Compressed Mode Configuration shall be valid in the</u> 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 in one or more Transmission Gap Pattern Sequence within the *Transmission Gap Pattern Sequence Information* IE is set to 'SF/2', the DRNS shall include the *Transmission Gap Pattern Sequence Information Response IE* to the RADIO LINK RECONFIGURATION READY message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not].

DSCH Addition/Modification/Deletion:

The DRNC shall use any included DSCH information for the DSCHs to be added/modified/deleted in the RADIO LINK RECONFIGURATION PREPARE message, 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.

To add or modify each DSCH, 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 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.

The DRNS shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE of the DSCHs being added or modified.

USCH Addition/Modification/Deletion [TDD]

The DRNC shall use any included USCH information for the USCHs to be added/modified/deleted in the RADIO LINK RECONFIGURATION PREPARE message. 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.

To add or modify each USCH, 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 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.

The DRNS shall include in the RADIO LINK RECONFIGURATION READY message the *Transport Layer Address* IE and the *Binding ID* IE of the USCHs being added or modified.

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 3: 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 before providing a response to the SRNC.

DCH Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this new value when reserving resources for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on 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 RADIO LINK RECONFIGURATION REQUEST message 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 RADIO LINK RECONFIGURATION REQUEST message 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 RADIO LINK RECONFIGURATION REQUEST message includes a *DCHs to Modify* IE with 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 RADIO LINK RECONFIGURATION REQUEST message includes the *UL FP Mode* IE for a DCH or a DCH which belongs to 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 RADIO LINK RECONFIGURATION REQUEST message includes the *ToAWS* IE for a DCH or a DCH which belongs to 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 RADIO LINK RECONFIGURATION REQUEST message includes the *ToAWE* IE for a DCH or a DCH which belongs to 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.

[FDD - If the *DRAC Control* IE is present and set to "requested" in the RADIO LINK RECONFIGURATION REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION RESPONSE message the *Secondary CCPCH Info* IE to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.]

DCH Addition:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be added to the Radio Link(s), 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 RADIO LINK RECONFIGURATION REQUEST message includes a DCHs to *Add* IE with 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 it can 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 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 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-ordiated 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 the RADIO LINK RECONFIGURATION REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION RESPONSE message the *Secondary CCPCH Info* IE and the *Reference to System Information blocks IE* to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.

DCH Deletion:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be deleted from the Radio Link(s), the DRNS 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 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 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 the *TFCS* IE for the DL, the DRNS shall apply the new TFCS in the Downlink of the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message 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] section 5.2.1 for the inner loop DL power control in the new configuration.]

[FDD – If the RADIO LINK RECONFIGURATION REQUEST message 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.]

[TDD - UL/DL CCTrCH Modification]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes UL/DL CCTrCH to be modified the DRNC shall apply the included *TFCS* IE as the new value.]

[TDD – UL/DL CCTrCH Deletion]

[TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes any UL or DL CCTrCH to be deleted, the DRNC shall remove this CCTrCH in the new configuration.]

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

The DRNS decides the maximum and minimum SIR for the uplink of the Radio Link(s) and 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 RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH Information Response* IE group shall be included only for one of the DCH in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH Information Response* IE group shall be included only for one of the combined Radio Links.

Compressed Mode Preparation:

[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. <u>This new Compressed Mode Configuration shall be valid in the</u> <u>DRNS until the next Compressed Mode Configuration is configured in the DRNS or last Radio Link</u> is deleted.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transmission Gap Pattern* Sequence Information IE and 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 DRNS shall include the *DL* Code Information IE group in the RADIO LINK RECONFIGURATION RESPONSE message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not.]

8.3.16 Compressed Mode Command [FDD]

8.3.16.1 General

The Compressed Mode Command procedure is used to activate <u>or deactivate</u> the compressed mode in the DRNS for one UE-UTRAN connection. This procedure shall use the signalling bearer connection for the relevant UE context.

The Compressed Mode Command procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

8.3.16.2 Successful Operation



Figure 4: Compressed Mode Command procedure, Successful Operation

The DRNS shall deactivate all the ongoing Transmission Gap Pattern Sequences at the CM Configuration Change CFN requested by SRNC when receiving COMPRESSED MODE COMMAND message from the SRNC. From that moment on all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence Status* IE group repetitions (if present) shall be started when the indicated TGCFN elapses. The *CM Configuration Change CFN* in the *Active Pattern Sequence Information* IE and *TGCFN* for each sequence refers to the next coming CFN with that value.

If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the DRNS shall behave as specified in ref. [26].

8.3.16.3 Abnormal Conditions

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3GPP RAN WG3 Meeting #16 Windsor, United Kingdom, 16-20 October 2000

| Document | R3-002731 |
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| e.g. for | 3GPP use the format TP-99xxx |

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| <u>Reason for</u> <u>change:</u> | The current compresse overlap is r the compre- frame. Correction It is propos overlapping expected to shall send failure in Ra- Correction Cause value Reconfigure procedures Notes for r It is clarifie Sequences Addressed Synchronis Link Recor supported | t reference to TS : d mode measurer not adequate. In the ssed mode gaps 1: ed to delete the co g of one or more s o happen rarely (a RADIO LINK FAIL adio Links or Radi 2: e 'Invalid CM sett ation Preparation- since there is no evision 1 d that DL transmises overlap during C corrections to 'Invised Radio Link Re ofiguration- proceed pattern parameter | 25.302 to d ment in the is TS 25.30 do not over urrent desc equences of ctually sho URE INDIO io Link Sets ings' is rem and Unsyr use for this ssion shall M measure valid CM set configuration | escribe DF case when 2 the requilap and ar ription and during comula not hap catron hap catron main this cas oved from a cause va be stopped ement. ettings' cau on Prepara d, since ca y are conf | RNS behaviour dur In two or more patter irement for NW is e not scheduled to to specify new on hpressed mode me open at all) it is pro- lessage to notify th se. RL Setup-, Synch I Radio Link Recon lue in these procect d when Transmission use value in proced ation- and Unsynch ause value is usabligured. | ing the ern sequences just to ensure overlap the sa e. Since the asurement is posed that DR e permanent ronised Radio figuration- dures. on Gap Pattern lures RL Setup pronised Radio le for indicating | that ame RNS Link |

Other errors corrected (Node B->DRNS, clause->subclause and chapters where no modifications were addressed are removed)

Consequences for not accepting this CR:

If this Cr is not accepted the DRNS behaviour in the case when two or more pattern sequences overlap during CM measurement is not well defined.

<u>Clauses affected:</u> 8.3.1, 8.3.5, 8.3.9 and 8.3.16

Other specs
affected:Other 3G core specifications
Other GSM core
specifications
MS test specifications
BSS test specifications
O&M specifications





<----- double-click here for help and instructions on how to create a CR.

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8.3 DCH procedures

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 1: 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 RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The *First RLS Indicator* IE indicates if the concerning RL shall be considered part of the first RLS established towards this UE. If the *First RLS indicator* IE is set to "first RLS", the DRNS shall use a TPC pattern of n*"01" + "1" in the DL of the concerning RL and all RLs which are part of the same RLS, until UL synchronisation is achieved on the Uu. The TPC pattern shall continuously be repeated but shall be restarted at the beginning of every frame with CFNmod4=0. For all other RLs, the DRNS shall use a TPC pattern of all "1"'s in the DL until UL synchronisation is achieved on the Uu.]

[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 on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then 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 RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

[FDD - If the *Initial DL TX Power* IE and *Uplink SIR Target* IE are present 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.]

[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 *DL Timeslot ISCP* IE are present, the DRNC should use the indicated values when deciding the Initial DL TX Power.]

[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] section 5.2.1 for the inner loop DL power control.]

[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 for the concerning RLS or a DL POWER CONTROL REQUEST message is received. No innerloop 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) with DPC_MODE=0 and the power control procedure (see 8.3.7).]

[TDD – 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 and on each Time Slot of a RL until UL synchronisation is achieved for the concerning RL. No innerloop 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 SETUP REQUEST message includes a *DCH Info* IE with multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCH Info* 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 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 *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH and DSCH (if any).

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the SSDT Cell Identity 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 *Transmission Gap Pattern Sequence Information* IE, the DRNS shall store the information about the Transmission Gap Pattern Sequences to be used when those are activated.]

[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 immediately activate the indicated Transmisson Gap Pattern Sequences: for each sequence the *TGCFN* refers to latest passed CFN with that value. <u>If during the</u> compressed mode measurement the gaps of two or more pattern sequences overlap, the DRNS shall behave as specified in subclause 8.3.9. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the DRNS shall behave as specified in ref. [26].]

[TDD – The DRNS shall use the *RB Identity* IE list inside the USCH information group to map each *RB Identity* IE to the corresponding USCH.]

At the reception of the RADIO LINK SETUP REQUEST message, 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 setup.

[TDD –. If the DSCH Information is included in the RADIO LINK SETUP REQUEST message, the DRNC shall send a valid set of *Scheduling Priority* IE and *MAC-c/sh SDU lengths* IE parameters to the SRNC in the message RADIO LINK SETUP RESPONSE message].

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

[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 – 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 - In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference *RL ID* IE shall be included to indicate with which RL the combination is performed. The Reference *RL ID* IE shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.]

[FDD - In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the *Diversity Indication* IE that no combining is performed. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH and DSCH of the RL in the RADIO LINK SETUP RESPONSE message.]

[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 [TDD – and USCH] of the RL.]

In case of a set of coordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

[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.]

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id), the Frequency Number, the [FDD-Primary Scrambling Code], the [TDD-Cell Parameter ID, the Sync Case, the SCH Time Slot information, the Block STTD Indicator] of the neighbouring cells to the cell(s) where the radio link(s) are added. In addition, if the information is available, the DRNC shall also provide the [FDD-CPICH Power level]/[TDD-PCCPCH Power level, DPCH Constant Value] and Frame Offset of the neighbouring cell.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC and CN domain nodes) of the RNC controlling the neighbouring cell. [FDD – If the information is available, the DRNC shall include the *Tx Diversity Indicator* IE and Tx diversity capability (i.e. *STTD Support Indicator* IE, *Closed Loop Mode1 Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE) in *Per FDD Cell Information* IE].

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received 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 *DRAC Control* IE is set to "requested" in the RADIO LINK SETUP REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info IE* to be received on FACH, for each added Radio Link. If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.]

Depending on local configuration in the DRNS, it may include the geographical co-ordinates of the cell and the UTRAN access point position for each of the established RLs in the RADIO LINK SETUP RESPONSE message.

After sending of the RADIO LINK SETUP RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in ref. [3].

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

[FDD- If the *Downlink compressed mode method* 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 Information Response* IE in the RADIO LINK SETUP RESPONSE message indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

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8.3.5 Synchronised Radio Link Reconfiguration Commit

8.3.5.1 General

This procedure is used to order the DRNS to switch to the new configuration for the Radio Link(s) within the DRNS, previously prepared by the Synchronised Radio Link Preparation procedure.

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

8.3.5.2 Successful Operation



Figure 2: Synchronised Radio Link Reconfiguration Commit procedure, Successful Operation

The DRNS shall switch to the new configuration previously prepared by the Synchronised RL Reconfiguration procedure at the CFN requested by the SRNC when receiving the RADIO LINK RECONFIGURATION COMMIT message from the SRNC. [FDD – The CFN shall be ignored by DRNS if only Transmission Gap Pattern Sequence Information was included in the RL Reconfiguration.] When this procedure has been completed the Prepared Reconfiguration does not exist any more, see subclause 3.1

[FDD - If the RADIO LINK RECONFIGURATION COMMIT includes the *Active Pattern Sequence Information* IE, the DRNS shall deactivate all the ongoing Transmission Gap Pattern Sequences at the CM Configuration Change CFN. From that moment on all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence Status* IE group repetitions shall be started when the indicated TGCFN elapses. The *CM Configuration Change CFN* in the *Active Pattern Sequence Information* IE and *TGCFN* for each sequence refers to the next coming CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the DRNS shall behave as specified in ref. [26].]

8.3.5.3 Abnormal Conditions

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8.3.9 Radio Link Failure

8.3.9.1 General

This procedure is started by the DRNS when one or more Radio Links or Radio Link Sets are no longer available.

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

The DRNC may initiate the Radio Link Failure procedure at any time after establishing a Radio Link.

8.3.9.2 Successful Operation



Figure 3: RL Failure procedure, Successful Operation

When DRNC detects that a one or more Radio Links or Radio Link Sets are no longer available, it shall send the RL FAILURE INDICATION message to the SRNC. The message indicates the failed Radio Links or Radio Link Sets with the most appropriate cause values defined in the *Cause* IE. If the failure concerns one or more individual Radio Links the DRNS shall indicate the affected Radio Link(s) using the *RL Information* IE group. [FDD - If the failure concerns one or more Radio Link Sets the DRNS shall indicate the affected Radio Link Set(s) using the *RL Set Information* IE group.]

When the RL Failure procedure is used to notify loss of UL synchronisation, the message shall be sent when indicated by the UL sync detection algorithm defined in ref. [10] and [22], and with the cause value 'Synchronisation Failure'.

[FDD – When Radio Link Failure procedure is used to indicate permanent failure in one or more Radio Links/Radio Link Sets due the overlapping of two or more pattern sequences during the compressed mode measurement, DL transmission shall be stopped and the RADIO LINK FAILURE INDICATION message shall be sent with the cause value 'Invalid CM Settings'. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the DRNS shall not remove the Radio Link/Radio Link Set from the UE context, or the UE context itself.]

In the other cases Radio Link Failure procedure is used to indicate that one or more Radio Links or Radio Link Sets are permanently unavailable and cannot be restored. After sending the RADIO LINK FAILURE INDICATION message to notify the permanent failure, the DRNS shall not remove the Radio Link from the UE context, or the UE context itself. When applicable, the allocation retention priorities associated to the transport channels shall be used by the DRNS to prioritise which Radio Links to indicate as unavailable to the SRNC.

Typical cause values are:

Radio Network Layer Causes:

- Synchronisation Failure;
- Invalid CM Settings.

Miscellaneous Causes:

- Control Processing Overload;
- HW Failure;

- O&M Intervention.

8.3.9.3 Abnormal Conditions

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8.3.16 Compressed Mode Command [FDD]

8.3.16.1 General

The Compressed Mode Command procedure is used to activate the compressed mode in the DRNS for one UE-UTRAN connection. This procedure shall use the signalling bearer connection for the relevant UE context.

The Compressed Mode Command procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

8.3.16.2 Successful Operation



Figure 4: Compressed Mode Command procedure, Successful Operation

The DRNS shall deactivate all the ongoing Transmission Gap Pattern Sequences at the CM Configuration Change CFN requested by SRNC when receiving COMPRESSED MODE COMMAND message from the SRNC. From that moment on all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence Status* IE group repetitions shall be started when the indicated TGCFN elapses. The *CM Configuration Change CFN* in the *Active Pattern Sequence Information* IE and *TGCFN* for each sequence refers to the next coming CFN with that value.

If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the DRNS shall behave as specified in subclause 8.3.9. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the DRNS shall behave as specified in ref. [26].

8.3.16.3 Abnormal Conditions

3GPP TSG-RAN3 Meeting #17 Chicago, USA, 20-24 Nov 2000

Tdoc R3-003230

| | | CR-Form-v3 | | | | | |
|--|---|--|--|--|--|--|--|
| | CHANGE REQUEST | | | | | | |
| | 25.423 CR 219 rev 5 | Current version: 3.3.0 | | | | | |
| Proposed change | Proposed change affects: (U)SIM ME/UE Radio Access Network X Core Network | | | | | | |
| Title: | Supporting for CN Direct Paging | | | | | | |
| Source: | R-WG3 | | | | | | |
| Work item code: | | Date: Nov 2000 | | | | | |
| Category: | F | Release: R99 | | | | | |
| | Use <u>one</u> of the following categories: F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. | Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5) | | | | | |
| 2 () | | | | | | | |
| Reason for change: In RAN WG2 #15 meeting, R2-1831(CR 520r2 to 25.331) was agreed and this contribution is in line with it. The idea is following : To convey a CN originated page to a connected mode UE in CELL_PCH/URA_PCH, the UTRAN directly pages the connected mode UE w PAGING TYPE 1 and with paging originator = UTRAN on the PCH and includ CN page information (CN domain identity and CN paging cause). And also this contribution propose value range of DRX Cycle Length Coefficition integer(312) to align with RRC specification. | | | | | | | |
| Summary of chang | ge: Rev 5: Page numbers were corrected | | | | | | |

Rev 4:

WG2 #17 meeting, the upper bound of DRX Cycle Length Coefficient were changed to 9 from 12.(R2-2351). This revision reflects this decision.

Rev 3: ASN.1 error correction based on NEC comment. , -> |

Rev 2: Condition table was removed.

Rev 1:

| | 1. Procedure text in Paging procedulated. | lure was remanded. And also "group" was | | | |
|--------------------------|--|--|--|--|--|
| | 2. CN Originated Page to Connected Mode UE IE was corrected and change as optional. Corresponding change was applied in ASN.1. | | | | |
| | 3. On the cover sheet, dependency | y was denoted.(TS25.331 CR520) | | | |
| | | | | | |
| Consequences if | It will not be in line with WG2 decis | ion and cannot support CN direct paging to | | | |
| not approved: | UE in CELL PCH/URA PCH. | | | | |
| | | | | | |
| Clauses affected: | 8.2.4.2, 9.1.27, 9.2.1.26, 9.2.1.x, 9. | 3.3, 9.3.4, 9.3.6 | | | |
| | | | | | |
| Other specs affected: | X Other core specifications Test specifications O&M Specifications | TS25.331 CR520, TS25.331 CR631 | | | |
| | | | | | |
| Other comments: | | | | | |

8.2.4 Paging

8.2.4.1 General

This procedure is used by the SRNC to indicate to a CRNC that a UE shall be paged in a cell or URA that is under the control of the CRNC.

This procedure shall use the connectionless mode of the signalling bearer.

8.2.4.2 Successful Operation



Figure 1: Paging procedure, Successful Operation

The procedure is initiated with a PAGING REQUEST message sent from the SRNC to the CRNC.

If the message contains the *C-Id* IE, the CRNC shall page in the indicated cell. Alternatively, if the message contains the *URA-Id* IE, the CRNC shall page in all cells that it controls in the indicated URA.

If the PAGING REQUEST message includes the *CN Originated Page to Connected Mode UE* IE, the CRNC shall include the information contained in the *CN Originated Page to Connected Mode UE* IE when paging the UE.

The CRNC shall calculate the Paging Occasions from the *IMSI* IE and the *DRX Cycle Length Coefficient* IE according to specification in ref. [15] and apply transmission on PICH and PCH accordingly.

8.2.4.3 Abnormal Conditions

9.1.27 PAGING REQUEST

| IE/Group Name | Presence | Range | IE type and | Semantics description | Criticality | Assigned Criticality |
|------------------------------|----------|-----------|----------------|-----------------------|-------------|-------------------------|
| | | | reference | | | |
| Message Type | М | | 9.2.1.40 | | YES | ignore |
| Transaction ID | Μ | | 9.2.1.59 | | — | |
| CHOICE paging area | | | | | YES | ignore |
| >"URA" | | | | | YES | ignore |
| >>URA-ID | М | | 9.2.1.70 | | - | |
| >"Cell" | | | | | YES | ignore |
| >>C-Id | М | | 9.2.1.6 | | - | |
| SRNC-Id | М | | RNC-Id | | YES | ignore |
| | | | 9.2.1.50 | | | - |
| S-RNTI | Μ | | 9.2.1.53 | | YES | ignore |
| IMSI | Μ | | 9.2.1.31 | | - | |
| DRX Cycle Length Coefficient | Μ | | 9.2.1.26 | | YES | ignore |
| CN Originated Page to | | <u>01</u> | | | YES | ignore |
| Connected Mode UE | | | | | | - |
| >Paging Cause | M | | <u>9.2.1.x</u> | | - | |
| >CN Domain Type | M | | <u>9.2.1.x</u> | | - | |
| >Paging Record Type | Μ | | <u>9.2.1.x</u> | | - | |

9.2.1.26 DRX Cycle Length Coefficient

The DRX Cycle Length Coefficient is used as input for the formula to establish the paging occasions to be used in DRX.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------------------------|----------|-------|---|--|
| DRX Cycle Length Coefficient | | | Integer <u>INTE</u> GER (2 <u>3</u> ,, 12 9) | Refers to 'k' in the formula as specified in ref. [15], Discontinuous Reception. |

9.2.1.x Paging Cause

Cause for a CN originated page.

| IE/Group Nama | Broconco | Banga | IE type and | Somenties description |
|---------------|----------|-------|--------------------|-----------------------|
| IE/Group Name | Fresence | Kange | IE type and | Semantics description |
| | | | reference | |
| Paging Cause | | | ENUMERAT | See in [16] |
| | | | ED | |
| | | | Enumerated(| |
| | | | Terminating | |
| | | | Conversatio | |
| | | | nal Call, | |
| | | | Terminating | |
| | | | Streaming | |
| | | | Call, | |
| | | | Terminating | |
| | | | Interactive | |
| | | | Call, | |
| | | | Terminating | |
| | | | Background | |
| | | | Call, SMS, | |
| | | |) | |

9.2.1.x CN Domain Type

Identifies the type of core network domain.

| IE/Group Name | Presence | Range | IE type and | Semantics description |
|----------------|----------|-------|------------------|-----------------------|
| | | | <u>reference</u> | |
| CN Domain Type | | | ENUMERAT | <u>See in [16]</u> |
| | | | EDEnumerat | |
| | | | ed (CS | |
| | | | domain, PS | |
| | | | domain, | |
| | | | Don't | |
| | | | <u>care,)</u> | |

9.2.1.x Paging Record Type

| IE/Group Name | Presence | <u>Range</u> | IE type and reference | Semantics description |
|--------------------|----------|--------------|--|-----------------------|
| Paging Record Type | | | Enumerated ENUMERAT ED (IMSI (GSM-MAP), TMSI (GSM- MAP), P- TMSI (GSM- MAP), IMSI (DS-41), TMSI (DS | <u>See in [16]</u> |
| | | | 41)) | |

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,
   BLER,
   Block-STTD-Indicator,
   BindingID,
   C-ID,
   C-RNTI,
   CCTrCH-ID,
   CellIndividualOffset,
   CFN,
   ClosedLoopModel-SupportIndicator,
   ClosedLoopMode2-SupportIndicator,
   Closedlooptimingadjustmentmode,
   CN-CS-DomainIdentifier,
   CN-PS-DomainIdentifier,
CNDomainType,
   Cause,
   CellParameterID,
   ChipOffset,
   CriticalityDiagnostics,
   D-RNTI,
   D-RNTI-ReleaseIndication,
   DCH-ID,
   DL-DPCH-SlotFormat,
   DL-TimeslotISCP,
   DL-Power,
   DL-ScramblingCode,
   DPCHConstantValue,
   DPCH-ID,
   DRACControl,
   DRXCycleLengthCoefficient,
   DedicatedMeasurementType,
   DedicatedMeasurementValue,
   DiversityControlField,
   DiversityMode,
   DSCH-ID,
   FACH-InitialWindowSize,
   SchedulingPriorityIndicator,
   FDD-DL-ChannelisationCodeNumber,
   FDD-S-CCPCH-Offset,
   FDD-TPC-DownlinkStepSize,
   FirstRLS-Indicator,
   FrameHandlingPriority,
   FrameOffset,
   GA-AccessPointPosition,
   GA-Cell,
   IB-SG-POS,
   IB-SG-REP,
   IMSI,
   L3-Information,
   LimitedPowerIncrease,
   MAC-c-sh-SDU-Length,
```

MaximumAllowedULTxPower, MaxNrDLPhysicalchannels, MaxNrOfUL-DPCHs, MaxNrTimeslots, MaxNrULPhysicalchannels, MeasurementFilterCoefficient, MeasurementID, MidambleShiftAndBurstType, MinimumSpreadingFactor, MinUL-ChannelisationCodeLength, MultipleURAsIndicator, MultiplexingPosition, NrOfDLchannelisationcodes, PagingCause, PagingRecordType, PDSCHCodeMapping, PayloadCRC-PresenceIndicator, PCCPCH-Power, PowerAdjustmentType, PowerOffset, PRACH-Midamble, PRACH-MinimumSpreadingFactor, PreambleSignatures, PrimaryCCPCH-RSCP, PrimaryCPICH-EcNo, PrimaryCPICH-Power, PrimaryScramblingCode, PropagationDelay, PunctureLimit, OE-Selector, RACH-SubChannelNumbers, RANAP-RelocationInformation, RB-Identity, RL-ID, RL-Set-ID, RNC-ID, RepetitionLength, RepetitionPeriod, ReportCharacteristics, RSSI, S-FieldLength, S-RNTI, SCH-TimeSlot, SAI, SN, SSDT-CellID, SSDT-CellID-Length, SSDT-Indication, SSDT-SupportIndicator, STTD-Indicator, STTD-SupportIndicator, AdjustmentPeriod, ScaledAdjustmentRatio, MaxAdjustmentStep, ScramblingCodeNumber, SecondaryCCPCH-SlotFormat, SyncCase, TDD-ChannelisationCode, TDD-DPCHOffset, TDD-PhysicalChannelOffset, TDD-TPC-DownlinkStepSize, TFCI-Coding, TFCI-Presence, TFCI-SignallingMode, TimeSlot. TimingAdjustmentRequired, TOAWE, TOAWS, TransmitDiversityIndicator, TransportBearerID, TransportBearerRequestIndicator, TFCS, Transmission-Gap-Pattern-Sequence-Information, Transmission-Gap-Pattern-Sequence-Information-Response, TransportFormatManagement, TransportFormatSet, TransportLayerAddress,

TrCH-SrcStatisticsDescr,

TxDiversityIndicator, UARFCN, UC-ID, UL-DPCCH-SlotFormat, UL-SIR, UL-FP-Mode, UL-ScramblingCode, UL-TimeslotISCP, URA-ID, USCH-ID FROM RNSAP-IEs PrivateIE-Container{}, ProtocolExtensionContainer{}, ProtocollE-ContainerList{}, ProtocolIE-ContainerPair{}, ProtocolIE-ContainerPairList{}, ProtocollE-Container{}, ProtocolIE-Single-Container{}, RNSAP-PRIVATE-IES, RNSAP-PROTOCOL-EXTENSION, RNSAP-PROTOCOL-IES, RNSAP-PROTOCOL-IES-PAIR FROM RNSAP-Containers maxNoOfDSCHs, maxNoOfRB, maxNoOfUSCHs maxNrOfCCTrCHs, maxNrOfDCHs. maxNrOfTS, maxNrOfDL-Codes, maxNrOfDPCHs, maxNrOfMACcshSDU-Length, maxNrOfRLs, maxNrOfRLSets, maxNrOfRLs-1, maxNrOfRLs-2, maxNrOfSCCPCHs. maxNrOfULTs, maxNrOfDLTs, maxRNCinURA-1, maxNrOfNeighbouringRNCs, maxNrOfFDDNeighboursPerRNC, maxNrOfTDDNeighboursPerRNC, maxFACHCountPlus1, maxIBSEG. id-Active-Pattern-Sequence-Information, id-AdjustmentRatio, id-All-RLItem-DM-Rqst, id-All-RLItem-Set-DM-Rqst, id-AllowedQueuingTime, id-BindingID, id-C-ID, id-C-RNTI, id-CFN, id-CN-CS-DomainIdentifier, id-CN-PS-DomainIdentifier, id-Cause, id-CauseLevel-RL-AdditionFailureFDD, id-CauseLevel-RL-AdditionFailureTDD, id-CauseLevel-RL-ReconfFailure, id-CauseLevel-RL-SetupFailureFDD, id-CauseLevel-RL-SetupFailureTDD, id-CellItem-PagingRqst, id-ClosedLoopModel-SupportIndicator, id-ClosedLoopMode2-SupportIndicator, id-CNOriginatedPage-PagingRqst, id-CombiningItem-RL-AdditionFailureFDD, id-CombiningItem-RL-AdditionRspFDD, id-CombiningItem-RL-AdditionRspTDD, id-CombiningItem-RL-SetupFailureFDD, id-CombiningItem-RL-SetupRspFDD, id-CriticalityDiagnostics, id-D-RNTI, id-D-RNTI-ReleaseIndication, id-DCH-AddList-RL-ReconfPrepFDD,

id-DCH-AddList-RL-ReconfPrepTDD, id-DCH-AddList-RL-ReconfRqstFDD, id-DCH-AddList-RL-ReconfRqstTDD, id-DCH-DeleteList-RL-ReconfPrepFDD, id-DCH-DeleteList-RL-ReconfPrepTDD, id-DCH-DeleteList-RL-ReconfRqstFDD, id-DCH-DeleteList-RL-ReconfRqstTDD, id-DCH-Information-RL-SetupRgstFDD, id-DCH-InformationList-RL-SetupRqstTDD, id-DCH-InformationResponseListIE-RL-ReconfReadyFDD, id-DCH-InformationResponseListIE-RL-ReconfReadyTDD, id-DCH-InformationResponseListIE-RL-ReconfRsp, id-DCH-ModifyList-RL-ReconfPrepFDD, id-DCH-ModifyList-RL-ReconfPrepTDD, id-DCH-ModifyList-RL-ReconfRqstFDD, id-DCH-ModifyList-RL-ReconfRqstTDD, id-DCH-InformationResponseListIE-RL-SetupRspTDD, id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD, id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD, id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD, id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD, id-DL-CCTrCH-InformationListIE-PhyChReconfRgstTDD, id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD, id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD, id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD, id-DL-CCTrCH-InformationDeleteList-RL-ReconfRgstTDD, id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD, id-DL-CCTrCH-InformationList-RL-SetupRqstTDD, id-DL-CodeInformationListIE-PhyChReconfRqstFDD, id-DL-CodeInformationListIE-RL-AdditionFailureFDD, id-DL-CodeInformationListIE-RL-AdditionRspFDD, id-DL-CodeInformationListIE-RL-ReconfReadyFDD, id-DL-CodeInformationListIE-RL-ReconfResp, id-DL-CodeInformationListIE-RL-SetupFailureFDD, id-DL-DPCH-Information-RL-ReconfPrepFDD, id-DL-DPCH-Information-RL-SetupRqstFDD, id-DL-DPCH-Information-RL-ReconfRqstFDD, id-DL-DPCH-InformationItem-PhyChReconfRqstTDD, id-DL-DPCH-InformationItem-RL-AdditionRspTDD, id-DL-DPCH-InformationItem-RL-SetupRspTDD, id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD, id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD, id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD, id-DL-Physical-Channel-Information-RL-SetupRqstTDD, id-DLReferencePower, id-DLReferencePowerList-DL-PC-Rqst, id-DL-ReferencePowerInformation-DL-PC-Rqst, id-DRXCycleLengthCoefficient, id-DedicatedMeasurementObjectType-DM-Rprt, id-DedicatedMeasurementObjectType-DM-Rqst, id-DedicatedMeasurementObjectType-DM-Rsp, id-DedicatedMeasurementType, id-DiversityIndicationItem-RL-AdditionFailureFDD, id-DiversityIndicationItem-RL-AdditionRspFDD, id-DiversityIndicationItem-RL-AdditionRspTDD, id-DiversityIndicationItem-RL-SetupFailureFDD, id-DiversityIndicationItem-RL-SetupRspFDD, id-DSCH-AddList-RL-ReconfPrepTDD, id-DSCH-Add-RL-ReconfPrepFDD, id-DSCH-DeleteList-RL-ReconfPrepTDD. id-DSCH-Delete-RL-ReconfPrepFDD, id-DSCH-InformationItem-RL-SetupRqstFDD, id-DSCH-InformationListIE-RL-AdditionRspTDD, id-DSCH-InformationListIEs-RL-SetupRspTDD, id-DSCH-InformationList-RL-SetupRqstTDD, id-DSCH-InformationResponseItem-RL-SetupRspFDD, id-DSCH-InformationResponseListIE-RL-AdditionFailureFDD, id-DSCH-InformationResponseListIE-RL-SetupFailureFDD, id-DSCH-Information-RL-SetupRqstFDD, id-DSCH-ModifyList-RL-ReconfPrepTDD, id-DSCH-Modify-RL-ReconfPrepFDD, id-DSCHToBeAddedOrModifiedIE-RL-ReconfReadyFDD, id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD,

id-FACH-InfoForDRNCSelectedS-CCPCH-CTCH-ResourceRspFDD, id-FACH-InfoForDRNCSelectedS-CCPCH-CTCH-ResourceRspTDD, id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD, id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD, id-GA-AccessPointPosition, id-GA-Cell, id-GeneralCauseItem-RL-AdditionFailureFDD, id-GeneralCauseItem-RL-AdditionFailureTDD, id-GeneralCauseItem-RL-ReconfFailure, id-GeneralCauseItem-RL-SetupFailureFDD, id-GeneralCauseItem-RL-SetupFailureTDD, id-IMSI. id-L3-Information, id-MAC-c-sh-SDU-LengthListIE-CTCH-ResourceRspFDD, id-MAC-c-sh-SDU-LengthListIE-CTCH-ResourceRspTDD, id-MAC-c-sh-SDU-LengthListIE-option-CTCH-ResourceRspFDD, id-MAC-c-sh-SDU-LengthListIE-option-CTCH-ResourceRspTDD, id-AdjustmentPeriod, id-MaxAdjustmentStep, id-MeasurementAvailableItem-DedicatedMeasurementReport, ${\tt id-MeasurementnotAvailableItem-DedicatedMeasurementReport,}$ id-MeasurementFilterCoefficient, id-MeasurementID, id-MultipleURAsIndicator, id-Neighbouring-CellInformationItem-RL-AdditionFailureFDD, id-Neighbouring-CellInformationItem-RL-AdditionRsp, id-Neighbouring-CellInformationItem-RL-SetupFailureFDD, id-Neighbouring-CellInformationItem-RL-SetupRsp, id-NonCombiningItem-RL-AdditionFailureFDD, id-NonCombiningItem-RL-AdditionRspFDD, id-NonCombiningItem-RL-AdditionRspTDD, id-NonCombiningOrFirstRLItem-RL-SetupFailureFDD, id-NonCombiningOrFirstRLItem-RL-SetupRspFDD, id-PagingArea-PagingRqst, id-PriorityIndicatorAndInitialWindowSizeListIE-CTCH-ResourceRspFDD, id-PriorityIndicatorAndInitialWindowSizeListIE-CTCH-ResourceRspTDD, id-PriorityIndicatorAndInitialWindowSizeListIE-option-CTCH-ResourceRspFDD, id-PriorityIndicatorAndInitialWindowSizeListIE-option-CTCH-ResourceRspTDD, id-PowerAdjustmentType, id-ProcedureScope-DL-PC-Rqst, id-RACH-InfoForDRNCSelectedPRACH-CTCH-ResourceRspFDD, id-RACH-InfoForDRNCSelectedPRACH-CTCH-ResourceRspTDD, id-RANAP-RelocationInformation, id-RL-Information-PhyChReconfRqstFDD, id-RL-Information-PhyChReconfRqstTDD, id-RL-Information-RL-AdditionRqstFDD, id-RL-Information-RL-AdditionRgstTDD, id-RL-Information-RL-DeletionRqst, id-RL-Information-RL-FailureInd, id-RL-Information-RL-ReconfPrepFDD, id-RL-Information-RL-RestoreInd, id-RL-Information-RL-SetupRgstFDD, id-RL-Information-RL-SetupRqstTDD, id-RL-InformationItem-DM-Rprt, id-RL-InformationItem-DM-Rqst, id-RL-InformationItem-DM-Rsp, id-RL-InformationItem-RL-SetupRqstFDD, id-RL-InformationList-RL-AdditionRqstFDD, id-RL-InformationList-RL-DeletionRqst, id-RL-InformationList-RL-ReconfPrepFDD, id-RL-InformationResponse-RL-AdditionRspTDD, id-RL-InformationResponse-RL-ReconfReadyTDD, id-RL-InformationResponse-RL-SetupRspTDD, id-RL-InformationResponseItem-RL-AdditionRspFDD, id-RL-InformationResponseItem-RL-ReconfReadvFDD, id-RL-InformationResponseItem-RL-ReconfRsp, id-RL-InformationResponseItem-RL-SetupRspFDD id-RL-InformationResponseList-RL-AdditionRspFDD, id-RL-InformationResponseList-RL-ReconfReadyFDD, id-RL-InformationResponseList-RL-ReconfRsp, id-RL-InformationResponseList-RL-SetupRspFDD, id-RLItem-DM-Rprt, id-RLItem-DM-Rgst, id-RLItem-DM-Rsp, id-RLItem-RL-FailureInd, id-RLItem-RL-RestoreInd, id-RL-ReconfigurationFailure-RL-ReconfFail, id-RL-Set-InformationItem-DM-Rprt,

id-RL-Set-InformationItem-DM-Rqst, id-RL-Set-InformationItem-DM-Rsp, id-RL-Set-Information-RL-FailureInd, id-RL-Set-Information-RL-RestoreInd, id-RL-SetItem-DM-Rprt, id-RL-SetItem-DM-Rqst, id-RL-SetItem-DM-Rsp, id-RL-SetItem-RL-FailureInd, id-RL-SetItem-RL-RestoreInd, id-RLSpecificCauseItem-RL-AdditionFailureFDD, id-RLSpecificCauseItem-RL-AdditionFailureTDD, id-RLSpecificCauseItem-RL-ReconfFailure, id-RLSpecificCauseItem-RL-SetupFailureFDD, id-RLSpecificCauseItem-RL-SetupFailureTDD, id-RNCsWithCellsInTheAccessedURA-List-UL-ST-IndFDD, id-RNCsWithCellsInTheAccessedURA-List-UL-ST-IndTDD, id-RNCsWithCellsInTheAccessedURA-List-CTCH-ResourceRspFDD, id-RNCsWithCellsInTheAccessedURA-List-CTCH-ResourceRspTDD, id-ReportCharacteristics, id-Reporting-Object-RL-FailureInd, id-Reporing-Object-RL-RestoreInd, id-S-RNTI, id-SAI, id-SRNC-ID, id-SecondaryCCPCHListIE-CTCH-ResourceRspTDD, id-STTD-SupportIndicator, id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD, id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD, id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD, id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD, id-TransportBearerID, id-TransportBearerRequestIndicator, id-TransportLayerAddress, id-UC-ID. id-Transmission-Gap-Pattern-Sequence-Information, id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD, id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD, id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD, id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD, id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD, id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD, id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD, id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD, $id-\text{UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD}\,,$ id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD, id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD, id-UL-CCTrCH-InformationList-RL-SetupRgstTDD, $id\-UL\-CCTrCH\-Information\ListIE\-PhyChReconfRqstTDD,$ id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD, id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD, id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD, id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD, id-UL-DPCH-Information-RL-ReconfPrepFDD, id-UL-DPCH-Information-RL-ReconfRqstFDD, id-UL-DPCH-Information-RL-SetupRqstFDD, id-UL-DPCH-InformationItem-PhyChReconfRqstTDD, id-UL-DPCH-InformationItem-RL-AdditionRspTDD, id-UL-DPCH-InformationItem-RL-SetupRspTDD, id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD, id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD, id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD,id-UL-Physical-Channel-Information-RL-SetupRqstTDD, id-UL-SIRTarget, id-URA-ID, id-URAItem-PagingRqst, $id-{\tt UnsuccessfulRL-Information Response-RL-Addition Failure {\tt FDD}, }$ id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD, id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD, id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD, $id-{\tt Unsuccessful RL-Information Response List-{\tt RL-Addition Failure FDD}, }$ id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD, id-USCH-AddList-RL-ReconfPrepTDD, id-USCH-DeleteList-RL-ReconfPrepTDD, id-USCH-InformationListIE-RL-AdditionRspTDD, id-USCH-InformationListIEs-RL-SetupRspTDD, id-USCH-InformationList-RL-SetupRqstTDD, id-USCH-ModifyList-RL-ReconfPrepTDD, id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD

FROM RNSAP-Constants;

```
•
```

_ _ -- PAGING REOUEST ***** PagingRequest ::= SEQUENCE { protocolIEs ProtocolIE-Container $\{ \{ PagingRequest-IEs \} \}$, protocolExtensions ProtocolExtensionContainer {{PagingRequest-Extensions}} OPTIONAL, } PagingRequest-IEs RNSAP-PROTOCOL-IES ::= { CRITICALITY ignore TYPE PagingArea-PagingRqst { ID id-PagingArea-PagingRqst PRESENCE mandatory } | { ID id-SRNC-ID CRITICALITY ignore TYPE RNC-ID PRESENCE mandatory } | { ID id-S-RNTI CRITICALITY ignore TYPE S-RNTI PRESENCE mandatory } | { ID id-IMSI CRITICALITY ignore TYPE IMSI PRESENCE mandatory } | { ID id-DRXCycleLengthCoefficient CRITICALITY ignore TYPE DRXCycleLengthCoefficient PRESENCE mandatory $]_{\tau}$ { ID id-CNOriginatedPage-PagingRqst CRITICALITY ignore TYPE CNOriginatedPage-PagingRqst PRESENCE optional }, . . . } PagingArea-PagingRqst ::= CHOICE { uRA URA-PagingRqst, cell Cell-PagingRqst, . . . } URA-PagingRqst ::= ProtocolIE-Single-Container {{ URAIE-PagingRqst }} URAIE-PagingRqst RNSAP-PROTOCOL-IES ::= { { ID id-URAItem-PagingRqst CRITICALITY ignore TYPE URAItem-PagingRqst PRESENCE mandatory } } URAItem-PagingRqst ::= SEQUENCE { uRA-ID URA-ID, iE-Extensions ProtocolExtensionContainer { { URAItem-PagingRqst-ExtIEs} } OPTIONAL, . . . } URAItem-PagingRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { } Cell-PagingRqst ::= ProtocolIE-Single-Container {{ CellIE-PagingRqst }} CellIE-PagingRqst RNSAP-PROTOCOL-IES ::= { { ID id-CellItem-PagingRqst CRITICALITY ignore TYPE CellItem-PagingRqst PRESENCE mandatory } } CellItem-PagingRqst ::= SEQUENCE { c-ID C-ID, iE-Extensions ProtocolExtensionContainer { { CellItem-PagingRqst-ExtIEs } } OPTIONAL, . . . } CellItem-PagingRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { } CNOriginatedPage-PagingRqst::= SEQUENCE { pagingCause PagingCause cNDomainType CNDomainType, pagingRecordType PagingRecordType, ProtocolExtensionContainer { { CNOriginatedPage-PagingRqst-ExtIEs } } iE-Extensions OPTIONAL, . . .

}
CNOriginatedPage-PagingRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
 ...
}

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PagingRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
 ...

<Parts of the ASN.1 module is omitted>

}

9.3.4 Information Element Definitions

```
- -
-- Information Element Definitions
<Parts of the ASN.1 module is omitted>
-- C
Cause ::= CHOICE {
   radioNetwork
                    CauseRadioNetwork,
   transport
                     CauseTransport,
   protocol
                      CauseProtocol,
                      CauseMisc,
   misc
   . . .
}
CauseMisc ::= ENUMERATED {
   control-processing-overload,
   hardware-failure,
   om-intervention,
   not-enough-user-plane-processing-resources,
   unspecified,
}
CauseProtocol ::= ENUMERATED {
   transaction-not-allowed,
   transfer-syntax-error,
   abstract-syntax-error-reject,
   abstract-syntax-error-ignore-and-notify,
   message-not-compatible-with-receiver-state,
   semantic-error,
   unspecified,
   abstract-syntax-error-falsely-constructed-message,
    . . .
}
CauseRadioNetwork ::= ENUMERATED {
   unknown-C-ID,
   cell-not-available,
   power-level-not-supported,
   ul-scrambling-code-already-in-use,
   dl-radio-resources-not-available,
   ul-radio-resources-not-available,
   measurement-not-supported-for-the-object,
   combining-resources-not-available,
   reconfiguration-not-allowed,
   requested-configuration-not-supported,
   synchronisation-failure,
   requested-tx-diversity-mode-not-supported,
   measurement-temporaily-not-available,
   unspecified.
   invalid-CM-settings,
   reconfiguration-CFN-not-elapsed,
   number-of-DL-codes-not-supported,
   dch-not-supported,
   dsch-not-supported,
   usch-not-supported,
   rach-fach-cpch-not-supported,
   ul-spreading-factor-not-supported,
   dl-spreading-factor-not-supported,
   cm-not-supported,
   transaction-not-supported-by-destination-node-b,
    . . .
}
```

```
CauseTransport ::= ENUMERATED {
```

```
transmission-link-failure,
    transmission-port-not-available,
    unspecified,
    . . .
}
                         ::= INTEGER (0..65535)
C-ID
CCTrCH-ID
                         ::= INTEGER (0..15)
CellIndividualOffset ::= INTEGER (-20..20)
                             ::= INTEGER (0..127,...)
CellParameterID
CFN
                    ::= INTEGER (0..255)
ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding,
    . . .
}
ChipOffset
                         ::= INTEGER (0..38399)
ClosedLoopModel-SupportIndicator ::= ENUMERATED {
    closedLoop-Model-Supported,
    closedLoop-Model-not-Supported
}
ClosedLoopMode2-SupportIndicator ::= ENUMERATED {
    closedLoop-Mode2-Supported,
    closedLoop-Mode2-not-Supported
}
Closedlooptimingadjustmentmode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    . . .
}
CodeNumber ::= INTEGER (0..maxCodeNumComp-1)
CodingRate ::= ENUMERATED {
    half,
    third,
    . . .
}
CRC-Size
                       ::= ENUMERATED {
    v0,
    v8.
    v12,
    v16,
    v24,
    . . .
}
    riggeringMessage TriggeringMessage
CriticalityDiagnostics ::= SEQUENCE {
                                                     OPTIONAL,
                                                           OPTIONAL,
    criticalityResponse
                                 Criticality
                                                           OPTIONAL,
    CriticalityResponseCriticalityOPTIONAL,iEsCriticalityResponsesCriticalityDiagnostics-IE-List,iE-ExtensionsProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} }
OPTIONAL,
    . . .
}
CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
                                Criticality,
        criticalityResponse
        iE-ID
                                 ProtocolIE-ID,
        repetitionNumber
                                 RepetitionNumber
                                                          OPTIONAL,
```

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```

```
ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs}
        iE-Extensions
} OPTIONAL,
        . . .
    }
CriticalityDiagnostics-IE-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
CN-CS-DomainIdentifier ::= SEQUENCE {
   pLMN-ID
                       PLMN-ID,
    1AC
                       LAC.
                      ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs } } OPTIONAL
    iE-Extensions
}
CN-CS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
CN-PS-DomainIdentifier ::= SEQUENCE {
                       PLMN-ID,
   pLMN-ID
    lac
                       LAC,
    rAC
                        RAC,
                      ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL
    iE-Extensions
}
CN-PS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
}
              ::= ENUMERATED {
CNDomainType
   cs-domain,
   ps-domain,
   dont-care,
   . . .
}
  According to the mappingSee in [16]
C-RNTI
                       ::= INTEGER (0..65535)
-- D
DCH-ID
                        ::= INTEGER (0..255)
DedicatedMeasurementType ::= ENUMERATED {
   sir,
    sir-error,
    transmitted-code-power,
   rSCP,
   rx-timing-deviation,
   round-trip-time,
    . . .
}
DedicatedMeasurementValue ::= CHOICE {
                SIR-Value,
    sIR-Value
    sIR-ErrorValue
                          SIR-Error-Value,
    transmittedCodePowerValue Transmitted-Code-Power-Value,
                       RSCP-Value, -- TDD only
   rSCP
   rxTimingDeviationValue Rx-Timing-Deviation-Value, -- TDD only
    roundTripTime Round-Trip-Time-Value, -- FDD only
    . . .
}
DeltaSIR
                        ::= INTEGER (0..30)
-- Step 0.1 dB, Range 0..3 dB.
                              ::= ENUMERATED {
DiversityControlField
   may,
    must,
   must-not
}
DiversityMode
                           ::= ENUMERATED {
   none,
    sTTD,
    closedLoopModel,
```

```
closedLoopMode2,
   . . .
}
DL-DPCH-SlotFormat
                          ::= INTEGER (0..16,...)
                     ::= INTEGER (-350..150)
DL-Power
-- Value = DL-Power / 10
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB
                      ::= INTEGER (0..1048575)
D-RNTI
D-RNTI-ReleaseIndication ::= ENUMERATED {
   release-D-RNTI,
   not-release-D-RNTI
}
DL-ScramblingCode ::= INTEGER (0..15)
DL-FrameType ::= ENUMERATED {
   typeA,
   typeB,
   . . .
}
DL-TimeslotISCP := INTEGER (0..91)
-- According to mapping in [24]
Downlink-Compressed-Mode-Method ::= ENUMERATED {
  puncturing,
   sFdiv2,
   higher-layer-scheduling,
    . . .
}
DPCH-ID
                      ::= INTEGER (0..239)
DPCHConstantValue ::= INTEGER (-10..10)
-- Unit dB, Step 1dB
              ::= ENUMERATED {
DRACControl
   requested,
   not-requested
}
                                  ::= INTEGER (\frac{23}{2}..\frac{129}{2})
DRXCycleLengthCoefficient
-- According to mappingSee in [16]
DSCH-ID
                      ::= INTEGER (0..255)
•
<Parts of the ASN.1 module is omitted>
•
.
```
-- P PagingCause ::= ENUMERATED { terminating-conversational-call, terminating-streaming-call, terminating-interactive-call, terminating-background-call, sms, . . . } According to mappingSee in [16] PagingRecordType ::= ENUMERATED { imsi-gsm-map, tmsi-gsm-map, p-tmsi-gsm-map, imsi-ds-41, tmsi-ds-41-. . . } According to mappingSee in [16] PayloadCRC-PresenceIndicator ::= ENUMERATED { crc-included. crc-not-included } PCCPCH-Power ::= INTEGER (-150..400,...) -- PCCPCH-power = power * 10 -- If power <= -15 PCCPCH shall be set to -150-- If power >= 40 PCCPCH shall be set to 400 -- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dBm PDSCHCodeMapping ::= SEQUENCE { dL-ScramblingCode DL-ScramblingCode, PDSCHCodeMapping-SignallingMethod, signallingMethod ProtocolExtensionContainer { { PDSCHCodeMapping-ExtIEs} } OPTIONAL, iE-Extensions } PDSCHCodeMapping-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= { } PDSCHCodeMapping-SignallingMethod ::= CHOICE { ${\tt pDSCHCodeMapping-SignallingMethod-CodeRange}$ PDSCHCodeMapping-SignallingMethod-CodeRange, PDSCHCodeMapping-SignallingMethod-TFCIRange, pDSCHCodeMapping-SignallingMethod-TFCIRange pDSCHCodeMapping-SignallingMethod-Explicit PDSCHCodeMapping-SignallingMethod-Explicit } PDSCHCodeMapping-SignallingMethod-CodeRange ::= SEQUENCE (SIZE (1..maxNoCodeGroups)) OF SEQUENCE spreadingFactor SpreadingFactor, multi-code-info Multi-code-info, CodeNumber, start-CodeNumber stop-CodeNumber CodeNumber . . . } PDSCHCodeMapping-SignallingMethod-TFCIRange ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF SEQUENCE { maxTFCIvalue MaxTFCIvalue, spreadingFactor SpreadingFactor, multi-code-info Multi-code-info, codeNumber CodeNumber, . . . } PDSCHCodeMapping-SignallingMethod-Explicit ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF SEQUENCE spreadingFactor SpreadingFactor, Multi-code-info, multi-code-info codeNumber CodeNumber, . . . } Periodic ::= SEQUENCE {

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```

```
reportPeriodicity
                           ReportPeriodicity,
                            ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
}
Periodic-Extles RNSAP-PROTOCOL-EXTENSION ::= {
   . . .
}
PLMN-ID ::= OCTET STRING (SIZE(3))
PowerAdjustmentType ::= ENUMERATED {
   none,
    common,
    individual
}
                      ::= INTEGER (0..24)
PowerOffset
PRACH-Midamble ::= ENUMERATED {
   inverted,
   direct
}
PRACH-MinimumSpreadingFactor ::= ENUMERATED {
   v32,
    v64,
   v128,
   v256,
    . . .
}
PreambleSignatures
                          ::= BIT STRING (SIZE (16))
-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 See ref. [21] --
PrimaryCPICH-Power
                           ::= INTEGER (-100..500)
-- step 0.1 (Range -10.0..50.0) Unit is dBm
PrimaryCPICH-EcNo
                           ::= INTEGER (-30..30)
                          ::= INTEGER (0..91)
PrimaryCCPCH-RSCP
-- According to maping in [14]
                              ::= INTEGER (0..511)
PrimaryScramblingCode
PropagationDelay
                           ::= INTEGER (0..255)
                           ::= INTEGER (0..15)
PunctureLimit
-- 0: 40%; 1: 44%; ... 14: 96%; 15: 100
<Parts of the ASN.1 module is omitted>
•
```

INTEGER ::= 4 INTEGER ::= 5

INTEGER ::= 6

INTEGER ::= 7

INTEGER ::= 8

INTEGER ::= 9

INTEGER ::= 10

INTEGER ::= 11

INTEGER ::= 12

INTEGER ::= 15

INTEGER ::= 16 INTEGER ::= 17

INTEGER ::= 18

INTEGER ::= 19

INTEGER ::= 20 INTEGER ::= 21

INTEGER ::= 22

INTEGER ::= 26

INTEGER ::= 27

INTEGER ::= 28

INTEGER ::= 29

INTEGER ::= 30 INTEGER ::= 31

INTEGER ::= 32

INTEGER ::= 33

INTEGER ::= 34

INTEGER ::= 35

INTEGER ::= 39 INTEGER ::= 40

INTEGER ::= 41

INTEGER ::= 42

INTEGER ::= 43 INTEGER ::= 44

INTEGER ::= 45

INTEGER ::= 46

INTEGER ::= 47

INTEGER ::= 48 INTEGER ::= 49

INTEGER ::= 50

INTEGER ::= 51

INTEGER ::= 52 INTEGER ::= 53

INTEGER ::= 54

INTEGER ::= 55 INTEGER ::= 56

INTEGER ::= 57

INTEGER ::= 58

INTEGER ::= 59

INTEGER ::= 60

INTEGER ::= 61

INTEGER ::= 62

INTEGER ::= 63

INTEGER ::= 64

INTEGER ::= 67

INTEGER ::= 68 INTEGER ::= 69

INTEGER ::= 70 INTEGER ::= 71

INTEGER ::= 72

INTEGER ::= 73

INTEGER ::= 74

9.3.6 Constant Definitions

```
<Parts of the ASN.1 module is omitted>
-- IEs
_ _
id-AllowedOueuingTime
id-BindingID
id-C-ID
id-C-RNTT
id-CFN
id-CN-CS-DomainIdentifier
id-CN-PS-DomainIdentifier
id-Cause
id-CellItem-PagingRqst
id-CombiningItem-RL-AdditionFailureFDD
id-CombiningItem-RL-AdditionRspFDD
id-CombiningItem-RL-AdditionRspTDD
id-CombiningItem-RL-SetupFailureFDD
id-CombiningItem-RL-SetupRspFDD
id-CriticalityDiagnostics
id-D-RNTT
id-D-RNTI-ReleaseIndication
id-DCH-AddList-RL-ReconfPrepFDD
id-DCH-AddList-RL-ReconfPrepTDD
id-DCH-AddList-RL-ReconfRqstFDD
id-DCH-AddList-RL-ReconfRqstTDD
id-DCH-DeleteList-RL-ReconfPrepFDD
id-DCH-DeleteList-RL-ReconfPrepTDD
id-DCH-DeleteList-RL-ReconfRqstFDD
id-DCH-DeleteList-RL-ReconfRqstTDD
id-DCH-Information-RL-SetupRqstFDD
id-DCH-InformationList-RL-SetupRqstTDD
id-DCH-ModifyList-RL-ReconfPrepFDD
id-DCH-ModifyList-RL-ReconfPrepTDD
id-DCH-ModifyList-RL-ReconfRqstFDD
id-DCH-ModifyList-RL-ReconfRqstTDD
id-DCH-InformationResponseListIE-RL-SetupRspTDD
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD
id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD
id-DL-CCTrCH-InformationList-RL-SetupRgstTDD
id-DL-CodeInformationListIE-PhyChReconfRqstFDD
id-DL-CodeInformationListIE-RL-AdditionFailureFDD
id-DL-CodeInformationListIE-RL-AdditionRspFDD
id-DL-CodeInformationListIE-RL-ReconfReadvFDD
id-DL-CodeInformationListIE-RL-SetupFailureFDD
id-DL-DPCH-Information-RL-ReconfPrepFDD
id-DL-DPCH-Information-RL-SetupRqstFDD
id-DL-DPCH-Information-RL-ReconfRqstFDD
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD
id-DL-DPCH-InformationItem-RL-AdditionRspTDD
id-DL-DPCH-InformationItem-RL-SetupRspTDD
id-DLReferencePower
id-DLReferencePowerList-DL-PC-Rqst
id-DL-ReferencePowerInformation-DL-PC-Rgst
id-DRXCycleLengthCoefficient
id-DedicatedMeasurementObjectType-DM-Rprt
id-DedicatedMeasurementObjectType-DM-Rqst
id-DedicatedMeasurementObjectType-DM-Rsp
id-DedicatedMeasurementType
```

3GPP

| id-DiversityIndicationItem-RL-AdditionFailureFDD | INTEGER | ::= | 75 |
|--|---------|-------|-------|
| id-DiversityIndicationItem-RL-AdditionRspFDD | INTEGER | ::= | 76 |
| id-DiversityIndicationItem-RL-AdditionRspTDD | INTEGER | ::= | 77 |
| id-DiversityIndicationItem-RL-SetupFailureFDD | INTEGER | ::= | 78 |
| id-DiversityIndicationItem-RL-SetupRspFDD | TNTEGER | ::= | 79 |
| id-FACH-InfoForDRNCSelectedS-CCPCH-CTCH-ResourceRspFDD | INTEGER | ::= | 80 |
| | INTEGER | · · _ | Q1 |
| d FAGI Inforentialegeletede CCCCC CTCL RESOLUCESPID | INTEGER | | 01 |
| | INIEGER | ••= | 04 |
| 10-FACH-INIOFOTUESelectedS-CCPCH-CTCH-ResourcerspTDD | INTEGER | ••= | 83 |
| Id-IMSI | INTEGER | ::= | 84 |
| id-L3-Information | INTEGER | ::= | 85 |
| id-MAC-c-sh-SDU-LengthListIE-CTCH-ResourceRspFDD | INTEGER | ::= | 86 |
| id-MAC-c-sh-SDU-LengthListIE-CTCH-ResourceRspTDD | INTEGER | ::= | 87 |
| id-MAC-c-sh-SDU-LengthListIE-option-CTCH-ResourceRspFDD | INTEGER | ::= | 88 |
| id-MAC-c-sh-SDU-LengthListIE-option-CTCH-ResourceRspTDD | INTEGER | ::= | 89 |
| id-AdjustmentPeriod | TNTEGER | ::= | 90 |
| id-MaxAdjustmentStep | INTEGER | ::= | 91 |
| id_MassurementFilterCoefficient | INTEGER | · · _ | 02 |
| | INTEGER | | 02 |
| | INIEGER | ••= | 93 |
| 1d-MultipleURASINGICATOr | INTEGER | ••= | 94 |
| id-Neighbouring-CellInformationItem-RL-SetupFailureFDD | INTEGER | ::= | 95 |
| id-Neighbouring-CellInformationItem-RL-SetupRsp | INTEGER | ::= | 96 |
| id-NonCombiningItem-RL-AdditionFailureFDD | INTEGER | ::= | 97 |
| id-NonCombiningItem-RL-AdditionRspFDD | INTEGER | ::= | 98 |
| id-NonCombiningItem-RL-AdditionRspTDD | INTEGER | ::= | 99 |
| id-NonCombiningOrFirstRLItem-RL-SetupFailureFDD | INTEGER | ::= | 100 |
| id-NonCombiningOrFirstRLItem-RL-SetupRspFDD | TNTEGER | ::= | 101 |
| id-Daginglrea-DagingRest | INTEGER | ::- | 102 |
| id DeinsteindigeternatietelWinderGigetigtte (TOUL DescurseDenEDD | INTEGER | | 102 |
| id priority indicator And initial Windows is a list if CHCH - Resources prop | INTEGER | | 103 |
| Id-PriorityIndicatorAndinitiatwindowsizeListite-Cich-Resourcerspibb | INIEGER | ••= | 104 |
| 1d-PriorityIndicatorAndInitialWindowSizeListIE-option-CTCH-ResourceRspFDD | INTEGER | ::= | 105 |
| id-PriorityIndicatorAndInitialWindowSizeListIE-option-CTCH-ResourceRspTDD | INTEGER | ::= | 106 |
| id-PowerAdjustmentType | INTEGER | ::= | 107 |
| id-ProcedureScope-DL-PC-Rqst | INTEGER | ::= | 108 |
| id-RANAP-RelocationInformation | INTEGER | ::= | 109 |
| id-RL-Information-PhyChReconfRqstFDD | INTEGER | ::= | 110 |
| id-RL-Information-PhyChReconfRgstTDD | INTEGER | ::= | 111 |
| id-RL-Information-RL-AdditionRestEDD | INTEGER | ::= | 112 |
| id-RL-Information-RL-AdditionRgstTDD | INTEGER | ::= | 113 |
| id-RL-Information-RL-DeletionRost | INTEGER | ::= | 114 |
| id_BL_Information_BL_FailureInd | INTEGER | · · _ | 115 |
| | INTEGER | | 116 |
| | INTEGER | | 117 |
| | INIEGER | ••= | 11/ |
| 1d-RL-Information-RL-SetupRqstFDD | INTEGER | ::= | 118 |
| id-RL-Information-RL-SetupRqstTDD | INTEGER | ::= | 119 |
| id-RL-InformationItem-DM-Rprt | INTEGER | ::= | 120 |
| id-RL-InformationItem-DM-Rqst | INTEGER | ::= | 121 |
| id-RL-InformationItem-DM-Rsp | INTEGER | ::= | 122 |
| id-RL-InformationItem-RL-SetupRqstFDD | INTEGER | ::= | 123 |
| id-RL-InformationList-RL-AdditionRgstFDD | INTEGER | ::= | 124 |
| id-RL-InformationList-RL-DeletionRgst | TNTEGER | ::= | 125 |
| id-RL-InformationList-RL-ReconfPrepEDD | INTEGER | ::= | 126 |
| id_RL_InformationResponse_RL_AdditionRepTDD | INTEGER | ::- | 127 |
| d B InformationResponde B PagenfBeadyTDD | INTECER | | 1 2 0 |
| | INTEGER | | 120 |
| id Di InformationResponse-rationer additioner app | TNIFCER | ••= | 122 |
| 1d-RL-InformationResponseitem-RL-AdditionRspFDD | INTEGER | ::= | 130 |
| id-RL-InformationResponseItem-RL-ReconfReadyFDD | INTEGER | ::= | 131 |
| id-RL-InformationResponseItem-RL-ReconfRsp | INTEGER | ::= | 132 |
| id-RL-InformationResponseItem-RL-SetupRspFDD | INTEGER | ::= | 133 |
| id-RL-InformationResponseList-RL-AdditionRspFDD | INTEGER | ::= | 134 |
| id-RL-InformationResponseList-RL-ReconfReadyFDD | INTEGER | ::= | 135 |
| id-RL-InformationResponseList-RL-ReconfRsp | INTEGER | ::= | 136 |
| id-RL-InformationResponseList-RL-SetupRspFDD | INTEGER | ::= | 137 |
| id-RLItem-DM-Rort | INTEGER | ::= | 138 |
| id-RLTtem-DM-Rast | INTEGER | ::= | 139 |
| id_PLItem_DM_Rsp | INTEGER | ::- | 140 |
| id-DL-DegonfigurationFailure DL-DegonfFail | | | 1/1 |
| Id-RL-ReconfigurationFailure-RL-Reconffail | INTEGER | | 141 |
| Id-RI-Sec-III.0/IMALIOII.Lem-DM-RDFL | TNIFCER | ••= | 143 |
| Id-RI-Set-InformationItem-DM-RQST | TNLEGER | • • = | 144 |
| 1d-RL-Set-InformationItem-DM-Rsp | INTEGER | ::= | 145 |
| 1d-RL-Set-Information-RL-FailureInd | INTEGER | ::= | 146 |
| id-RL-Set-Information-RL-RestoreInd | INTEGER | ::= | 147 |
| id-RL-SetItem-DM-Rprt | INTEGER | ::= | 148 |
| id-RL-SetItem-DM-Rqst | INTEGER | ::= | 149 |
| id-RL-SetItem-DM-Rsp | INTEGER | ::= | 150 |
| id-RNCsWithCellsInTheAccessedURA-List-UL-ST-IndFDD | INTEGER | ::= | 151 |
| id-ReportCharacteristics | INTEGER | ::= | 152 |
| id-Reporting-Object-RL-FailureInd | INTEGER | ::= | 153 |
| | | | |

INTEGER ::= 154

id-Reporing-Object-RL-RestoreInd id-S-RNTI id-SAI id-SRNC-TD id-SecondaryCCPCHListIE-CTCH-ResourceRspTDD id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD id-TransportBearerID id-TransportBearerRequestIndicator id-TransportLayerAddress id-IIC-ID id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD id-UL-CCTrCH-InformationAddItem-RL-ReconfRqstTDD id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD id-UL-CCTrCH-InformationAddList-RL-ReconfRqstTDD id-UL-CCTrCH-InformationItem-RL-SetupRgstTDD id-UL-CCTrCH-InformationList-RL-SetupRqstTDD id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD id-UL-DPCH-Information-RL-ReconfPrepFDD id-UL-DPCH-Information-RL-ReconfRostFDD id-UL-DPCH-Information-RL-SetupRqstFDD id-UL-DPCH-InformationItem-PhyChReconfRqstTDD id-UL-DPCH-InformationItem-RL-AdditionRspTDD id-UL-DPCH-InformationItem-RL-SetupRspTDD id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD id-UL-SIRTarget id-URA-ID id-URAItem-PagingRqst id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD id-Active-Pattern-Sequence-Information id-AdjustmentRatio id-All-RLItem-DM-Rqst id-All-RLItem-Set-DM-Rqst id-CauseLevel-RL-AdditionFailureFDD id-CauseLevel-RL-AdditionFailureTDD id-CauseLevel-RL-ReconfFailure id-CauseLevel-RL-SetupFailureFDD id-CauseLevel-RL-SetupFailureTDD id-DCH-InformationResponseListIE-RL-ReconfReadyFDD id-DCH-InformationResponseListIE-RL-ReconfReadyTDD id-DCH-InformationResponseListIE-RL-ReconfRsp id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD id-DL-CodeInformationListIE-RL-ReconfResp id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD id-DSCH-AddList-RL-ReconfPrepTDD id-DSCH-Add-RL-ReconfPrepFDD id-DSCH-DeleteList-RL-ReconfPrepTDD id-DSCH-Delete-RL-ReconfPrepFDD id-DSCH-InformationItem-RL-SetupRqstFDD id-DSCH-InformationListIE-RL-AdditionRspTDD id-DSCH-InformationListIEs-RL-SetupRspTDD id-DSCH-InformationList-RL-SetupRqstTDD id-DSCH-InformationResponseItem-RL-SetupRspFDD ${\tt id-DSCH-InformationResponseListIE-RL-AdditionFailureFDD}$ id-DSCH-InformationResponseListIE-RL-SetupFailureFDD id-DSCH-Information-RL-SetupRqstFDD id-DSCH-ModifyList-RL-ReconfPrepTDD id-DSCH-Modify-RL-ReconfPrepFDD id-DSCHToBeAddedOrModifiedIE-RL-ReconfReadyFDD id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD id-GA-AccessPointPosition id-GA-Cell

| тмтесто | · · _ | 166 |
|---|--|---|
| TNIEGER | ••- | 100 |
| INTEGER | ::= | 156 |
| INTEGER | ::= | 157 |
| TNTEGER | ::= | 158 |
| INTEGER | | 150 |
| INTEGER | ::= | 159 |
| INTEGER | ::= | 160 |
| INTEGER | ::= | 161 |
| INTEGER | | 1 < 0 |
| INTEGER | ••= | 162 |
| INTEGER | ::= | 163 |
| TNTEGER | ::= | 164 |
| TNTECED | | 165 |
| INTEGER | ••= | 105 |
| INTEGER | ::= | 166 |
| INTEGER | ::= | 167 |
| тмттстр | · · _ | 160 |
| INTEGER | ••= | 100 |
| INTEGER | ::= | 169 |
| INTEGER | ::= | 170 |
| TNTECED | · · _ | 171 |
| INTEGER | | 1 0 |
| INTEGER | ::= | 172 |
| INTEGER | ::= | 173 |
| TNTEGER | ::= | 174 |
| INTEGER | | 100 |
| INTEGER | ::= | 175 |
| INTEGER | ::= | 176 |
| INTEGER | ::= | 177 |
| INTEGER | | 170 |
| INIEGER | ••= | 1/8 |
| INTEGER | ::= | 179 |
| INTEGER | ::= | 180 |
| INTEGER | | 101 |
| INIEGER | ••= | TQT |
| INTEGER | ::= | 182 |
| TNTEGER | ::= | 183 |
| INTEGED | | 101 |
| INIEGER | ••= | 184 |
| INTEGER | ::= | 185 |
| INTEGER | ::= | 186 |
| TNEGED | | 100 |
| INIEGER | ••= | 188 |
| INTEGER | ::= | 189 |
| TNTEGER | ::= | 190 |
| INTEGED | | 101 |
| INIEGER | ••= | 191 |
| INTEGER | ::= | 192 |
| INTEGER | ::= | 193 |
| TNEGED | | 104 |
| INIEGER | ••= | 194 |
| INTEGER | ::= | 195 |
| INTEGER | ::= | 196 |
| INTEGED | | 107 |
| INIEGER | ••= | 197 |
| INTEGER | ::= | 198 |
| TNTEGER | ::= | 199 |
| INTEGED | | 200 |
| INIEGER | ••= | 200 |
| INTEGER | ::= | 201 |
| INTEGER | ::= | 202 |
| TNEEGED | | 202 |
| INIEGER | ••= | 203 |
| INTEGER | ::= | 204 |
| INTEGER | ::= | 205 |
| INTEGED | | 200 |
| INIEGER | ••= | 206 |
| INTEGER | ::= | 207 |
| INTEGER | ::= | 208 |
| TNEEGED | | 200 |
| INIEGER | ••= | 209 |
| INTEGER | ::= | 210 |
| INTEGER | ::= | 211 |
| тмтрстр | · · _ | 212 |
| TNIEGER | ••- | 212 |
| INTEGER | ::= | 213 |
| INTEGER | ::= | 214 |
| тмттстр | · · _ | 215 |
| INIEGER | ••- | 215 |
| INTEGER | ::= | 216 |
| INTEGER | ::= | 217 |
| TNTRCEP | ::- | 21 Q |
| TIMECOL | | 210 |
| INTEGER | | · · · · O |
| INTEGER | ••= | 219 |
| | ··= | 219 |
| TNTFCFP | ::= | 219 220 221 |
| INTEGER | ::= | 219 220 221 |
| INTEGER INTEGER | ···= ··= ··= | 219 220 221 222 |
| INTEGER INTEGER INTEGER | · · = · · = · · = · · = · · = | 219 220 221 222 223 |
| INTEGER INTEGER INTEGER | · · = · · = · · = · · = · · = · · = | 219 220 221 222 223 224 |
| INTEGER INTEGER INTEGER | · · = · · = · · = · · = · · = · · = | 219 220 221 222 223 224 |
| INTEGER INTEGER INTEGER INTEGER INTEGER | · · = · · = · · = · · = · · = · · = · · = | 219 220 221 222 223 224 225 |
| INTEGER INTEGER INTEGER INTEGER INTEGER | · · = · · = | 219 220 221 222 223 224 225 226 |
| INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER | · · = · · = | 219 220 221 222 223 224 225 226 227 |
| INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER | · · · = · · · = | 219 220 221 222 223 224 225 226 227 |
| INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER | · · · = · · · = | 219 220 221 222 223 224 225 226 227 228 |
| INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER | · · · = · · · · · | 219 220 221 222 223 224 225 226 227 228 229 |
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| INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER | · · · = · · · · · | 219 220 221 222 223 224 225 226 227 228 229 230 |
| INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER INTEGER | | 219 220 221 222 223 224 225 226 227 228 229 230 231 |

| id-GeneralCauseItem-RL-AdditionFailureFDD | INTEGER ::= 233 |
|--|-------------------|
| id-GeneralCauseItem-RL-AdditionFailureTDD | INTEGER ::= 234 |
| id-GeneralCauseItem-RL-ReconfFailure | INTEGER ::= 235 |
| id-GeneralCauseItem-RL-SetupFailureFDD | INTEGER ::= 236 |
| id-GeneralCauseItem-RL-SetupFailureTDD | INTEGER ::= 237 |
| id-MeasurementAvailableItem-DedicatedMeasurementReport | INTEGER ::= 238 |
| id-MeasurementnotAvailableItem-DedicatedMeasurementReport | INTEGER ::= 239 |
| id-Neighbouring-CellInformationItem-RL-AdditionFailureFDD | INTEGER ::= 240 |
| id-Neighbouring-CellInformationItem-RL-AdditionRsp | INTEGER ::= 241 |
| id-RACH-InfoForDRNCSelectedPRACH-CTCH-ResourceRspFDD | INTEGER ::= 242 |
| id-RACH-InfoForDRNCSelectedPRACH-CTCH-ResourceRspTDD | INTEGER ::= 243 |
| id-RLItem-RL-FailureInd | INTEGER ::= 244 |
| id-RLItem-RL-RestoreInd | INTEGER ::= 245 |
| id-RL-SetItem-RL-FailureInd | INTEGER ::= 246 |
| id-RL-SetItem-RL-RestoreInd | INTEGER ::= 247 |
| id-RLSpecificCauseItem-RL-AdditionFailureFDD | INTEGER ::= 248 |
| id-RLSpecificCauseItem-RL-AdditionFailureTDD | INTEGER ::= 249 |
| id-RLSpecificCauseItem-RL-ReconfFailure | INTEGER ::= 250 |
| id-RLSpecificCauseItem-RL-SetupFailureFDD | INTEGER ::= 251 |
| id-RLSpecificCauseItem-RL-SetupFailureTDD | INTEGER ::= 252 |
| id-RNCsWithCellsInTheAccessedURA-List-CTCH-ResourceRspFDD | INTEGER ::= 253 |
| id-ENCsWithCellsInTheAccessedURA-List-CTCH-ResourceRspTDD | INTEGER ::= 254 |
| id-Transmission-Gap-Pattern-Sequence-Information | INTEGER ::= 255 |
| id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD | INTEGER $::= 256$ |
| id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD | INTEGER $::= 257$ |
| id_IIICCTTCH-InformationModifyItem-RL-ReconfRastTDD | INTEGER ::= 258 |
| id-IIICCTTCH-InformationDeletList-RL-ReconfPrepTDD | INTEGER ::= 259 |
| id-IIICCTrCH-InformationModifyList-RL-ReconfPrepTDD | INTEGER ::= 260 |
| id-IIICCTrCH-InformationModifyList-RL-ReconfRestTDD | INTEGER ::= 261 |
| id_III_CCTTCH_InformationDeletItem_BL_ReconfPostTDD | INTEGER ::= 262 |
| id_IIICCTrCH-InformationDeleteList_RL_ReconfPostTDD | INTEGER ::= 263 |
| id JII _DDCU_InformationDeletelistIt_DI_PeronfPerdyTDD | INTEGER ··- 264 |
| d II - DCG InformationDetechistis E D - ReconfrequitDD | INTEGER ··- 265 |
| id Ungugage fulle information and an and a second second and a second se | INTEGER ··- 205 |
| id USCU-1ddi i at DI _BogonfDromTDD | INTEGER ··- 200 |
| id USCH-AddList-RL-Reconference | INTEGER ··= 207 |
| id USCH-Deleteristicalist Full AdditionDanEDD | INTEGER ··= 200 |
| | INTEGER ··= 209 |
| | INTEGER ··= 270 |
| Id-USCH_INFORMATIONLIST-RL-SETUPRGSTIDD | INTEGER ::= 2/1 |
| | INTEGER ::= 2/2 |
| 1d-USCHTOBEAddedUrModlfledList-RL-ReconficeadyTDD | INTEGER := 273 |
| 1d-DL-Physical-Channel-Information-RL-SetupRqstTDD | INTEGER ::= 2/4 |
| 1d-UL-Physical-Channel-Information-RL-SetupRqstTDD | INTEGER ::= 275 |
| 1d-ClosedLoopModel-SupportIndicator | INTEGER ::= 276 |
| 1d-ClosedLoopMode2-SupportIndicator | INTEGER ::= 277 |
| id-RNCsWithCellsInTheAccessedURA-List-UL-ST-IndTDD | INTEGER ::= 278 |
| id-STTD-SupportIndicator | INTEGER ::= 279 |
| id-CNOriginatedPage-PagingRqst | INTEGER ::= xxx |

END

| | CHANGE REQUEST Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. |
|---|--|
| | TS 25.423 CR 221 Current Version: 3.3.0 |
| GSM (AA.BB) or 3G (A | AA.BBB) specification number ↑ |
| For submission to | b: RAN#10 For approval X Strategic (for SMG use only) |
| Proposed change (at least one should be ma | e affects: (U)SIM ME UTRAN / Radio X Core Network |
| <u>Source:</u> | R-WG3 Date: 10/2000 |
| Subject: | Common Transport Channel Resources Initialisation Clarification |
| Work item: | |
| Category:FA(only one categoryBShall be markedCWith an X)D | CorrectionXRelease:Phase 2Corresponds to a correction in an earlier releaseRelease 96Release 96Addition of featureRelease 97Release 97Functional modification of featureRelease 98Release 98Editorial modificationRelease 00X |
| <u>Reason for</u> <u>change:</u> | The common transport channel resource initialisation procedure needs to clearly define when optional parameters are included within messages. If this CR is not approved the specification will not be clear on the inclusion of optional parameters. |
| Clauses affected | 8.4.1.2 |
| Other specs Affected: | Other 3G core specifications \rightarrow List of CRs:Other GSM core specifications \rightarrow List of CRs:MS test specifications \rightarrow List of CRs:BSS test specifications \rightarrow List of CRs:D&M specifications \rightarrow List of CRs: |
| <u>Other</u> comments: | |

8.4.1 Common Transport Channel Resources Initialisation

8.4.1.1 General

The Common Transport Channel Resources Initialisation procedure is used by the SRNC for the initialisation of the Common Transport Channel user plane towards the DRNC and/or for the initialisation of the UE context in the DRNC.

This procedure shall use the connectionless mode of the signalling bearer.

8.4.1.2 Successful Operation

SRNC



Figure 1: Common Transport Channel Resources Initialisation procedure, Successful Operation

The SRNC initiates the procedure by sending the message COMMON TRANSPORT CHANNEL RESOURCES REQUEST to the DRNC.

Upon reception of the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNC shall respond by sending a COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message to the SRNC.

If the value of the Transport Bearer Request Indicator IE is set to "Bearer Requested", the DRNC shall store the received Transport Bearer ID IE and include the Binding Identity IE and Transport Layer Address IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message.

If the value of the Transport Bearer Request Indicator IE is set to" Bearer not Requested", the DRNC shall use the transport bearer for the indicated by the Transport Bearer ID IE.

If the C-ID IE is included in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNC shall allocate a C-RNTI for the indicated cell and include the C-RNTI IE in the COMMON TRANSPORT CHANNEL **RESOURCES RESPONSE** message.

If there exists multiple Secondary CCPCHs in the cell indicated by the C-ID IE or if no C-ID IE is included in the COMMON TRANSPORT CHANNEL RESOURCE REQUEST message in the cell where the UE is located and the DRNC decides to use the DRNC selected Secondary CCPCH instead of UE selected Secondary CCPCH, the FACH Info for DRNC Selected S-CCPCH IE group shall be included in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message. If the DRNC includes the FACH Info for DRNC Selected S-CCPCH IE group, then it shall also include the FACH Priority Indicator IE and FACH Initial Window Size IE for each priority class for this Secondary CCPCH.

If the C-ID IE is not included in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message or if the DRNC does not include the FACH Info for DRNC Selected S-CCPCH IE group in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message, the DRNC shall include the FACH Info for UE Selected S-CCPCH IE group in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message. The DRNC shall include the FACH Priority Indicator IE and FACH Initial Window Size IE in the FACH Info for UE Selected S-CCPCH IE group for each priority class that the DRNC has determined shall be used. The DRNC may include several MAC-c/sh SDU Length IEs for each priority class.

If there exists multiple RACHs in the cell where the UE is located and the DRNC decides to use the DRNC selected PRACH instead of the UE selected PRACH, the RACH Info for DRNC Selected PRACH IE group shall be included in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message. TDD - If the DRNC has defined a non-default midamble within the cell for this selected RACH, it shall include the PRACH Midamble IE in the COMMON TRANSPORT CHANNEL RESOURCES RESPONSE message with the selected midamble value.]

If the *C-ID* IE is included in the COMMON TRANSPORT CHANNEL RESOURCES REQUEST message, the DRNC shall include the *URA ID* IE of the cell identified by the received *C-ID* IE, the *Multiple URA Indicator* IE indicating whether or not the cell belongs to multiple URAs, and the RNC Identity of all other RNCs that are having at least one cell within the URA in the cell.

8.4.1.3 Unsuccessful Operation



Figure 2: Common Transport Channel Resources Initialisation procedure, Unsuccessful Operation

If the *Transport Bearer Request Indicator* IE is set to "Bearer Requested" and the DRNC is not able to provide a Transport Bearer, the DRNC shall respond to the SRNC with the COMMON TRANSPORT CHANNEL RESOURCES FAILURE message, indicating the cause of the failure.

Typical cause values are:

Radio Network Layer Causes:

- RACH/FACH/CPCH not Supported.
- 8.4.1.4 Abnormal Conditions

3GPP- RAN-WG3 Meeting #16

D Editorial modification

| Document | t R3 - | -0032 | 232 |
|----------|----------------|--------------|----------|
| e.g. | for 3GPP use | the format | TP-99xxx |
| oi | r for SMG, use | e the format | P-99-xxx |

Release 96 Release 97 Release 98 Release 99

Release 00

Х

| Windsor, U | Κ, | 16 th - 20 th | Octobe | er 2000 | | | | DC | Joann | e.g. for 3 or for | 3GPP use SMG, use | the format the format | TP-99xxx P-99-xxx |
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| | | | CHAI | NGE I | REQ | UES | T Pla | ease see ige for in: | embedo struction: | led help f s on how | ïle at the to fill in tl | bottom of his form co | this prrectly. |
| | | | 25.4 | 23 | CR | 228 | Br2 | С | urrent | Versio | on: <mark>3</mark> | .3.0 | |
| GSM (AA.BB) or | • 3G (J | AA.BBB) specific | ation number | ·↑ | | | ↑ CR nun | nber as a | llocated | by MCC s | support te | eam | |
| For submission list expected approximation of the second s | on to oval m | D: TSG-RA neeting # here ↑ | <mark>AN#10</mark> | for a for info | pproval rmation | X | | | non | Strate | gic gic | (for S use d | SMG only) |
| Proposed cha (at least one should | ange be ma | e affects: arked with an X) | (U)S | | ME | | UTR | AN / F | Radio | X | Core | Networ | k |
| Source: | | R-WG3 | | | | | | | | Date: | Nove | ember 2 | 2000 |
| Subject: | | Correction | for Tabul | ar format | t | | | | | | | | |
| Work item: | | | | | | | | | | | | | |
| | F A P | Correction Correspon | ds to a co | prrection | in an ea | rlier re | lease | X | Rele | ase: | Phase Relea | e 2 ase 96 | |
| shall be marked | Б С | Functional | modificat | tion of fea | ature | | | | | | Relea | ase 97 ase 98 | |

Reason for change:

| with an X) | |
|------------|--|
|------------|--|

| CR228r2: The following three changes are reflected into the CR228r1. |
|---|
| - Reference of BLER was corrected. (Changed to 9.2.1.4) |
| - Reference of Block STTD Indicator was removed. (No changes from the |
| 25.423v3.0.0) |

The change of the range of FACH Info for UE Selected S-CCPCHs in COMMON TRANSPORT CHANNEL RESOURCES RESPONSE TDD message (9.1.36.2) was undone (highlighted in light blue). (No changes from the 25.423v3.0.0)

CR228r1: the changes from the previous CR are highlighted in yellow. In the previous CR, Criticality and Assigned Criticality columns for CHOICE tags were filled. But some of these changes are conflicted with the decision of the last meeting (Criticality on each CHOICE tags are not needed). Therefore, changes from the current specification related to CHOICE tags are undone if it is conflicted with the agreement.

There are several minor errors in the tabular format. For example, IE type reference, Criticality or Presence are missing in their columns. This CR proposes to correct these mistakes. Furthermore this CR also corrects other kinds of mistakes described below.

- 9.1.3.1 RADIO LINK SETUP REQUEST (FDD)
 - Blank row between Diversity mode IE and SSDT Cell ID length IE is deleted. (revision is invisible)
- 9.1.8.1 RADIO LINK ADDITION FAILURE (FDD) The indentation of *Successful RL Information Response* IE is corrected.
- 9.1.36.2 COMMON TRANSPORT CHANNEL RESOURCES RESPONSE (TDD) The range of "FACH Info for UE Selected S-CCPCHs" is corrected. (see R3-001617, CR106r2)

| Clauses affect | ed: 9.1.3.1, 9.1.3.2, 9.1.4.1, 9 9.1.11.1, 9.1.11.2, 9.1.12 9.1.24.1, 9.1.24.2, 9.1.31 | 9.1.4.2, 9.1.5.1, 9.1.6.1, 9.1.7.1, 9.1.7.2, 9.1.8.1, 9.1.8.2, 1, 9.1.12.2, 9.1.13, 9.1.16.1, 9.1.16.2, 9.1.17, 9.1.20, , 9.1.35, 9.1.36.1, 9.1.36.2, 9.1.38 |
|---------------------------------|---|---|
| <u>Other specs</u> affected: | Other 3G core specifications Other GSM core specifications MS test specifications BSS test specifications O&M specifications | $\begin{array}{c c} \rightarrow & \text{List of CRs:} \\ \rightarrow & \text{List of CRs:} \\ \hline \rightarrow & \text{List of CRs:} \end{array}$ |
| Other comments: | | |

<----- double-click here for help and instructions on how to create a CR.

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|---------------------------------------|------------------|--|------------------|---------------|-------------|-------------|
| | | | reference | description | | Criticality |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | M | | 9.2.1.59 | | _ | |
| SRNC-Id | М | | RNC-ld | | YES | reject |
| S-RNTI | М | | 92153 | | YES | reject |
| D-RNTI | 0 | | 9.2.1.24 | | YES | reject |
| Allowed Queuing Time | 0 | | 9.2.1.2 | | YES | reject |
| UL DPCH Information | | 1 | - | | YES | reject |
| >UL Scrambling Code | Μ | | 9.2.2.53 | | — | |
| >Min UL Channelisation | М | | 9.2.2.25 | | — | |
| Code Length | | | | | | |
| >Max Number of UL | C – | | 9.2.2.24 | | - | |
| DPDCHs | CodeLen | | | | | |
| >Puncture Limit | M | | 9.2.1.46 | For the UL. | _ | |
| >TFCS | М | | TFCS for | | - | |
| | | | the UL | | | |
| | N4 | | 9.2.1.63 | | | |
| >UL DPCCH Slot Format | M | | 9.2.2.52 | | _ | |
| >Oplink SIR Target | 0 | | 9.2.1.69 | | _ | |
| >Diversity mode | М | | 9.2.2.8 | | _ | |
| >SSDT Cell Identity Length | 0 | | 9.2.2.41 | | _ | |
| >S Field Length | 0 | | 9.2.2.36 | | - | |
| DL DPCH Information | | 1 | | | YES | reject |
| >TFCS | Μ | | TFCS for | | - | |
| | | | the DL. | | | |
| | | | 9.2.1.63 | | | |
| >DL DPCH Slot Format | M | | 9.2.2.9 | | _ | |
| >Number of DL channelisation codes | М | | <u>9.2.2.26A</u> | | - | |
| >TFCI Signalling Mode | Μ | | 9.2.2.46 | | - | |
| >TFCI Presence | C- SlotFormat | | 9.2.1.55 | | _ | |
| >Multiplexing Position | M | | 9.2.2.26 | | _ | |
| >Power Offset Information | | 1 | | | _ | |
| >>PO1 | М | | Power | Power offset | - | |
| | | | Offset | for the TFCI | | |
| | | | 9.2.2.30 | bits. | | |
| >>PO2 | Μ | | Power | Power offset | — | |
| | | | Offset | for the TPC | | |
| | | | 9.2.2.30 | bits. | | |
| >>PO3 | М | | Power | Power offset | - | |
| | | | Offset | for the pilot | | |
| EDD TBC Downlink Stop | M | | 9.2.2.30 | DITS. | | |
| Size | IVI | | 9.2.2.10 | | _ | |
| >Limited Power Increase | М | | 9.2.1.33 | | _ | |
| DCH Information | | 1 <maxno ofDCHs></maxno | | | GLOBAL | reject |
| >Payload CRC Presence | М | - | 9.2.1.42 | | - | |
| >UL FP Mode | М | | 9.2.1.67 | | _ | |
| >ToAWS | M | | 9.2.1.58 | | _ | |
| >ToAWE | М | | 9.2.1.57 | | - | |
| >DCH Specific Info | | 1 <maxno< td=""><td></td><td></td><td>-</td><td></td></maxno<> | | | - | |
| >>DCH ID | М | 0.201102 | 9.2.1.16 | | _ | |
| >>TrCh Source Statistics | М | | 9.2.1.65 | | - | |

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| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--|-------------------|------------------------------------|---|-----------------------|-------------|-------------------------|
| Descriptor | | | | | | |
| >>Transport Format Set | М | | 9.2.1.64 | For the UL. | _ | |
| >>Transport Format Set | M | | 9.2.1.64 | For the DL. | _ | |
| >>BLER | M | | 9.2.1.3 9.2. | For the UL. | _ | |
| | | | 1.4 | | | |
| >>BLER | М | | 9.2 .1.3 <u>9.2.</u> <u>1.4</u> | For the DL. | _ | |
| >>Allocation/Retention Priority | М | | 9.2.1.1 | | - | |
| >>Frame Handling Priority | М | | 9.2.1.29 | | _ | |
| >>QE-Selector | М | | 9.2.1.46A | | _ | |
| >>DRAC control | М | | 9.2.2.13 | | _ | |
| DSCH Information | | 01 | | | YES | reject |
| >DSCH Info | | 1 <maxno ofDSCHs></maxno | | | EACH | reject |
| >>DSCH ID | М | | 9.2.1.26A | | _ | |
| >>TrCh Source Statistics Descriptor | М | | 9.2.1.65 | | - | |
| >>Transport Format Set | М | | <u>9.2.1.64</u> | For DSCH | _ | |
| >>Allocation/Retention Priority | М | | <u>9.2.1.1</u> | | - | |
| >>Scheduling Priority Indicator | М | | <u>9.2.1.51A</u> | | _ | |
| >>BLFR | М | | 9.2.1.4 | | _ | |
| >PDSCH RL ID | M | | RL ID 9.2.1.49 | | | |
| >TFCS | М | | 9.2.1.63 CS for the | For DSCH | _ | |
| RL Information | | 1 <maxn oofRLs></maxn | | | EACH | notify |
| >RL ID | М | | 9.2.1.49 | | _ | |
| >C-Id | М | | 9.2.1.6 | | _ | |
| >First RLS Indicator | М | | <u>9.2.2.16A</u> | | - | |
| >Frame Offset | М | | 9.2.1.30 | | - | |
| >Chip Offset | Μ | | 9.2.2.1 | | - | |
| >Propagation Delay | 0 | | 9.2.2.33 | | - | |
| >Diversity Control Field | C – NotFirstRL | | 9.2.2.6 | | - | |
| >Initial DL TX Power | C_ifAlone | | DL Power 9.2.2.10 | | _ | |
| >Primary CPICH Ec/No | C_ifAlone | 1 | 9.2.2.32 | ľ | - | |
| >SSDT Cell Identity | 0 | | 9.2.2.40 | | _ | |
| >Transmit Diversity Indicator | C – Diversity | | 9.2.2.50 | | _ | |
| Transmission Gap Pattern | 0 | | <u>9.2.2.47A</u> | | YES | reject |
| Active Pattern Sequence | 0 | | <u>9.2.2.A</u> | | YES | reject |

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| Condition | Explanation |
|----------------|--|
| CodeLen | This IE is present only if "Min UL Channelisation Code length" equals to 4 |
| SlotFormat | This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16. |
| NotFirstRL | This IE is present only if the RL is not the first one in the RL Information. |
| Diversity mode | This IE is present unless <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> group is "none" |
| C_lfalone | Either Initial DL TX Power IE or Primary CPICH Ec/No IE shall be present. |

| Range bound | Explanation |
|--------------|-------------------------------------|
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofDCHs | Maximum number of DCHs for one UE. |
| MaxnoofRLs | Maximum number of RLs for one UE. |

9.1.3.2 TDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|--|----------|--|-------------------------|-------------------------------------|-----------------|-------------|
| | | | and | description | | Criticality |
| | | | reference | | | |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | - | |
| SRNC-Id | Μ | | RNC-Id | | YES | reject |
| | | | 9.2.1.50 | | | |
| S-RNTI | M | | 9.2.1.53 | | YES | reject |
| D-RNTI | 0 | | 9.2.1.24 | | YES | reject |
| Allowed Queuing Time | 0 | | 9.2.1.2 | | YES | reject |
| UL Physical Channel | | 1 | | | <u>YES</u> EACH | reject |
| Information | | | | | | |
| >Maximum Timeslot per frame | М | | 9.2.3.3A | For the UL | | |
| >Minimum Spreading Factor | М | | 9.2.3.4A | For the UL | | |
| >Maximum number of UL physical channels per timeslot | М | | 9.2.3.3B | | | |
| DL Physical Channel | | 1 | | | YESEACH | reject |
| >Maximum Timeslot per | М | | 9.2.3.3A | For the DL | | |
| frame | | | | | | |
| >Minimum Spreading Factor | Μ | | 9.2.3.4A | For the DL | | |
| >Maximum number of DL | М | | 9.2.3.3C | | | |
| physical channels per frame | | | | | | |
| UL CCTrCH Information | | 0 <maxno< td=""><td></td><td>For DCH</td><td>EACH</td><td>notify</td></maxno<> | | For DCH | EACH | notify |
| | | ofCCTrCH s> | | and USCH | | |
| >CCTrCH ID | М | | 9.2.3.2 | | _ | |
| >TFCS | M | | 92163 | For the UI | _ | |
| >TFCI Coding | M | | 92311 | | _ | |
| >Puncture Limit | M | | 92146 | | _ | |
| DL CCTrCH Information | | 0 <maxno ofCCTrCH</maxno | | For DCH and DSCH | EACH | notify |
| | M | 3 | 9232 | | _ | |
| | M | | 9.2.3.2 | For the DI | | |
| >TECL Coding | N | | 9.2.1.05 | | _ | |
| >Puncture Limit | M | | 9.2.3.11 | | _ | |
| >TDD TPC Downlink Step | M | | 9.2.1.40 | | _ | |
| Size | IVI | | 9.2.3.10 | | _ | |
| >TPC CCTrCH List | | 1 to <maxnoc CTrCH></maxnoc | | List of uplink CCTrCH which | - | |
| | | | | provide TPC | | |
| >>TPC CCTrCH ID | М | | CCTrCH ID 9.2.3.2 | | _ | |
| DCH Information | | 0 <maxno< td=""><td></td><td></td><td>GLOBAL</td><td>reject</td></maxno<> | | | GLOBAL | reject |
| >Payload CRC Presence | М | 01001132 | 9.2.1.42 | | - | |
| | М | + | 92167 | + | _ | |
| STOAWS | M | + | 92158 | + | | |
| | M | 1 | 92157 | | | |
| >DCH Specific Info | | 1 <maxno ofDCHs></maxno | 9.2.1.57 | | _ | |
| >>DCH ID | Μ | | 9.2.1.16 | | - | |
| >>CCTrCH ID | M | | 9.2.3.2 | UL CCTrCH in which the DCH is | - | |
| | 1 | 1 | 1 | mapped | 1 | |

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| >>CCTrCH ID | М | | 9232 | DL CCTrCH | _ | |
|--------------------------------|----------|---|-------------------------------|--------------|--------|--------|
| | | | 0.2.0.2 | in which the | | |
| | | | | | | |
| | | | | manned | | |
| >>TrCh Source Statistics | M | | 0.2.1.65 | mappeu | | |
| >>TICH Source Statistics | IVI | | 9.2.1.05 | | _ | |
| Descriptor | N.4 | | 0.04.04 | | | |
| >>Transport Format Set | M | | 9.2.1.64 | For the UL. | - | |
| >>Transport Format Set | M | | 9.2.1.64 | For the DL. | - | |
| >>BLER | M | | 9.2.1.3<u>9.2.</u> | For the UL. | - | |
| | | | <u>1.4</u> | | | |
| >>BLER | М | | 9.2.1.3 9.2. | For the DL. | _ | |
| | | | <u>1.4</u> | | | |
| >>Allocation/Retention | М | | 9.2.1.1 | | - | |
| Priority | | | | | | |
| >>Frame Handling Priority | М | | 9.2.1.29 | | _ | |
| >>QE-Selector | C- | | 9.2.1.46A | | _ | |
| | CoorDCH | | 0.2 | | | |
| DSCH Information | 00012011 | 0 to | | | GLOBAL | reject |
| | | <maynoof< td=""><td></td><td></td><td>OLOBAL</td><td>reject</td></maynoof<> | | | OLOBAL | reject |
| | | | | | | |
| | NA | 0301132 | 0.0.4.004 | | | |
| | IVI N | | 9.2.1.26A | | - | |
| SCCTICH ID | M | | <u>9.2.3.2</u> | DLCCTICH | - | |
| | | | | in which the | | |
| | | | | DSCH is | | |
| | | | | mapped | | |
| >TrCh Source Statistics | M | | <u>9.2.1.65</u> | | _ | |
| Descriptor | | | | | | |
| >Transport Format Set | М | | 9.2.1.64 | For DSCH | - | |
| >Allocation/Retention Priority | М | | 9.2.1.1 | | _ | |
| >Scheduling Priority | М | | 9.2.1.51A | | _ | |
| Indicator | | | | | | |
| >BI FR | М | | 9214 | | _ | |
| USCH Information | | 0 to | 0.2.111 | | | reject |
| | | <maynoof< td=""><td></td><td></td><td>OLOBAL</td><td>reject</td></maynoof<> | | | OLOBAL | reject |
| | | | | | | |
| | NA | 0001132 | 0 2 2 1 4 | | | |
| | | | 9.2.3.14 | | - | |
| | IVI | | <u>9.2.3.2</u> | | - | |
| | | | | In which the | | |
| | | | | USCHIS | | |
| | | | | mapped | | |
| >TrCh Source Statistics | M | 1 | <u>9.2.1.65</u> | | - | |
| Descriptor | | | | | | |
| >Transport Format Set | М | | <u>9.2.1.64</u> | For USCH | - | |
| >Allocation/Retention Priority | Μ | | <u>9.2.1.1</u> | | _ | |
| >Scheduling Priority | M | | <u>9.2.1.51A</u> | | - | |
| Indicator | | | | | | |
| >RB Info | | 1 to | | All Radio | _ | |
| | | <maxnoof< td=""><td></td><td>Bearers</td><td></td><td></td></maxnoof<> | | Bearers | | |
| | | RB> | | using this | | |
| | | | | USCH | | |
| >>RB Identity | М | 1 | 9235B | | _ | |
| RI Information | 101 | 1 | 0.2.0.00 | | VES | reject |
| | М | + ' | 921/0 | | - | 10,000 |
| | M | ł | 0.2.1.43 | | - | |
| | IVI | | 9.2.1.0 | | _ | |
| >Frame Offset | | l | 9.2.1.30 | | _ | |
| >Primary CCPCH RSCP | 0 | | 9.2.3.5 | | - | |
| >Time slot ISCP Info | | 0 <maxno< td=""><td></td><td></td><td>-</td><td></td></maxno<> | | | - | |
| | | ofDLts> | | <u> </u> | | |
| >>Time slot | Μ | | <u>9.2.1.56</u> | | - | |
| >>DL Timeslot ISCP | M | _ | 9.2.3.12 | | _ | |

| Condition | Explanation |
|-----------|---|
| CoorDCH | This IE is present only this DCH is part of a set of coordinated DCHs |
| | (number of instances of DCH Specific Info is greater than 1) |

| Range bound | Explanation |
|----------------|--|
| MaxnoofDCHs | Maximum number of DCHs for one UE. |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofUSCHs | Maximum number of USCHs for one UE. |
| MaxnoofRBs | Maximum number of Radio Bearers for one UE. |
| MaxnoofCCTrCHs | Maximum number of CCTrCH for one UE. |
| MaxnoofDLts | Maximum number of Downlink time slots per Radio Link |

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

| 1 | IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|---|--|-------------------|---------------------------------------|------------------|--|-------------|-------------|
| | | | | and reference | description | - | Criticality |
| | Message Type | М | | 9.2.1.40 | | YES | reject |
| | Transaction ID | М | | 9.2.1.59 | | _ | |
| | D-RNTI | 0 | | 9.2.1.24 | | YES | ignore |
| | CN PS Domain Identifier | 0 | | 9.2.1.12 | | YES | ignore |
| | CN CS Domain Identifier | 0 | | 9.2.1.11 | | YES | ignore |
| | RL Information Response | | 1 <maxno ofRLs></maxno | | | EACH | ignore |
| | >RL ID | М | | 9.2.1.49 | | _ | |
| | >RL Set ID | М | | 9.2.2.35 | | | |
| | >URA ID | М | | 9.2.1.70 | | | |
| | >SAI | М | | 9.2.1.52 | | - | |
| | >Cell GAI | 0 | | <u>9.2.1.5A</u> | | _ | |
| ļ | >UTRAN Access Point Position | 0 | | <u>9.2.1.70A</u> | | - | |
| | >RSSI | М | | 9.2.2.35A | | _ | |
| | >Secondary CCPCH Info | | 01 | | | - | |
| | >>FDD S-CCPCH Offset | М | - | 9.2.2.15 | Corresponds | - | |
| | | | | | to: Ҭ _{S-CCPCH,k} , see ref. [8] | | |
| | >>DL Scrambling Code | М | | 9.2.2.8 | | — | |
| | >>FDD DL Channelisation Code Number | M | | 9.2.2.14 | | - | |
| | >>TFCS | М | | 9.2.1.63 | For the DL. | _ | |
| | >>Secondary CCPCH Slot | M | | 9.2.2.38 | | - | |
| | >>TFCI presence | C - SlotEormat | | 9.2.1.55 | | - | |
| | > Multiplaying Desition | M | | 0.2.2.26 | | | |
| | | | | 9.2.2.20 | | | |
| | | IVI | 1 | 9.2.2.44 | | | |
| | | | <pre></pre> | | | - | |
| | >>>TFS | | | 9.2.1.64 | For each FACH, and the PCH when multiplexed on the same Secondary CCPCH | _ | |
| | >>Scheduling Information | | 1 | | | - | |
| | >>>IB_SG_REP | М | | 9.2.2.4 | | _ | |
| | >>>Segment | | 1 | | | _ | |
| | Information | | <maxibse G></maxibse | | | | |
| | >>>IB_SG_POS | М | | 9.2.2.20 | | _ | |
| | >DL Code Information | | 1 <maxnoof DLCodes</maxnoof | | | _ | |
| | >>DL Scrambling Code | М | | 9.2.2.8 | | _ | |
| | >>FDD DL Channelisation Code Number | М | | 9.2.2.14 | | _ | |
| | >>Transmission Gap Pattern Sequence Information Response | 0 | | <u>9.2.2.47B</u> | | - | |

| Ī | IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|----|--|------------------|--|------------------------|--|-------------|-------------|
| | | | | and | description | ·····, | Criticality |
| | | - | | reference | | | |
| | >Diversity Indication | C- NotFirstRL | | 9.2.2.7 | | - | |
| ļ | >CHOICE diversity | M | | | | | |
| ł | | | | | | VES | lanore |
| - | >>>RL ID | M | | 9.2.1.49 | Reference RL ID for the | - | Ignore |
| ľ | >>Non Combining or First | | | | combining | YES | ignore |
| | >>>DCH Information Response | | 0 <maxno ofDCHs></maxno | | Only one DCH per set of co-ordinated DCHs shall be included | I | |
| | >>>>DCH ID | Μ | | 9.2.1.16 | | - | |
| Ī | >>>>Binding ID | М | | 9.2.1.3 | | _ | |
| | >>>>Transport Layer Address | М | | 9.2.1.62 | | _ | |
| ľ | >SSDT Support Indicator | М | | 9.2.2.43 | | _ | |
| | >Maximum Uplink SIR | М | | Uplink SIR 9.2.1.69 | | - | |
| | >Minimum Uplink SIR | М | | Uplink SIR 9.2.1.69 | | - | |
| | >Closed loop timing adjustment mode | 0 | | <u>9.2.2.3A</u> | | - | |
| | >Maximum Allowed UL Tx Power | М | | 9.2.1.35 | | - | |
| | >Maximum DL TX Power | М | | DL Power 9.2.2.10 | | - | |
| | >Minimum DL TX Power | М | | DL Power 9.2.2.10 | | _ | |
| | >DSCH Information Response | | 01 | | | YES | ignore |
| | >>DSCH Information | | 1 <maxno ofDSCHs></maxno | | | - | |
| ۱İ | >>>DSCH ID | М | 0.2001.0 | 9.2.1.26A | | _ | |
| | >>>Priority Indicator | | 116 | | Provide Information for each priority class used | _ | |
| | >>>Scheduling Priority Indicator | М | | <u>9.2.1.51A</u> | For DSCH | _ | |
| | >>>>MAC-c/sh SDU Length | | 1 <maxnb MAC- c/shSDUL ength></maxnb | | | - | |
| ļ | >>>>MAC-c/sh SDU Length | М | | <u>9.2.1.34</u> | | _ | |
| ۱ľ | >>>Binding ID | М | | <u>9.2.1.3</u> | | — | |
| ļ | >>>Transport Layer | М | | <u>9.2.1.62</u> | | _ | |
| | >>PDSCH code mapping | M | | <u>9.2.2.27A</u> | PDSCH code mapping to | - | |
| | | | | | be used | | |
| | >Neighbouring Cell Information | | 0 <maxnoof neighbourin</maxnoof | | | EACH | ignore |
| ł | >>PNC-Id | NA | yrncs> | 02150 | | | |
| ł | NN PS Domain Identifiar | | | 9.2.1.00 | | | |
| ŀ | | 0 | | 0.2.1.12 | 1 | | |
| L | | U | | 3.4.1.11 | 1 | — | |

| IE/Group Name | Presence | Range | IE type and | Semantics description | Criticality | Assigned Criticality |
|---|----------|---|------------------------|-------------------------------------|-------------|-------------------------|
| | | | reference | | | |
| >>Per FDD Cell Information | | 0 <maxno ofFDDneig hbours></maxno | | | П | |
| >>>C-Id | М | | 9.2.1.6 | | _ | |
| >>>UARFCN | M | | 9.2.1.66 | Corresponds to Nu in ref. [6] | - | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nd in ref. [6] | = | |
| >>>Frame Offset | 0 | | 9.2.1.30 | | _ | |
| >>>Primary Scrambling Code | М | | 9.2.1.45 | | - | |
| >>>Primary CPICH Power | 0 | | 9.2.1.44 | | - | |
| >>>Cell Individual Offset | 0 | | 9.2.1.7 | | Π | |
| >>>Tx Diversity Indicator | Μ | | 9.2.2.50 | | Ξ | |
| >>>STTD Support Indicator | 0 | | 9.2.2.45 | | Ξ | |
| >>>Closed Loop Mode1 Support Indicator | 0 | | 9.2.2.2 | | Ξ | |
| >>>Closed Loop Mode2 Support Indicator | 0 | | 9.2.2.3 | | Ξ | |
| >>Per TDD Cell Information | | 0 <maxno ofTDDneig hbours></maxno | | | Ξ | |
| >>>C-Id | Μ | | 9.2.1.6 | | Ξ | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nt in ref. [7] | - | |
| >>>Frame Offset | 0 | | 9.2.1.30 | | | |
| >>>Cell Parameter ID | Μ | | 9.2.1.8 | | _ | |
| >>>Sync Case | Μ | | 9.2.1.54 | | _ | |
| >>>Time Slot | C-Case1 | | 9.2.1.56 | | _ | |
| >>>SCH Time Slot | C-Case2 | | 9.2.1.51 | | - | |
| >>>Block STTD Indicator | Μ | | | | | |
| >>>Cell Individual Offset | 0 | | 9.2.1.7 | | | |
| >>>DPCH Constant Value | 0 | | 9.2.1.23 | | - | |
| >>>PCCPCH Power | 0 | | 9.2.1.43 | | _ | |
| Uplink SIR Target | 0 | | Uplink SIR 9.2.1.69 | | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|------------|--|
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information |
| Case1 | This IE is present only if Sync Case = Case1. |
| Case2 | This IE is present only if Sync Case = Case2. |
| SlotFormat | This IE is present only if the Secondary CCPCH Slot Format is equal |
| | to any of the value 8 to 17 |

| Range bound | Explanation |
|-------------------------|--|
| MaxnoofRLs | Maximum number of RLs for one UE. |
| MaxnoofDCHs | Maximum number of DCHs for one UE. |
| MaxNbMAC-c/shSDULength | Maximum number of different MAC-c/sh SDU lengths |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofneighbouringRNCs | Maximum number of neighbouring RNCs |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell. |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell. |
| MaxFACHCount | Maximum number of FACH's mapped onto secondary CCPCH's |
| MaxIBSEG | Maximum number of segments for one Information Block |

9.1.4.2 TDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|---------------------------------|----------|--|-----------------|--------------|-------------|-------------|
| | | | and | description | | Criticality |
| | | | reference | | | |
| Message Type | M | | 9.2.1.40 | | YES | reject |
| I ransaction ID | M | | 9.2.1.59 | | - | innere |
| CN PS Domain Identifier | 0 | | 9.2.1.24 | | | ignore |
| CN CS Domain Identifier | 0 | | 9.2.1.12 | | VES | ignore |
| RI Information Response | 0 | 1 | 9.2.1.11 | | YES | ignore |
| >RL ID | М | , | 9.2.1.49 | | - | ightere |
| >URA ID | M | | 9.2.1.70 | | _ | |
| >SAI | Μ | | 9.2.1.52 | | — | |
| >Cell GAI | 0 | | <u>9.2.1.5A</u> | | — | |
| >UTRAN Access Point | 0 | | 9.2.1.70A | | - | |
| Position | | | | | | |
| >UL Interference per Time | | 1 | | Interference | - | |
| Slot | | <maxnoof< td=""><td></td><td>Level for</td><td></td><td></td></maxnoof<> | | Level for | | |
| | | ULts> | | each UL | | |
| | | | | within the | | |
| | | | | Radio Link | | |
| >>Time Slot | М | | 9.2.1.56 | | _ | |
| >>UL Timeslot ISCP | М | | 9.2.3.13A | | - | |
| >Maximum Uplink SIR | Μ | | Uplink SIR | | — | |
| | | | 9.2.1.69 | | | |
| >Minimum Uplink SIR | Μ | | Uplink SIR | | - | |
| | | | 9.2.1.69 | | | |
| >Maximum Allowed UL Tx Power | М | | 9.2.1.35 | | _ | |
| >Maximum DL TX Power | М | | DL Power | | - | |
| >Minimum DL TX Power | М | | DL Power | | _ | |
| | | | 9.2.2.10 | | | |
| >Timing Adjustment | М | | 9.2.3.12A | | - | |
| >UL CCTrCH Information | | 0 <maxno< td=""><td></td><td>For DCH</td><td>GLOBAL</td><td>ignore</td></maxno<> | | For DCH | GLOBAL | ignore |
| | | ofCCTrCH | | | | 5 |
| >>CCTrCH ID | М | 0- | 9232 | | _ | |
| >>UL DPCH Information | | 01 | 0.2.0.2 | | YES | ianore |
| >>>Repetition Period | М | | 9.2.3.7 | | _ | .g |
| >>>Repetition Length | Μ | | 9.2.3.6 | | _ | |
| >>>TDD DPCH Offset | Μ | | 9.2.3.8A | | — | |
| >>>UL Timeslot | | 1 to | | | - | |
| Information | | <maxnoof< td=""><td></td><td></td><td></td><td></td></maxnoof<> | | | | |
| | N4 | 15 | 0.04.50 | | | |
| >>>> I lime Slot | | | 9.2.1.50 | | _ | |
| and Burst Type | IVI | | 9.2.3.4 | | _ | |
| >>>TECI Presence | М | | 92155 | | _ | |
| >>>UL Code | | 1 to | 0.2.1.00 | | _ | |
| Information | | <maxnoof< td=""><td></td><td></td><td></td><td></td></maxnoof<> | | | | |
| | | DPCH> | | | | |
| >>>>DPCH ID | Μ | | 9.2.3.3 | | _ | |
| >>>>TDD | Μ | | 9.2.3.8 | | — | |
| Channelisation | | | | | | |
| Code | | | | . | | |
| >DL CCTrCH Information | | 0 <maxno< td=""><td></td><td>For DCH</td><td>GLOBAL</td><td>ignore</td></maxno<> | | For DCH | GLOBAL | ignore |
| | | | | | | |
| | M | 32 | 0232 | | | |
| >>DL DPCH Information | | 0.1 | 3.2.3.2 | | YES | ignore |
| >>>Repetition Period | М | 01 | 9.2.3.7 | 1 | | ignore |
| >>>Repetition Length | M | | 9.2.3.6 | | _ | |
| | 1 | 1 | - | | | |

| IE/Group Name | Presence | Range | IE type and | Semantics description | Criticality | Assigned Criticality |
|--------------------------------------|----------|---|--------------------|--|-------------|-------------------------|
| | | | reference | uccomption | | onnounty |
| >>>TDD DPCH Offset | М | | 9.2.3. <u>8A</u> × | | _ | |
| >>>DL Timeslot Information | | 1 to <maxnoof TS</maxnoof | | | - | |
| >>>>Time Slot | М | | 9.2.1.56 | | _ | |
| >>>>Midamble Shift and Burst Type | М | | 9.2.3.4 | | - | |
| >>>>TFCI Presence | М | | 9.2.1.55 | | _ | |
| >>>>DL Code Information | | 1 to <maxnoof DPCH></maxnoof | | | _ | |
| >>>>DPCH ID | M | | 9.2.3.3 | | _ | |
| >>>> IDD Channelisation Code | M | | 9.2.3.8 | | _ | |
| >DCH Information | | 1 <maxno< td=""><td></td><td>Only one</td><td>GLOBAL</td><td>ignore</td></maxno<> | | Only one | GLOBAL | ignore |
| Response | | ofDCHs> | | DCH per set | | |
| | | | | of co-ordinated DCHs shall be included. | | |
| >>DCH ID | М | | 9.2.1.16 | | _ | |
| >>Binding ID | М | | 9.2.1.3 | | _ | |
| >>Transport Layer Address | М | | 9.2.1.62 | | - | |
| >DSCH Information Response | | 0 <maxnoof DSCHs></maxnoof | | | GLOBAL | ignore |
| >>DSCH ID | М | | <u>9.2.1.26A</u> | | _ | |
| >>Priority Indicator | | 116 | | Provide Information for each priority class used | _ | |
| >>>Scheduling Priority Indicator | М | | <u>9.2.1.51A</u> | For DSCH | _ | |
| >>>MAC-c/sh SDU Length | | 1 <maxnb MAC- c/shSDUL ength></maxnb | | | _ | |
| >>>>MAC-c/sh SDU Length | Μ | | <u>9.2.1.34</u> | | - | |
| >>Binding ID | M | | <u>9.2.1.3</u> | | _ | |
| >> I ransport Layer Address | M | | 9.2.1.62 | | - | |
| Management | IVI | | 3.2.3.13 | | _ | |
| >USCH Information Response | | 0 <maxnoof USCHs></maxnoof | | | GLOBAL | ignore |
| >>USCH ID | Μ | | <u>9.2.3.14</u> | | | |
| >>Binding ID | М | | <u>9.2.1.3</u> | | _ | |
| >>Transport Layer Address | M | | <u>9.2.1.62</u> | | — | |
| >>Transport Format Management | M | | <u>9.2.3.13</u> | | - | |
| >Neighbouring Cell Information | 0 | 0 <maxno ofneighbo uringRNCs ></maxno | | | EACH | ignore |
| >>RNC-Id | М | | 9.2.1.50 | | - | |
| >>CN PS Domain Identifier | 0 | | 9.2.1.12 | | - | |
| >>CN CS Domain Identifier | 0 | | 9.2.1.11 | | - | |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--|----------|---|-----------------------------|-------------------------------------|-------------|-------------------------|
| >>Per FDD Cell Information | | 0 <maxno ofFDDneig hbours></maxno | | | = | |
| >>>C-Id | Μ | | 9.2.1.6 | | _ | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nu in ref. [6] | - | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nd in ref. [6] | _ | |
| >>>Frame Offset | 0 | | 9.2.1.30 | | - | |
| >>>Primary Scrambling Code | Μ | | 9.2.1.45 | | - | |
| >>>Cell Individual Offset | 0 | | 9.2.1.7 | | - | |
| >>>Primary CPICH Power | 0 | | 9.2.1.44 | | - | |
| >>>Tx Diversity Indicator | М | | 9.2.2.50 | | = | |
| >>>STTD Support Indicator | 0 | | 9.2.2.45 | | - | |
| >>>Closed Loop Mode1 Support Indicator | 0 | | 9.2.2.2 | | - | |
| >>>Closed Loop Mode2 Support Indicator | 0 | | 9.2.2.3 | | - | |
| >>Per TDD Cell Information | | 0 <maxno ofTDDneig hbours></maxno | | | - | |
| >>>C-Id | Μ | | 9.2.1.6 | | _ | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nt in ref. [7] | _ | |
| >>>Frame Offset | 0 | | 9.2.1.30 | | _ | |
| >>>Cell Parameter ID | М | | 9.2.1.8 | | - | |
| >>>Sync Case | М | | 9.2.1.54 | | - | |
| >>>Time Slot | C-Case1 | | 9.2.1.56 | | _ | |
| >>>SCH Time Slot | C-Case2 | | 9.2.1.51 | | - | |
| >>>Block STTD Indicator | М | | | | - | |
| >>>Cell Individual Offset | 0 | | 9.2.1.7 | | _ | |
| >>>DPCH Constant Value | 0 | | 9.2.1.23 | | _ | |
| >>>PCCPCH Power | 0 | | 9.2.1.43 | | - | |
| Uplink SIR Target | M | | Uplink SIR 9.2.1.69 | | _ | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|-----------|---|
| Case1 | This IE is present only if Sync Case = Case1. |
| Case2 | This IE is present only if Sync Case = Case2. |

| Range bound | Explanation |
|-------------------------|--|
| MaxnoofDPCHs | Maximum number of DPCHs for one CCTrCH. |
| MaxnoofDCHs | Maximum number of DCHs for one UE. |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofUSCHs | Maximum number of USCHs for one UE. |
| MaxNbMAC-c/shSDULength | Maximum number of different MAC-c/sh SDU lengths |
| MaxnoofneighbouringRNCs | Maximum number of neighbouring RNCs |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell |
| MaxnoofCCTrCHs | Maximum number of CCTrCH for one UE. |
| MaxnoofULts | Maximum number of Uplink time slots per Radio Link |
| MaxnoofTS | Maximum number of Timeslots for a UE |

9.1.5 RADIO LINK SETUP FAILURE

9.1.5.1 FDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|--|----------|---|------------------------|--|-------------|---------------|
| | | | reference | description | | Criticality |
| Message Type | Μ | | 9.2.1.40 | | YES | reject |
| Transaction ID | Μ | | 9.2.1.59 | | _ | |
| D-RNTI | 0 | | 9.2.1.24 | | YES | ignore |
| CN PS Domain Identifier | 0 | | 9.2.1.12 | | YES | ignore |
| CN CS Domain Identifier | 0 | | 9.2.1.11 | | YES | ignore |
| CHOICE cause level | M | | | | YES | <u>Ignore</u> |
| >General | | | | | Yes | Ignore |
| >>Cause | М | | <u>9.2.1.5</u> | | | |
| >RL specific | | | | | Yes | Ignore |
| >>Unsuccessful RL | | 1 <maxn< td=""><td></td><td></td><td>EACH</td><td>Ignore</td></maxn<> | | | EACH | Ignore |
| Information Response | | ootRLs> | | | | |
| >>>RL ID | M | | 9.2.1.49 | | _ | |
| >>>Cause | M | | 9.2.1.5 | | - | |
| >>Successful RL | | 0 <maxno< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxno<> | | | EACH | ignore |
| Information Response | N.4 | OTRLS-1> | 0.0.4.40 | | | |
| >>>RL ID | M | | 9.2.1.49 | | _ | |
| >>>RL Set ID | M | | 9.2.2.35 | | _ | |
| >>>URA ID | M | | 9.2.1.70 | | _ | |
| >>>SAI | M | | 9.2.1.52 | | _ | |
| >>>RSSI | M | | 9.2.2.35A | | - | |
| >>>DL Code Information | | 1 <maxno ofDLCode</maxno | | | GLOBAL | ignore |
| >>>>DL Scrambling Code | М | 0 | 9.2.2.8 | | - | |
| >>>FDD DL Channelisation Code | М | | 9.2.2.14 | | - | |
| | <u> </u> | | 0.0.0.475 | | | |
| >>>> I ransmission Gap Pattern Sequence Information Response | 0 | | 9.2.2.47B | | _ | |
| >>>Diversity Indication | М | | 9.2.2.7 | | _ | |
| >>>CHOICE diversity Indication | M | | | | - | |
| >>>Combining | | | | | YES | ignore |
| >>>>RL ID | М | | 9.2.1.49 | Reference RL ID for the combining | - | |
| >>>Non Combining | | | | | YES | ignore |
| First RL | | | | | | 0 |
| >>>>DCH Information Response | | 0 <maxno ofDCHs></maxno | | Only one DCH per set of co-ordinated DCHs shall be included | _ | |
| | М | | 92116 | | _ | |
| >>>>>Binding ID | M | | 9.2.1.3 | | _ | |
| >>>>>Transport | M | | 9.2.1.62 | | _ | |
| Layer Address | M | | 0.2.2.42 | | | |
| Indicator | | | 3.2.2.43 | | _ | |
| >>>Maximum Uplink SIR | М | | Uplink SIR 9.2.1.69 | | - | |
| >>>Minimum Uplink SIR | M | | Uplink SIR 9.2.1.69 | | - | |
| >>Closed loop timing adjustment mode | 0 | | <u>9.2.2.3A</u> | | - | |
| >>>Maximum Allowed | М | | 9.2.1.35 | | _ | |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|----------------------------------|----------|---|-----------------------------|-------------------------------------|-------------|-------------------------|
| | | | reference | | | |
| >>>Maximum DL TX | М | | DL Power | | _ | |
| Power | | | 9.2.2.10 | | | |
| >>>Minimum DL TX | М | | DL Power | | _ | |
| Power | | | 9.2.2.10 | | | |
| >>>DSCH Information | | 0 <maxno< td=""><td></td><td></td><td>GLOBAL</td><td>ignore</td></maxno<> | | | GLOBAL | ignore |
| Response | | ofDSCHs> | | | | |
| >>>DSCH ID | М | | <u>9.2.1.26A</u> | | _ | |
| >>>>Binding ID | M | | <u>9.2.1.3</u> | | _ | |
| >>>>Transport Layer | Μ | | <u>9.2.1.62</u> | | - | |
| Address | - | 0 | | | = | |
| Information | 0 | 0 <maxnoor neighbourin gRNCs></maxnoor | | | EACH | ignore |
| >>>>RNC-Id | М | | 9.2.1.50 | | _ | |
| >>>CN PS Domain Identifier | 0 | | 9.2.1.12 | | _ | |
| >>>CN CS Domain Identifier | 0 | | 9.2.1.11 | | - | |
| >>>Per FDD Cell Information | | 0 <maxno ofFDDneig</maxno | | | - | |
| | | hbours> | | | | |
| >>>>C-ld | Μ | | 9.2.1.6 | | — | |
| >>>>UARFCN | М | | 9.2.1.66 | Corresponds to Nu in ref. [6] | _ | |
| >>>>UARFCN | М | | 9.2.1.66 | Corresponds to Nd in ref. [6] | _ | |
| >>>>Frame Offset | 0 | | 9.2.1.30 | | _ | |
| >>>>Primary | Μ | | 9.2.1.45 | | _ | |
| Scrambling Code | | | | | | |
| >>>>Primary CPICH Power | 0 | | 9.2.1.44 | | - | |
| >>>>Cell Individual Offset | 0 | | 9.2.1.7 | | - | |
| >>>>Tx Diversity Indicator | М | | 9.2.2.50 | | - | |
| >>>>STTD Support Indicator | 0 | | 9.2.2.45 | | - | |
| >>>>Closed Loop Mode1 Support | 0 | | 9.2.2.2 | | - | |
| Indicator | 0 | | 0222 | | | |
| Mode2 Support Indicator | 0 | | 9.2.2.0 | | _ | |
| >>>>Per TDD Cell Information | | 0 <maxno ofTDDneig hbours></maxno | | | _ | |
| >>>>C-ld | M | | 9.2.1.6 | | _ | |
| >>>>UARFCN | M | | 9.2.1.66 | Corresponds to Nt in ref. [7] | - | |
| >>>>Frame Offset | 0 | | 9.2.1.30 | | | |
| >>>>Cell Parameter | Μ | | 9.2.1.8 | | - | |
| >>>>Sync Case | M | | 9.2.1.54 | | _ | |
| >>>>Time Slot | C-Case1 | | 9.2.1.56 | ļ | | |
| >>>>SCH Time Slot | C-Case2 | | 9.2.1.51 | | _ | |
| >>>>Block STTD Indicator | М | | | | - | |
| >>>>Cell Individual Offset | 0 | | 9.2.1.7 | | - | |
| >>>>DPCH | 0 | | 9.2.1.23 | | - | |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------------|-----------------------|-------------|-------------------------|
| Constant Value | | | | | | |
| >>>>PCCPCH Power | 0 | | 9.2.1.43 | | - | |
| Uplink SIR Target | 0 | | Uplink SIR 9.2.1.69 | | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|-----------|---|
| Case1 | This IE is present only if Sync Case = Case1. |
| Case2 | This IE is present only if Sync Case = Case2. |

| Range bound | Explanation |
|-------------------------|--|
| MaxnoofRLs | Maximum number of RLs for one UE. |
| MaxnoofDCHs | Maximum number of DCHs for one UE. |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofneighbouringRNCs | Maximum number of neighbouring RNCs |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell |

9.1.5.2 TDD Message

| IE/Group Name | Presence | Range | IE type and | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|----------------|--------------------------|-------------|-------------------------|
| Maaaaga Turaa | N.4 | | | | VES | raiaat |
| Message Type | IVI | | 9.2.1.40 | | IEO | reject |
| Transaction ID | Μ | | 9.2.1.59 | | - | |
| CHOICE cause level | M | | | | <u>YES</u> | <u>Ignore</u> |
| >General | | | | | Yes | Ignore |
| >>Cause | Μ | | <u>9.2.1.5</u> | | | |
| >RL specific | | | | | Yes | ignore |
| >>Unsuccessful RL | | 1 | | | YES | ignore |
| Information Response | | | | | | - |
| >>>RL ID | М | | 9.2.1.49 | | _ | |
| >>>Cause | М | | 9.2.1.5 | | _ | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

9.1.6 RADIO LINK ADDITION REQUEST

9.1.6.1 FDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--|----------|--|-----------------------------|--|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | _ | |
| Uplink SIR Target | М | | Uplink SIR 9.2.1.69 | | YES | reject |
| RL Information | | 1 <maxn oofRLs- 1></maxn | | | EACH | notify |
| >RL ID | М | | 9.2.1.49 | | _ | |
| >C-ld | М | | 9.2.1.6 | | _ | |
| >Frame Offset | М | | 9.2.1.30 | | _ | |
| >Chip Offset | М | | 9.2.2.1 | | _ | |
| >Diversity Control Field | М | | 9.2.2.6 | | _ | |
| >Primary CPICH Ec/No | 0 | | 9.2.2.32 | | _ | |
| >SSDT Cell Identity | 0 | | 9.2.2.40 | | | |
| >Transmit Diversity Indicator | 0 | | 9.2.2.50 | | - | |
| Active Pattern Sequence Information | 0 | | <u>9.2.2A</u> | Either all the already active Transmissio n Gap Sequence(s) are addressed (Transmissio n Gap Pattern sequence shall overlap with the existing one) or none of the transmission gap sequences is activated. | YES | reject |

| Range bound | Explanation |
|-------------|--|
| MaxnoofRLs | Maximum number of radio links for one UE |

9.1.6.2 TDD Message

I

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--------------------------|----------|-------------------------------------|-----------------------------|-----------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | reiect |
| Transaction ID | M | | 9.2.1.59 | | - | |
| RL Information | | 1 | | | YES | reject |
| >RL ID | Μ | | 9.2.1.49 | | _ | |
| >C-Id | Μ | | 9.2.1.6 | | - | |
| >Frame Offset | Μ | | 9.2.1.30 | | - | |
| >Diversity Control Field | Μ | | 9.2.2.6 | | - | |
| >Primary CCPCH RSCP | 0 | | 9.2.3.5 | | - | |
| >Time slot ISCP Info | | 0 <ma xnoofD Lts></ma | | | - | |
| >>Time slot | Μ | | <u>9.2.1.56</u> | | - | |
| >>DL Timeslot ISCP | Μ | | 9.2.3.12 | | _ | |

| Range bound | Explanation | | | |
|-------------|--|--|--|--|
| MaxnoofDLts | Maximum number of Downlink time slots per Radio Link | | | |

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|--|-------------------|---|------------------|--|-------------|-------------|
| | | | and reference | description | | Criticality |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | Μ | | 9.2.1.59 | | _ | |
| RL Information Response | | 1 <maxnoof RLs-1></maxnoof | | | EACH | ignore |
| >RL ID | М | | 9.2.1.49 | | _ | |
| >RL Set ID | М | | 9.2.2.35 | | _ | |
| >URA ID | Μ | | 9.2.1.70 | | _ | |
| >SAI | М | | 9.2.1.52 | | _ | |
| >Cell GAI | 0 | | <u>9.2.1.5A</u> | | _ | |
| >UTRAN Access Point Position | 0 | | <u>9.2.1.70A</u> | | _ | |
| >RSSI | М | | 9.2.2.35A | | _ | |
| >Secondary CCPCH Info | | 01 | | | _ | |
| >>FDD S-CCPCH Offset | М | | 9.2.2.15 | Corresponds | _ | |
| | | | | , see ref. [8] | | |
| >>DL Scrambling Code | IVI N4 | | 9.2.2.8 | | | |
| >>FDD DL Channelisation Code Number | M | | 9.2.2.14 | | _ | |
| >>TFCS | Μ | | 9.2.1.63 | For the DL. | _ | |
| >>Secondary CCPCH Slot Format | М | | 9.2.2.38 | | _ | |
| >>TFCI presence | C - SlotFormat | | 9.2.1.55 | | _ | |
| >>Multiplexing Position | М | | 9.2.2.26 | | _ | |
| >>STTD Indicator | М | | 9.2.2.44 | | _ | |
| >>FACH/PCH Information | | 1 <maxfachc< td=""><td></td><td></td><td>-</td><td></td></maxfachc<> | | | - | |
| >>>TFS | | | 9.2.1.64 | For each FACH, and the PCH when multiplexed on the same Secondary CCPCH | _ | |
| >>Scheduling Information | | 1 | | | _ | |
| >>>IB_SG_EP | М | | 9.2.2.21 | | - | |
| >>>Segment Information | | 1 <maxibseg ></maxibseg | | | - | |
| >>>IB_SG_POS | Μ | | 9.2.2.20 | | _ | |
| >DL Code Information | | 1 <maxnoof DLCodes></maxnoof | | | GLOBAL | ignore |
| >>DL Scrambling Code | Μ | | 9.2.2.8 | | - | |
| >>FDD DL Channelisation Code Number | М | | 9.2.2.14 | | _ | |
| >>Transmission Gap Pattern Sequence Information Response | 0 | | <u>9.2.2.47B</u> | | _ | |
| >Diversity Indication | Μ | | 9.2.2.7 | | YES | ignore |
| >CHOICE diversity | M | | | | | |
| indication | | | | | | |

Error! No text of specified style in document.

| | IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|---|--|----------|--|------------------------|------------------------------|-------------|-------------|
| | | | | and reference | description | | Criticality |
| | >>Combining | | | | | YES | Ignore |
| | >>>RL ID | М | | 9.2.1.49 | Reference RL-Id | _ | |
| | >>Non combining | | | | | YES | ignore |
| | >>>DCH Information | | 1 <maxnoof< td=""><td></td><td>Only one</td><td>—</td><td></td></maxnoof<> | | Only one | — | |
| | Response | | DCHs> | | DCH per set of | | |
| | | | | | DCHs shall be included. | | |
| | >>>>DCH ID | М | | 9.2.1.16 | | _ | |
| | >>>>Binding ID | М | | 9.2.1.3 | | - | |
| | >>>>Transport Layer Address | М | | 9.2.1.62 | | - | |
| | >SSDT Support Indicator | М | | 9.2.2.43 | | - | |
| | >Minimum Uplink SIR | М | | Uplink SIR 9.2.1.69 | | _ | |
| | >Maximum Uplink SIR | М | | Uplink SIR | | _ | |
| | >Closed loop timing | 0 | | <u>9.2.2.3A</u> | | - | |
| ╞ | >Maximum Allowed UL Tx | М | | 9.2.1.35 | | _ | |
| - | Power >Maximum DL TX Power | M | | DL Power | | _ | |
| | | | | 9.2.2.10 | | | |
| | >Minimum DL TX Power | М | | DL Power 9.2.2.10 | | — | |
| | >Neighbouring Cell Information | | 0 <maxnoofn eighbouringR NCs></maxnoofn | | | EACH | ignore |
| | >>RNC-Id | М | | 9.2.1.50 | | _ | |
| | >CN PS Domain Identifier | 0 | | 9.2.1.12 | | - | |
| | >>CN CS Domain Identifier | 0 | | 9.2.1.11 | | - | |
| | >>Per FDD Cell | | 0 <maxnoof< td=""><td></td><td></td><td>_</td><td></td></maxnoof<> | | | _ | |
| | Information | | FDDneighbo urs> | | | | |
| | >>>C-ld | М | | 9.2.1.6 | | _ | |
| | >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nu in ref. | - | |
| | >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nd in ref. | - | |
| - | S S Fromo Offoot | 0 | | 0.2.1.20 | [6] | | |
| ┢ | >>>Primary Scrambling | M | | 92145 | | | |
| | Code | | | 0.04.44 | | | |
| | Power | 0 | | 9.2.1.44 | | _ | |
| | >>>Cell Individual Offset | 0 | | 9.2.1.7 | | — | |
| | >>>Tx Diversity Indicator | M | | 9.2.2.50 | | - | |
| | >>>STTD Support | 0 | | 9.2.2.45 | | - | |
| | >>>Closed Loop Mode1 Support Indicator | 0 | | 9.2.2.2 | | - | |
| | >>>Closed Loop Mode2 Support Indicator | 0 | | 9.2.2.3 | | _ | |
| | >>Per TDD Cell | | 0 <maxnoof< td=""><td></td><td></td><td>-</td><td></td></maxnoof<> | | | - | |
| | Information | | TDDneighbo | | | | |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|------------------------------|----------|-------|-----------------------------|-------------------------------------|-------------|-------------------------|
| | | urs> | | | | |
| >>>C-Id | М | | 9.2.1.6 | | — | |
| >>>UARFCN | M | | 9.2.1.66 | Corresponds to Nt in ref. [7] | - | |
| >>>Frame Offset | 0 | | 9.2.1.30 | | _ | |
| >>>Cell Parameter ID | М | | 9.2.1.8 | | - | |
| >>>Sync Case | М | | 9.2.1.54 | | - | |
| >>>Time Slot | C-Case1 | | 9.2.1.56 | | - | |
| >>>SCH Time Slot | C-Case2 | | 9.2.1.51 | | - | |
| >>>Block STTD Indicator | Μ | | | | - | |
| >>>Cell Individual Offset | 0 | | 9.2.1.7 | | - | |
| >>>DPCH Constant Value | 0 | | 9.2.1.23 | | _ | |
| >>>PCCPCH Power | 0 | | 9.2.1.43 | | _ | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|------------|---|
| Case1 | This IE is present only if Sync Case = Case1. |
| Case2 | This IE is present only if Sync Case = Case2. |
| SlotFormat | This IE is present only if the Secondary CCPCH Slot Format is |
| | equal to any of the value 8 to 17 |

| Range bound | Explanation |
|-------------------------|--|
| MaxnoofDCHs | Maximum number of dedicated channels on one RL |
| MaxnoofRLs | Maximum number of radio links for one UE |
| MaxnoofneighbouringRNCs | Maximum number of neighbouring RNCs |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one |
| | cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one |
| | cell |
| MaxnoofDLCodes | Maximum number of DL code information |
| MaxFACHCount | Maximum number of FACH's mapped onto secondary |
| | CCPCH's |
| MaxIBSEG | Maximum number of segments for one Information |
| | Block |

9.1.7.2 TDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|-------------------------|-----------|--|------------------|--------------|-------------|-------------|
| | | | and | description | | Criticality |
| | | | reference | | | |
| Message Type | M | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | _ | |
| RL Information Response | | 1 | | | YES | ignore |
| >RL ID | M | | 9.2.1.49 | | _ | |
| >URA ID | M | | 9.2.1.70 | | _ | |
| >SAI | M | | 9.2.1.52 | | — | |
| | 0 | | <u>9.2.1.5A</u> | | _ | |
| >UTRAN ACCess Point | 0 | | <u>9.2.1.70A</u> | | _ | |
| | | 1 | | Interference | | |
| Time Slot | | <pre></pre> | | l evel for | _ | |
| | | Lts> | | each UL | | |
| | | | | time slot | | |
| | | | | within the | | |
| | | | | Radio Link | | |
| >>Time Slot | М | | 9.2.1.56 | | _ | |
| >>UL Timeslot ISCP | Μ | | 9.2.3.13A | | _ | |
| >Timing Adjustment | M | | 9.2.3.12A | | - | |
| Required | | | | | | |
| >UL CCTrCH Information | | 0 <maxnoof< td=""><td></td><td>For DCH</td><td>GLOBAL</td><td>ignore</td></maxnoof<> | | For DCH | GLOBAL | ignore |
| | N/ | CCTICHS> | 0.2.2.2 | | | |
| | IVI | 0.1 | 9.2.3.2 | | | ignoro |
| Information | | 01 | | | TES | ignore |
| >>>Repetition Period | М | | 9237 | | _ | |
| >>>Repetition Length | M | | 9.2.3.6 | | _ | |
| >>>TDD DPCH Offset | M | | 9.2.3.8A | | _ | |
| >>>UL Timeslot | | 1 to | | | _ | |
| Information | | <maxnooft< td=""><td></td><td></td><td></td><td></td></maxnooft<> | | | | |
| | | S | | | | |
| >>>>Time Slot | М | | 9.2.1.56 | | _ | |
| >>>>Midamble Shift | М | | 9.2.3.4 | | - | |
| and Burst Type | | | | | | |
| >>>>TFCI Presence | М | | 9.2.1.55 | | - | |
| >>>>UL Code | | 1 to | | | - | |
| Information | | | | | | |
| | NA | FUN> | 0222 | | | |
| | M | | 9.2.3.3 | | | |
| Channelisation | 101 | | 0.2.0.0 | | | |
| Code | | | | | | |
| >DL CCTrCH Information | | 0 <maxnoof< td=""><td></td><td>For DCH</td><td>GLOBAL</td><td>ignore</td></maxnoof<> | | For DCH | GLOBAL | ignore |
| | | CCTrCHs> | | | | _ |
| >>CCTrCH ID | М | | 9.2.3.2 | | _ | |
| >>DL DPCH | | 01 | | | YES | ignore |
| Information | | | | | | |
| >>>Repetition Period | M | | 9.2.3.7 | | — | |
| >>>Repetition Length | IVI N4 | | 9.2.3.6 | | _ | |
| >>>TDD DPCH Olisel | IVI | 1 to | 9.2.3.6A | | _ | |
| Information | | r iu ∠maxnoOfT | | | _ | |
| internation | | S | | | | |
| >>>Time Slot | М | 0 | 9.2.1.56 | | _ | |
| >>>Midamble Shift | М | | 9.2.3.4 | | - | |
| and Burst Type | | | | | | |
| >>>>TFCI Presence | М | | 9.2.1.55 | | - | |
| >>>>DL Code | | 1 to | | | | |
| Information | | <maxnoofd< td=""><td></td><td></td><td> </td><td></td></maxnoofd<> | | | | |
| | N4 | PCH> | 0.0.0.0 | + | | |
| >>>>DPCH ID | | | 9.2.3.3 | | _ | |
| 2001/02 | IVI | 1 | 9.Z.J.Ö | 1 | - | 1 |

| | IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|---|----------------------------------|----------|--|----------------------|-----------------|-------------|-------------|
| | | | | and reference | description | | Criticality |
| | Channelisation Code | | | | | | |
| | >Diversity Indication | М | | 9.2.2.7 | | YES | ignore |
| ļ | >CHOICE diversity indication | M | | | | | |
| | >>Combining | | | | | YES | ignore |
| | >>>RL ID | М | | 9.2.1.49 | Reference RL | - | |
| | >>Non combining | | | | | YES | ignore |
| | >>>DCH Information | | 1 <maxnoof< td=""><td></td><td>Only one</td><td>—</td><td></td></maxnoof<> | | Only one | — | |
| | Response | | DCHs> | | DCH per set | | |
| | | | | | 0f | | |
| | | | | | | | |
| | | | | | be included. | | |
| | >>>DCH ID | М | | 9.2.1.16 | | _ | |
| | >>>>Binding ID | М | | 9.2.1.3 | | - | |
| | >>>>Transport Layer | М | | 9.2.1.62 | | _ | |
| | Address | | | | | | |
| | >Minimum Uplink SIR | М | | Uplink SIR | | _ | |
| | Maximum Unlink SIR | М | | 9.2.1.09 | | | |
| | | IVI | | 9.2.1.69 | | _ | |
| | >Maximum Allowed UL Tx Power | М | | 9.2.1.35 | | - | |
| | >Maximum DL TX Power | М | | DL Power | | _ | |
| | | | | 9.2.2.10 | | | |
| | >Minimum DL TX Power | М | | DL Power 9.2.2.10 | | - | |
| | >DSCH Information | | 0 | | | GLOBAL | ignore |
| | Response | | <maxnoof DSCHs></maxnoof | | | | |
| | >>DSCH ID | Μ | | <u>9.2.1.26A</u> | | - | |
| l | >>Transport Format Management | М | | <u>9.2.3.13</u> | | - | |
| | >>Priority Indicator | | 116 | | Provide | - | |
| | | | | | Information | | |
| | | | | | for each | | |
| | | | | | priority class | | |
| I | >>>Scheduling Priority | М | | 9.2.1.51A | DSCH | _ | |
| ļ | Indicator | | | | priority | | |
| | | | | | indicator | | |
| | >>>MAC-c/sh SDU | | 1 <maxnb< td=""><td></td><td></td><td>-</td><td></td></maxnb<> | | | - | |
| | Length | | MAC- c/shSDULen | | | | |
| | | | ath> | | | | |
| 1 | >>>MAC-c/sh SDU | М | gui | 9.2.1.34 | | _ | |
| | Length | | | | | | |
| | >> <u>CHOICE Diversity</u> | <u>0</u> | | | | - | |
| | Indication Diversity | | | | | | |
| | Indication | | | | | | |
| ļ | >>>Non combining | | | | | _ | |
| 1 | >>>BindingID | М | | 9.2.1.3 | | _ | |
| l | >>>>Transport | М | | 9.2.1.62 | | — | |
| | Layer Address | | | | | | |
| | >USCH Information | | 0 | | | GLOBAL | ignore |
| | Response | | <iviaxnoot< td=""><td></td><td></td><td></td><td></td></iviaxnoot<> | | | | |
| 1 | >>USCH ID | М | 0001132 | 9.2.3.14 | | _ | |
| ļ | >>Transport Format | M | | 9.2.3.13 | | _ | |
| | Management | | | | | | |
| | >>CHOICE Diversity | 0 | | | | _ | |
| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|-------------------------------|----------|---|---------------|-------------------------------------|-------------|-------------|
| | | | and reference | description | | Criticality |
| Indication CHOICE | | | | | | |
| Diversity | | | | | | |
| Indication | | | | | | |
| combining | | | | | _ | |
| >>>BindinaID | М | | 9.2.1.3 | | _ | |
| >>>>Transport | М | | 9.2.1.62 | | _ | |
| Layer Address | | - | | | | |
| >Neighbouring Cell | | 0 <maxnoofn< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxnoofn<> | | | EACH | ignore |
| Information | | NCs> | | | | |
| >>RNC-Id | М | | 9.2.1.50 | | _ | |
| >>CN PS Domain | 0 | | 9.2.1.12 | | _ | |
| | | | 0.0.4.44 | | | |
| >>CN CS Domain Identifier | 0 | | 9.2.1.11 | | _ | |
| >>Per FDD Cell | | 0 <maxnoof< td=""><td></td><td></td><td>_</td><td></td></maxnoof<> | | | _ | |
| Information | | FDDneighbo urs> | | | | |
| >>>C-Id | М | | 9.2.1.6 | | _ | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nu in ref. [6] | - | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nd in ref. [6] | - | |
| >>>Frame Offset | 0 | | 9.2.1.30 | [-] | - | |
| >>>Primary Scrambling Code | М | | 9.2.1.45 | | - | |
| >>>Primary CPICH | 0 | | 9.2.1.44 | | _ | |
| >>>Cell Individual | 0 | | 9.2.1.7 | | _ | |
| >>>Tx Diversity | М | | 9.2.2.50 | | - | |
| >>STTD Support | 0 | | 9.2.2.45 | | - | |
| | 0 | | 9222 | | | |
| Mode1 Support Indicator | | | 0.2.2 | | | |
| >>>Closed Loop | 0 | | 9.2.2.3 | | _ | |
| Mode2 Support | | | | | | |
| | | 0 | | | | |
| Information | | TDDneighbo | | | _ | |
| >>>C-Id | М | | 9.2.1.6 | | _ | |
| >>>UARFCN | М | | 9.2.1.66 | Corresponds to Nt in ref. | _ | |
| >>>Frame Offset | 0 | | 9.2.1.30 | | _ | |
| >>>Cell Parameter ID | М | | 9.2.1.8 | | | |
| >>>Sync Case | M | | 9.2.1.54 | | _ | |
| >>>Time Slot | C-Case1 | | 9.2.1.56 | | _ | |
| >>>SCH Time Slot | C-Case2 | | 9.2.1.51 | | _ | |
| Indicator | | | | | _ | |
| >>>Cell Individual Offset | 0 | | 9.2.1.7 | | _ | |
| >>>DPCH Constant Value | 0 | | 9.2.1.23 | | - | |
| >>>PCCPCH Power | 0 | | 9.2.1.43 | 1 | _ | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|-----------|---|
| Case1 | This IE is present only if Sync Case = Case1 |
| Case2 | This IE is present only if Sync Case = Case2. |

| Range Bound | Explanation |
|----------------------------------|--|
| MaxnoofDCHs | Maximum number of dedicated channels on one RL |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofUSCHs | Maximum number of USCHs for one UE. |
| MaxNbMAC-c/shSDULength | Maximum number of different MAC-c/sh SDU lengths |
| Maxno <i>ofneighbouringRNC</i> s | Maximum number of neighbouring RNCs |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one |
| | cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one |
| | cell |
| MaxnoofDLCodes | Maximum number of DL code information |
| MaxnoOfDPCHs | Maximum number of DPCH in one CCTrCH |
| MaxnoofCCTrCHs | number of CCTrCH for one UE. |
| MaxnoofULts | Maximum number of Uplink time slots per Radio Link |
| MaxnoofTS | Maximum number of Timeslots for a UE |

9.1.8 RADIO LINK ADDITION FAILURE

9.1.8.1 FDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|---|----------|---|------------------------|--------------|-------------|-------------|
| | | | and reference | description | | Criticality |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | _ | |
| CHOICE cause level | M | | | | <u>YES</u> | ignore |
| >General | | | | | Yes | ignore |
| >>Cause | М | | <u>9.2.1.5</u> | | _ | |
| >RL specific | | | | | Yes | ignore |
| >>Unsuccessful RL Information Response | | 1 <maxnoof RLs-1></maxnoof | | | EACH | ignore |
| >>>RL ID | Μ | | 9.2.1.49 | | _ | |
| >>>Cause | М | | 9.2.1.5 | | _ | |
| >>>Successful RL | | 0 <maxnoof< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxnoof<> | | | EACH | ignore |
| Information Response | | RLs-2> | | | | |
| >>>RL ID | М | | 9.2.1.49 | | — | |
| >>>RL Set ID | М | | 9.2.2.35 | | - | |
| >>>URA ID | M | | 9.2.1.70 | | - | |
| >>>SAI | M | | 9.2.1.52 | | _ | |
| >>>RSSI | М | | 9.2.2.35A | | - | |
| >>>DL Code Information | | 1 <maxnoof DLCodes></maxnoof | | | GLOBAL | ignore |
| >>>>DL Scrambling | М | | 9.2.2.8 | | _ | |
| >>>FDD DL | М | | 9.2.2.14 | | - | |
| Channelisation Code Number | | | | | | |
| >>>>Transmission | 0 | | 9.2.2.47B | | _ | |
| Gap Pattern | | | | | | |
| Sequence Information | | | | | | |
| >>>Diversity Indication | М | | 9227 | | YES | ianore |
| >>>CHOICE diversity | M | | 0.2.2.1 | | 120 | ignore |
| indication | <u></u> | | | | | |
| >>>Combining | | | | | YES | Ignore |
| >>>>RL ID | М | | 9.2.1.49 | Reference | _ | |
| | | | | RL-Id | | |
| >>>Non combining | | | | | YES | Ignore |
| >>>>DCH | | 1 <maxnoof< td=""><td></td><td>Only one</td><td>-</td><td></td></maxnoof<> | | Only one | - | |
| Information | | DCHs> | | DCH per set | | |
| Response | | | | of | | |
| | | | | co-ordinated | | |
| | | | | DCHs shall | | |
| | NA | | 02116 | De included. | _ | |
| | M | | 9213 | | _ | |
| | M | | 92162 | | | |
| Laver Address | | | 5.2.1.02 | | | |
| >>>SSDT Support | М | | 9.2.2.43 | | - | |
| Indicator | | | | | l | |
| >>>Minimum Uplink SIR | М | | 9.2.1.69 | | - | |
| >>>Maximum Uplink SIR | M | | Uplink SIR 9.2.1.69 | | _ | |
| >>>Closed loop timing | 0 | | <u>9.2.2.3A</u> | | =- | |
| >>Maximum Allowed | М | | 9.2.1.35 | | _ | |
| UL 1x Power >>>Maximum DL TX | M | | DL Power | | _ | |
| Power | N4 | | 9.2.2.10 | | | |
| >>>iviinimum DL TX Power | IVI | | 9.2.2.10 | | _ | |

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|----------|---|-----------------------------|-------------------------------------|-------------|-------------------------|
| >>>Neighbouring Cell Information | | 0 <maxnoofn eighbouringR NCs></maxnoofn | | | EACH | Ignore |
| >>>RNC-Id | Μ | | 9.2.1.50 | | — | |
| >>>>CN PS Domain Identifier | 0 | | 9.2.1.12 | | _ | |
| >>>CN CS Domain | 0 | | 9.2.1.11 | | _ | |
| >>>Per FDD Cell Information | | 0 <maxnoof FDDneighbo urs></maxnoof | | | = | |
| >>>>C-ld | М | | 9.2.1.6 | | _ | |
| >>>>UARFCN | M | | 9.2.1.66 | Corresponds to Nu in ref. [6] | _ | |
| >>>>UARFCN | М | | 9.2.1.66 | Corresponds to Nd in ref. [6] | = | |
| >>>>Frame Offset | 0 | | 9.2.1.30 | | _ | |
| >>>>Primary Scrambling Code | М | | 9.2.1.45 | | _ | |
| >>>>Primary CPICH Power | 0 | | 9.2.1.44 | | _ | |
| >>>>Cell Individual Offset | 0 | | 9.2.1.7 | | Ξ | |
| >>>>Tx Diversity | М | | 9.2.2.50 | | = | |
| >>>>STTD Support Indicator | 0 | | 9.2.2.45 | | = | |
| >>>>Closed Loop Mode1 Support Indicator | 0 | | 9.2.2.2 | | = | |
| >>>>Closed Loop Mode2 Support Indicator | 0 | | 9.2.2.3 | | Ξ | |
| >>>Per TDD Cell Information | | 0 <maxnoof TDDneighbo urs></maxnoof | | | = | |
| >>>>C-Id | Μ | | 9.2.1.6 | | = | |
| >>>>UARFCN | M | | 9.2.1.66 | Corresponds to Nt in ref. [7] | _ | |
| >>>>Frame Offset | 0 | | 9.2.1.30 | | - | |
| >>>>Cell Parameter ID | М | | 9.2.1.8 | | - | |
| >>>>Sync Case | М | | 9.2.1.54 | | _ | |
| >>>>Time Slot | C-Case1 | | 9.2.1.56 | l . | - | |
| >>>>SCH Time Slot | C-Case2 | | 9.2.1.51 | | _ | |
| >>>>Block STTD | М | | | | - | |
| >>>>Cell Individual Offset | 0 | | 9.2.1.7 | | _ | |
| >>>>DPCH Constant Value | 0 | | 9.2.1.23 | | _ | |
| >>>>PCCPCH Power | 0 | | 9.2.1.43 | | _ | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|-----------|---|
| Case1 | This IE is present only if Sync Case = Case1. |
| Case2 | This IE is present only if Sync Case = Case2. |

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| Range bound | Explanation |
|----------------------------------|---|
| MaxnoofDCHs | Maximum number of dedicated channels on one RL |
| MaxnoofRLs | Maximum number of radio links for one UE |
| Maxno <i>ofneighbouringRNC</i> s | Maximum number of neighbouring RNCs |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one cell |
| MaxnoofDLCodes | Maximum number of DL code information |

9.1.8.2 TDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|----------|-------|-----------------------------|-----------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | - | - |
| CHOICE cause level | M | | | | YES | ignore |
| >General | | | | | Yes | ignore |
| >>Cause | М | | <u>9.2.1.5</u> | | _ | |
| >RL specific | | | | | Yes | ignore |
| >>Unsuccessful RL Information Response | | 1 | | | YES | ignore |
| >>>RL ID | М | | 9.2.1.49 | | - | |
| >>>Cause | М | | 9.2.1.5 | | - | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

9.1.9 RADIO LINK DELETION REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|----------------|----------|----------------------------------|-----------------------------|-----------------------|-------------|-------------------------|
| Message Type | Μ | | 9.2.1.40 | | YES | reject |
| Transaction ID | Μ | | 9.2.1.59 | | - | |
| RL Information | | 1 <maxno ofRLs></maxno | | | EACH | notify |
| >RL ID | Μ | | 9.2.1.49 | | — | |

| Range bound | Explanation |
|-------------|--|
| MaxnoofRLs | Maximum number of radio links for one UE |

9.1.10 RADIO LINK DELETION RESPONSE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------------|-----------------------|-------------|-------------------------|
| Message Type | Μ | | 9.2.1.40 | | YES | reject |
| Transaction ID | Μ | | 9.2.1.59 | | - | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

9.1.11 RADIO LINK RECONFIGURATION PREPARE

9.1.11.1 FDD Message

| | IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|------|------------------------------------|------------|--|------------------|--------------|-------------|-------------|
| | - | | - | and | Description | - | Criticality |
| | | | | Reference | | | |
| Me | ssage Type | М | | 9.2.1.40 | | YES | reject |
| Tra | Insaction ID | М | | 9.2.1.59 | | _ | |
| Allo | owed Queuing Time | 0 | | 9.2.1.2 | | YES | reject |
| UL | DPCH Information | | 01 | | | YES | reject |
| > | UL Scrambling Code | 0 | | 9.22.53 | | _ | |
| > | UL SIR Target | 0 | | Uplink SIR | | _ | |
| | | | | 9.2.1.69 | | | |
| | Min UL Channelisation | 0 | | 9.2.2.25 | | _ | |
| > | Max Number of UL | C – | | 9.2.2.24 | | _ | |
| | DPDCHs | CodeLen | | | | | |
| > | Puncture Limit | 0 | | 9.2.1.46 | For the UL. | _ | |
| > | TFCS | 0 | | 9.2.1.63 | TFCS for the | _ | |
| | | | | | UL. | | |
| > | UL DPCCH Slot Format | 0 | | 9.2.2.52 | | _ | |
| > | Diversity mode | 0 | | 9.2.2.8 | | — | |
| > | SSDT Cell Identity | 0 | | 9.2.2.41 | | — | |
| | | | | | | | |
| > | S-Field Length | 0 | 0.1 | 9.2.2.36 | | - | |
| DL | DPCH Information | 0 | 01 | 0.0.4.00 | TEOOL | YES | reject |
| > | -TFCS | 0 | | 9.2.1.63 | DL. | - | |
| > | DL DPCH Slot Format | 0 | | 9.2.2.9 | | | |
| > | Number of DL | 0 | | <u>9.2.2.26A</u> | | — | |
| C | hannelisation codes | | | | | | |
| > | TFCI Signalling Mode | 0 | | 9.2.2.46 | | _ | |
| > | TFCI Presence | C- | | 9.2.1.55 | | - | |
| | | SlotFormat | | | | | |
| > | MultiplexingPosition | 0 | | 9.2.2.26 | | _ | |
| > | Limited Power Increase | 0 | | 9.2.1.33 | | - | |
| DC | He to Modify | | 0 maynaaf | | | | roigot |
| | | | | | | GLUBAL | reject |
| | | 0 | DCI152 | 02167 | | | |
| - | | 0 | | 9.2.1.07 | | | |
| | | 0 | | 9.2.1.50 | | | |
| | | 0 | 1 -maxnoof | 9.2.1.57 | | | |
| | | | DCHs> | | | | |
| | >>DCH ID | М | | 9.2.1.16 | | | |
| | >>Transport Format Set | 0 | | 9.2.1.64 | For the UL. | — | |
| | >>Transport Format Set | 0 | | 9.2.1.64 | For the DL. | _ | |
| | >>Allocation/Retention Priority | 0 | | 9.2.1.1 | | _ | |
| | >>Frame Handling Priority | 0 | | 9.2.1.29 | | _ | |
| | >>DRAC Control | 0 | | 9.2.2.13 | | _ | |
| DC | Hs to Add | | 0 <maxnoof DCHs></maxnoof | | | GLOBAL | reject |
| > | Payload CRC Presence | М | | 9.2.1.42 | | _ | |
| | UL FP Mode | М | | 9.2.1.67 | | _ | |
| | ToAWS | M | | 9.2.1.58 | | _ | |
| > | ToAWE | М | | 9.2.1.57 | | _ | |
| > | DCH Specific Info | | 1 <maxnoof< td=""><td></td><td></td><td>-</td><td></td></maxnoof<> | | | - | |
| | >>DCH ID | М | 201102 | 9.2.1.16 | | _ | |
| | >>TrCh Source Statistics | M | | 9.2.1.65 | | _ | |
| L | | 1 | | | 1 | | |

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| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned Criticality |
|---|------------------|--------------------------------------|--|-------------|-------------|-------------------------|
| | | | Reference | Description | | Criticality |
| Descriptor | | | | | | |
| >>Transport Format Set | М | | 9.2.1.64 | For the UL. | _ | |
| >>Transport Format Set | М | | 9.2.1.64 | For the DL. | _ | |
| >>BLER | М | | 9.2.1.3 <u>9.2.</u> <u>1.4</u> | For the UL. | _ | |
| >>BLER | М | | 9.2.1.3<u>9.2.</u> 1.4 | For the DL. | - | |
| >>Allocation/Retention Priority | М | | 9.2.1.1 | | _ | |
| >>Frame Handling Priority | M | | 9.2.1.29 | | _ | |
| >>QE-Selector | М | | 9.2.1.46A | | — | |
| >>DRAC Control | М | | 9.2.2.13 | | _ | |
| DCHs to Delete | | 0 <maxnoof DCHs></maxnoof | | | GLOBAL | reject |
| >DCH ID | М | | 9.2.1.16 | | _ | |
| DSCH to modify | | 01 | | | YES | reject |
| >DSCH Info | | 0 <maxnoof DSCHs></maxnoof | | | _ | |
| >>DSCH ID | М | | <u>9.2.1.26A</u> | | _ | |
| >>TrCh Source Statistics Descriptor | 0 | | <u>9.2.1.65</u> | | = | |
| >>Transport Format Set | 0 | | <u>9.2.1.64</u> | For DSCH | _ | |
| >>Allocation/ Retention Priority | 0 | | <u>9.2.1.1</u> | | - | |
| >>Scheduling Priority Indicator | 0 | | <u>9.2.1.51A</u> | | _ | |
| >>BLÉR | 0 | | 9.2.1.4 | | _ | |
| >PDSCH RL ID | 0 | | RL ID 9.2.1.49 | | _ | |
| >Transport Format Combination Set | 0 | | <u>9.2.1.63</u> | For DSCH | _ | |
| DSCH to add | | 01 | | | YES | reject |
| >DSCH Info | | 1 <maxnoof DSCHs></maxnoof | | | _ | |
| >>DSCH ID | М | | <u>9.2.1.26A</u> | | _ | |
| >>TrCh Source Statistics Descriptor | М | | <u>9.2.1.65</u> | | - | |
| >>Transport Format Set | М | | <u>9.2.1.64</u> | For DSCH | _ | |
| >>Allocation/ Retention Priority | М | | <u>9.2.1.1</u> | | _ | |
| >>Scheduling Priority Indicator | Μ | | <u>9.2.1.51A</u> | | - | |
| >>BLER | Μ | | <u>9.2.1.4</u> | | - | |
| >PDSCH RL ID | М | | RL ID <u>9.2.1.49</u> | | = | |
| >Transport Format Combination Set | Μ | | <u>9.2.1.63</u> | For DSCH | - | |
| DSCHs to delete | | 01 | | | YES | reject |
| >DSCH Info | | 1 <maxnoof DSCHs></maxnoof | | | — | |
| >>DSCH ID | М | | <u>9.2.1.26A</u> | | _ | |
| RL Information | | 0 <maxnoof RLs></maxnoof | | | EACH | reject |
| >RL ID | Μ | | 9.2.1.49 | | - | |
| >SSDT Indication | 0 | | 9.2.2.41 | | - | |
| >SSDT Cell Identity | C - SSDTIndON | | 9.2.2.40 | | _ | |
| >Transmit Diversity | C – | | 9.2.2.50 | | - | |
| Indicator | Diversity | | | | | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------------|--------------------------|-------------|-------------------------|
| | mode | | | | | |
| Transmission Gap Pattern Sequence Information | 0 | | <u>9.2.2.47A</u> | | YES | reject |

| Condition | Explanation |
|----------------|--|
| SSDTIndON | The IE may be present if the SSDT Indication is set to |
| | 'SSDT Active in the UE'. |
| CodeLen | This IE is present only if "Min UL Channelisation Code |
| | length" equals to 4. |
| SlotFormat | This IE is only present if the DL DPCH Slot Format is |
| | equal to any of the values 12 to 16. |
| Diversity mode | This IE is present if <i>Diversity Mode</i> IE is present in <i>UL</i> |
| | DPCH Information group, unless it is equal to "none". |

| Range bound | Explanation |
|--------------|-------------------------------------|
| MaxnoofDCHs | Maximum number of DCHs for a UE. |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofRLs | Maximum number of RLs for a UE. |

9.1.11.2 TDD Message

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|----------------------|----------|--|-----------------|----------------|-------------|-------------|
| | | | and | Description | | Criticality |
| | | | Reference | | | |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | _ | |
| Allowed Queuing Time | 0 | | 9.2.1.2 | | YES | reject |
| UL CCTrCH to add | | 0 <maxno< td=""><td></td><td>For DCH</td><td>EACH</td><td>notify</td></maxno<> | | For DCH | EACH | notify |
| | | ofCCTrCH | | and USCH | | |
| | | S> | | | | |
| | M | | 9.2.3.2 | | _ | |
| >TFUS | M | | 9.2.1.63 | For the UL. | _ | |
| >TFCI Coding | | | 9.2.3.11 | | _ | |
| >Puncture Limit | IVI | 0 | 9.2.1.40 | | | notify (|
| OE COTTON to modify | | ofCCTrCH | | | EACH | noury |
| | | s> | | | | |
| >CCTrCH ID | М | | 9.2.3.2 | | _ | |
| >TFCS | 0 | | 9.2.1.63 | For the UL. | _ | |
| >TFCI Coding | 0 | | 9.2.3.11 | | _ | |
| >Puncture Limit | 0 | | 9.2.1.46 | | _ | |
| UL CCTrCH to delete | | 0 <maxno< td=""><td></td><td></td><td>EACH</td><td>notify</td></maxno<> | | | EACH | notify |
| | | ofCCTrCH | | | | - |
| | | S> | | | | |
| >CCTrCH ID | М | | <u>9.2.3.2</u> | | — | |
| DL CCTrCH to add | | 0 <maxno< td=""><td></td><td>For DCH</td><td>EACH</td><td>notify</td></maxno<> | | For DCH | EACH | notify |
| | | ofCCTrCH | | and DSCH | | |
| | | S> | 0.0.0.0 | | | |
| | IVI | | 9.2.3.2 | Far the DI | _ | |
| >IFCS | | | 9.2.1.63 | For the DL. | _ | |
| >TFCI Coding | | | 9.2.3.11 | | _ | |
| | IVI | 1 to | 9.2.1.40 | List of uplink | | |
| | | <maxnoc< td=""><td></td><td>CCTrCH</td><td>_</td><td></td></maxnoc<> | | CCTrCH | _ | |
| | | CTrCH> | | which | | |
| | | | | provide TPC | | |
| >>TPC CCTrCH ID | М | | CCTrCH | | - | |
| | | | ID | | | |
| | | | 9.2.3.2 | | | |
| DL CCTrCH to modify | | 0 <maxno< td=""><td></td><td></td><td>EACH</td><td>notify</td></maxno<> | | | EACH | notify |
| | | ofCCTrCH | | | | |
| | N.4 | \$> | 0.0.0.0 | | | |
| | | | <u>9.2.3.2</u> | For the DI | _ | |
| >TECL Coding | 0 | | 9.2.1.03 | FOI THE DL. | | |
| >Puncture Limit | 0 | | 92146 | | | |
| STPC CCTrCH List | U | 0 to | <u>3.2.1.40</u> | List of uplink | | |
| | | <maxnoc< td=""><td></td><td>CCTrCH</td><td></td><td></td></maxnoc<> | | CCTrCH | | |
| | | CTrCH> | | which | | |
| | | | | provide TPC | | |
| >>TPC CCTrCH ID | М | | CCTrCH | | - | |
| | | | ID | | | |
| | | | 9.2.3.3 | | | |
| DL CCTrCH to delete | | 0 <maxno< td=""><td></td><td></td><td>EACH</td><td>notify</td></maxno<> | | | EACH | notify |
| | | OTCCTTCH | | | | |
| | NA | 5> | 0222 | | | |
| | IVI | 0 cmaxno | <u> </u> | | | reject |
| | | ofDCHs> | | | | 10,000 |
| >UL FP Mode | 0 | | 9.2.1.67 | | _ | |
| >ToAWS | 0 | 1 | 9.2.1.58 | | - | |
| >ToAWE | 0 | | 9.2.1.57 | | _ | |
| >DCH Specific Info | | 1 <maxno< td=""><td></td><td></td><td>-</td><td></td></maxno<> | | | - | |
| | | ofDCHs> | | | | |
| >>DCH ID | М | | 9.2.1.16 | | - | |

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|--|---------------|------------------------------------|--|---|-------------|-------------|
| | | | Reference | Description | | Criticality |
| >>CCTrCH ID | 0 | | 9.2.3.2 | UL CCTrCH in which the DCH is mapped. | - | |
| >>CCTrCH ID | 0 | | 9.2.3.2 | DL CCTrCH in which the DCH is mapped | - | |
| >>Transport Format Set | 0 | | 9.2.1.64 | For the UL. | _ | |
| >> I ransport Format Set | 0 | | 9.2.1.64 | For the DL. | _ | |
| Priority | 0 | | 9.2.1.1 | | _ | |
| >>Frame Handling Priority | 0 | | 9.2.1.29 | | - | |
| DCHs to Add | | 0 <maxno ofDCHs></maxno | | | GLOBAL | reject |
| >Payload CRC Presence Indicator | М | | 9.2.1.42 | | _ | |
| >UL FP Mode | М | | 9.2.1.67 | | _ | |
| >ToAWS | M | | 9.2.1.58 | | _ | |
| >ToAWE | M | | 9.2.1.57 | | _ | |
| >DCH Specific Info | | 1 <maxno ofDCHs></maxno | | | - | |
| >>DCH ID | М | - | 9.2.1.16 | | _ | |
| >>CCTrCH ID | M | | 9.2.3.2 | UL CCTrCH in which the DCH is mapped. | _ | |
| >>CCTrCH ID | M | | 9.2.3.2 | DL CCTrCH in which the DCH is mapped | _ | |
| >>TrCh Source Statistics Descriptor | М | | 9.2.1.65 | | _ | |
| >>Transport Format Set | М | | 9.2.1.64 | For the UL. | _ | |
| >>Transport Format Set | М | | 9.2.1.64 | For the DL. | _ | |
| >>BLER | М | | 9.2.1.3<u>9.2.</u> <u>1.4</u> | For the UL. | - | |
| >>BLER | Μ | | 9.2.1.3<u>9.2.</u> <u>1.4</u> | For the DL. | - | |
| >>Allocation/Retention Priority | М | | 9.2.1.1 | | _ | |
| >>Frame Handling Priority | М | | 9.2.1.29 | | - | |
| >>QE-Selector | C- CoorDCH | | 9.2.1.46A | | _ | |
| DCHs to Delete | | 0 <maxno ofDCHs></maxno | | | GLOBAL | reject |
| >DCH ID | М | | 9.2.1.16 | | _ | |
| DSCHs to Modify | | 0 <maxno ofDSCHs></maxno | | | GLOBAL | reject |
| >DSCH ID | М | | <u>9.2.1.26A</u> | | - | |
| >CCTrCH ld | 0 | | <u>9.2.3.2</u> | DL CCTrCH in which the DSCH is mapped. | _ | |
| >TrCh Source Statistics Descriptor | 0 | | <u>9.2.1.65</u> | | - | |
| >Transport Format Set | 0 | | <u>9.2.1.64</u> | | _ | |
| >Allocation/Retention Priority | 0 | | <u>9.2.1.1</u> | | - | |
| >Scheduling Priority Indicator | 0 | | <u>9.2.1.51A</u> | | _ | |

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|---------------------------------------|----------|--|------------------|---|-------------|-------------|
| | | | and | Description | | Criticality |
| >BLER | 0 | | 9214 | | | |
| DSCHs to Add | | 0 <maxno< td=""><td><u>5.2.1.4</u></td><td></td><td>GLOBAL</td><td>reiect</td></maxno<> | <u>5.2.1.4</u> | | GLOBAL | reiect |
| | | ofDSCHs> | | | | |
| >DSCH ID | Μ | | <u>9.2.1.26A</u> | | _ | |
| >CCTrCH Id | М | | <u>9.2.3.2</u> | DL CCTrCH in which the DSCH is mapped. | - | |
| >TrCh Source Statistics Descriptor | Μ | | <u>9.2.1.65</u> | | = | |
| >Transport Format Set | Μ | | <u>9.2.1.64</u> | | | |
| >Allocation/Retention Priority | М | | <u>9.2.1.1</u> | | Ξ | |
| >Scheduling Priority Indicator | М | | <u>9.2.1.51A</u> | | Ξ | |
| >BLER | Μ | - | <u>9.2.1.4</u> | | _ | - |
| DSCHs to Delete | | 0 <maxno ofDSCHs></maxno | | | GLOBAL | reject |
| >DSCH ID | Μ | | <u>9.2.1.26a</u> | | - | |
| USCHs to Modify | | 0 <maxno ofUSCHs></maxno | | | GLOBAL | reject |
| >USCH ID | M | | <u>9.2.3.14</u> | | _ | |
| >CCTrCH Id | 0 | | <u>9.2.3.2</u> | UL CCTrCH in which the USCH is mapped. | _ | |
| >TrCh Source Statistics Descriptor | 0 | | <u>9.2.1.65</u> | | _ | |
| >Transport Format Set | 0 | | <u>9.2.1.64</u> | | - | |
| >Allocation/Retention Priority | 0 | | <u>9.2.1.1</u> | | _ | |
| >Scheduling Priority Indicator | 0 | | <u>9.2.1.51A</u> | | _ | |
| >BLER | 0 | | <u>9.2.1.4</u> | | _ | |
| >RB Info | | 1 to <maxnoof RB></maxnoof | | All Radio Bearers using this USCH | _ | |
| >>RB Identity | Μ | | <u>9.2.3.5B</u> | | _ | |
| USCHs to Add | | 0 <maxno ofUSCHs></maxno | | | GLOBAL | reject |
| >USCH ID | M | | 9.2.3.14 | | _ | |
| >CCTrCH Id | М | | <u>9.2.3.2</u> | UL CCTrCH in which the USCH is mapped. | _ | |
| >TrCh Source Statistics Descriptor | Μ | | <u>9.2.1.65</u> | | Ι | |
| >Transport Format Set | М | | 9.2.1.64 | | _ | |
| >Allocation/Retention Priority | M | | <u>9.2.1.1</u> | | - | |
| Scheduling Priority | M | | <u>9.2.1.51A</u> | | _ | |
| >BLER | M | 1.4- | <u>9.2.1.4</u> | | — | |
| | | <pre>contraction contraction contracti contraction contraction contraction contraction con</pre> | | Bearers using this USCH | _ | |
| >>RB Identity | М | | 9.2.3.5B | | _ | |
| USCHs to Delete | | 0 <maxno ofUSCHs></maxno | | | GLOBAL | reject |
| >USCH ID | М | | <u>9.2.3.14</u> | | _ | |

| Condition | Explanation |
|-----------|---|
| CoorDCH | This IE is present only this DCH is part of a set of coordinated DCHs |
| | (number of instances of DCH Specific Info is greater than 1) |

| 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. |
| MaxnoofRBs | Maximum number of Radio Bearers for one UE. |

9.1.12 RADIO LINK RECONFIGURATION READY

9.1.12.1 FDD Message

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|--|-------------------|---|------------------------|--|-------------|-------------|
| | | | and Reference | Description | | Criticality |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | _ | · · · |
| RL Information Response | | 0 <maxno ofRLs></maxno | | | EACH | ignore |
| >RL ID | М | | 9.2.1.49 | | _ | |
| >Maximum Uplink SIR | 0 | | Uplink SIR 9.2.1.69 | | - | |
| >Minimum Uplink SIR | 0 | | Uplink SIR 9.2.1.69 | | _ | |
| >Maximum DL TX Power | 0 | | DL Power 9.2.2.10 | | - | |
| >Minimum DL TX Power | 0 | | DL Power 9.2.2.10 | | - | |
| >Secondary CCPCH Info | | 01 | | | _ | |
| >>FDD S-CCPCH Offset | М | | 9.2.2.15 | Corresponds | - | |
| | | | | to: т _{s-ссрсн,к} , see ref. [8] | | |
| >>DL Scrambling Code | М | | 9.2.2.8 | | _ | |
| >>FDD DL Channelisation Code Number | М | | 9.2.2.14 | | - | |
| >>TFCS | М | | 9.2.1.63 | For the DL. | _ | |
| >Secondary CCPCH Slot Format | M | | 9.2.2.38 | | - | |
| >>TFCI Presence | C - SlotFormat | | 9.2.1.55 | | — | |
| >>Multiplexing Position | М | | 9.2.2.26 | | — | |
| >>STTD Indicator | М | | 9.2.2.44 | | _ | |
| >>FACH/PCH Information | | 1 <maxfac Hcount+1></maxfac | | | _ | |
| >>>TFS | | | 9.2.1.64 | For each FACH, and the PCH when multiplexed on the same Secondary CCPCH | _ | |
| >>Scheduling Information | | 1 | | | - | |
| >>>IB_SG_REP | М | | 9.2.2.21 | | - | |
| >>>Segment Information | | 1 <maxibse G></maxibse | | | - | |
| >>>IB_SG_POS | М | | 9.2.2.20 | | _ | |
| >Downlink Code Information | | 0 <maxno ofDLCode s></maxno | | | GLOBAL | ignore |
| >>DL Scrambling Code | Μ | | 9.2.2.8 | | _ | |
| >>FDD DL Channelisation Code Number | М | | 9.2.2.14 | | - | |
| >>Transmission Gap Pattern Sequence Information Response | 0 | | <u>9.2.2.47B</u> | | _ | |
| >DCH Information | | 0 <maxno< td=""><td></td><td>Only one</td><td>GLOBAL</td><td>ignore</td></maxno<> | | Only one | GLOBAL | ignore |

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|-------------------------------------|----------|--|------------------|---|-------------|-------------|
| | | | Reference | Description | | Criticality |
| Response | | ofDCHs> | | DCH per set of co- ordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined RLs. | | |
| >>DCH ID | М | | 9.2.1.16 | | _ | |
| >>Binding ID | Μ | | 9.2.1.3 | | - | |
| >>Transport Layer Address | Μ | | 9.2.1.62 | | - | |
| >DSCH to be Added or Modified | | 01 | | | YES | ignore |
| >>DSCH Information | | 1 <maxnoof DSCHs></maxnoof | | | _ | |
| >>>DSCH ID | Μ | | <u>9.2.1.26A</u> | | _ | |
| >>>Priority Indicator | | 116 | | Provide Information for each priority class used | - | |
| >>>Scheduling Priority Indicator | М | | <u>9.2.1.51A</u> | DSCH priority indicator | - | |
| >>>>MAC-c/sh SDU Length | | 1 <maxnb MAC- c/shSDUL ength></maxnb | | | - | |
| >>>>MAC-c/sh SDU Length | Μ | | <u>9.2.1.34</u> | | - | |
| >>>Binding ID | М | | <u>9.2.1.3</u> | | _ | |
| >>>Transport Layer Address | Μ | | <u>9.2.1.62</u> | | - | |
| >>PDSCH code mapping | M | | <u>9.2.2.27A</u> | PDSCH code mapping to be used | _ | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|------------|---|
| SlotFormat | This IE is present only if the Secondary CCPCH Slot Format is equal |
| | to any of the value 8 to 17 |

| Range bound | Explanation |
|------------------------|--|
| MaxnoofDCHs | Maximum number of DCHs. |
| MaxNbMAC-c/shSDULength | Maximum number of different MAC-c/sh SDU lengths |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofRLs | Maximum number of RLs for a UE. |
| MaxnoofDLCodes | Maximum number of Downlink Channelisation Codes. |
| MaxFACHCount | Maximum number of FACH's mapped onto secondary |
| | CCPCH's |
| MaxIBSEG | Maximum number of segments for one Information |
| | Block |

9.1.12.2 TDD Message

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|---|----------|--|------------------------|-------------|-------------|-------------|
| | | | and Reference | Description | | Criticality |
| Message Type | M | | | | VES | reject |
| Transaction ID | M | | 9.2.1.40 | | - | Тејесі |
| RI Information Response | | 0.1 | 3.2.1.33 | | YES | ignore |
| >RL ID | М | 01 | 92149 | | - | Ignore |
| >Maximum Uplink SIR | 0 | | Uplink SIR | | _ | |
| · | - | | 9.2.1.69 | | | |
| >Minimum Uplink SIR | 0 | | Uplink SIR 9.2.1.69 | | _ | |
| >Maximum DL TX Power | 0 | | DL Power 9.2.2.10 | | _ | |
| >Minimum DL TX Power | 0 | | DL Power 9.2.2.10 | | Ι | |
| >UL CCTrCH Information | | 0 <maxnoof CCTrCHs></maxnoof | | For DCH | GLOBAL | ignore |
| >>CCTrCH ID | М | | 9.2.3.2 | | - | |
| >>UL DPCH to be added | | 01 | | | YES | ignore |
| >>>Repetition Period | М | | 9.2.3.7 | | - | |
| >>>Repetition Length | M | | 9.2.3.6 | | _ | |
| >>>TDD DPCH Offset | М | | 9.2.3.8A | | - | |
| >>>UL Timeslot Information | | 1 to <maxnooft S</maxnooft | | | _ | |
| >>>>Time Slot | М | | 9.2.1.56 | | _ | |
| >>>Midamble | M | | 9.2.3.4 | | _ | |
| Shift and Burst Type | | | | | | |
| >>>TFCI Presence | Μ | | 9.2.1.55 | | _ | |
| >>>>UL Code Information | | 1 to <maxnoofd PCH></maxnoofd | | | _ | |
| >>>>DPCH | М | | 9.2.3.3 | | - | |
| >>>>TDD Channelisation Code | Μ | | 9.2.3.8 | | - | |
| >>UL DPCH to be modified | | 01 | | | YES | ignore |
| >>>Repetition Period | 0 | | 9.2.3.7 | | _ | |
| >>>Repetition Length | 0 | | 9.2.3.6 | | — | |
| >>>TDD DPCH Offset | 0 | | 9.2.3.8A | | _ | |
| >>>UL Timeslot Information | | 0 to <maxnooft S</maxnooft | | | _ | |
| >>>>Time Slot | М | | 9.2.1.56 | | — | |
| >>>>Midamble Shift and Burst Type | 0 | | 9.2.3.4 | | - | |
| >>>TFCI Presence | 0 | | 9.2.1.55 | | - | |
| >>>UL Code Information | | 0 to <maxnoofd PCH></maxnoofd | | | _ | |
| >>>>DPCH ID | М | | 9.2.3.3 | | - | |
| >>>>TDD Channelisation Code | Μ | | 9.2.3.8 | | - | |

| IE/Group Name | Presence | Range | IE Type and | Semantics Description | Criticality | Assigned Criticality |
|--|----------|--|-----------------|---|-------------|-------------------------|
| >>UL DPCH to be | | 0 <maxnoof< td=""><td>Reference</td><td></td><td>GLOBAL</td><td>ignore</td></maxnoof<> | Reference | | GLOBAL | ignore |
| deleted | | DPCHs> | | | | |
| >>>DPCH ID | M | 0 | 9.2.3.3 | | | : |
| >DL CCITCH Information | | 0 <maxnoot CCTrCHs></maxnoot | | For DCH | GLOBAL | ignore |
| >>CCTrCH ID | М | | 9.2.3.2 | | - | |
| >>DL DPCH to be added | | 01 | | | YES | ignore |
| >>>Repetition Period | М | | 9.2.3.7 | | - | |
| >>>Repetition Length | М | | 9.2.3.6 | | — | |
| >>>TDD DPCH Offset | М | | 9.2.3.8A | | _ | |
| >>>DL Timeslot | | 0 to | | | - | |
| Information | | <maxnooft< td=""><td></td><td></td><td></td><td></td></maxnooft<> | | | | |
| Time o Olat | | S | 0.04.50 | | | |
| >>>> Time Slot | M | | 9.2.1.56 | | _ | |
| and Burst Type | IVI | | 9.2.3.4 | | _ | |
| >>>TFCI Presence | М | | 9.2.1.55 | | _ | |
| >>>>DL Code | | 0 to | | | _ | |
| Information | | <maxnoofd PCH></maxnoofd | | | | |
| >>>>DPCH ID | М | | 9.2.3.3 | | - | |
| >>>>TDD | Μ | | 9.2.3.8 | | _ | |
| Channelisation Code | | | | | | |
| >>DL DPCH to be | | 01 | | | YES | ignore |
| modifed | | | | | | - |
| >>>Repetition Period | 0 | | 9.2.3.7 | | - | |
| >>>Repetition Length | 0 | | 9.2.3.6 | | _ | |
| >>>TDD DPCH Offset | 0 | | 9.2.3.8A | | _ | |
| >>>DL Timeslot | | 0 to <maxnooft< td=""><td></td><td></td><td>-</td><td></td></maxnooft<> | | | - | |
| | | S | | | | |
| >>>Time Slot | М | _ | 9.2.1.56 | | _ | |
| >>>>Midamble Shift | 0 | | 9.2.3.4 | | _ | |
| and Burst Type | | | | | | |
| >>>>TFCI Presence | 0 | | 9.2.1.55 | | - | |
| >>>>DL Code Information | | 0 to <maxnoofd PCH></maxnoofd | | | _ | |
| >>>>DPCH ID | М | | 9.2.3.3 | | _ | |
| >>>>TDD Channelisation | М | | 9.2.3.8 | | - | |
| Code | | | | | | |
| >>DL DPCH to be deleted | | 0 <maxnoof DPCHs></maxnoof | | | GLOBAL | ignore |
| >>>DPCH ID | М | | <u>9.2.</u> 3.3 | | - | |
| >>>DPCH ID >DCH Information Response | | 0 <maxnoof DCHs></maxnoof | 9.2.3.3 | Only one DCH per set | _ GLOBAL | ignore |
| | | | | of co- ordinated DCHs shall be included. The IE group | | |
| | | | | snall be included only once per DCH per set of combined RLs. | | |
| >>DCH ID | M | | 9.2.1.16 | | — | |
| Sinding II) | I M | 1 | 19213 | 1 | — | 1 |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------------|----------|---|-----------------------------|--|-------------|-------------------------|
| >>Transport Layer Address | M | | 9.2.1.62 | | - | |
| >DSCH to be Added or Modified | | 0 <maxnoof DSCHs></maxnoof | | | GLOBAL | ignore |
| >>DSCH ID | Μ | | <u>9.2.1.26A</u> | | - | |
| >>Transport Format Management | Μ | | <u>9.2.3.13</u> | | - | |
| >>Priority Indicator | | 116 | | Provide Information for each priority class used | Ι | |
| >>>Scheduling Priority Indicator | М | | <u>9.2.1.51A</u> | DSCH priority indicator | _ | |
| >>>MAC-c/sh SDU Length | | 1 <maxnbm AC- c/shSDULen gth></maxnbm | | | _ | |
| >>>>MAC-c/sh SDU Length | Μ | | <u>9.2.1.34</u> | | - | |
| >>Binding ID | Μ | | <u>9.2.1.3</u> | | _ | |
| >>Transport Layer Address | М | | <u>9.2.1.62</u> | | _ | |
| >USCH to be Added or Modified | | 0 <maxnoof USCHs></maxnoof | | | GLOBAL | ignore |
| >>USCH ID | Μ | | 9.2.3.14 | | — | |
| >>Transport Format Management | Μ | | <u>9.2.3.13</u> | | _ | |
| >>Binding ID | М | | <u>9.2.1.3</u> | | _ | |
| >>Transport Layer Address | Μ | | <u>9.2.1.62</u> | | - | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Range bound | Explanation |
|------------------------|--|
| MaxnoofDCHs | Maximum number of DCHs for a UE. |
| MaxnoofDSCHs | Maximum number of DSCHs for one UE. |
| MaxnoofUSCHs | Maximum number of USCHs for one UE. |
| MaxNbMAC-c/shSDULength | Maximum number of different MAC-c/sh SDU lengths |
| MaxnoofCCTrCHs | Maximum number of CCTrCHs for a UE. |
| Maxnoof DPCHs | Maximum number of DPCHs in one CCTrCH. |
| MaxnoofTS | Maximum number of Timeslots for a UE |

9.1.13 RADIO LINK RECONFIGURATION COMMIT

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------------|--------------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | ignore |
| Transaction ID | М | | 9.2.1.59 | | - | |
| CFN | М | | 9.2.1.9 | | YES | ignore |
| Active Pattern Sequence Information | 0 | | <u>9.2.2.A</u> | | YES | ignore |

9.1.14 RADIO LINK RECONFIGURATION FAILURE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--------------------------------|----------|---|-----------------------------|--------------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | _ | • |
| CHOICE cause level | M | | | | YES | <u>Ignore</u> |
| >General | | | | | YES | Ignore |
| >>Cause | М | | 9.2.1.5 | | YES | Ignore |
| > RL specific | | | | | YES | Ignore |
| >>RLs Causing | | 0 <maxnoof< td=""><td></td><td></td><td>EACH</td><td>Ignore</td></maxnoof<> | | | EACH | Ignore |
| Reconfiguration Failure | | RLs> | | | | - |
| >>>RL ID | М | | 9.2.1.49 | | - | |
| >>>Cause | Μ | | 9.2.1.5 | | _ | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Range bound | Explanation | | | |
|-------------|---------------------------------|--|--|--|
| MaxnoofRLs | Maximum number of RLs for a UE. | | | |

9.1.15 RADIO LINK RECONFIGURATION CANCEL

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------------|--------------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | ignore |
| Transaction ID | Μ | | 9.2.1.59 | | _ | |

9.1.16 RADIO LINK RECONFIGURATION REQUEST

9.1.16.1 FDD Message

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-----------------------------------|--|--------------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | _ | |
| Allowed Queuing Time | 0 | | 9.2.1.2 | | YES | reject |
| UL DPCH Information | | 01 | | | YES | reject |
| >TFCS | 0 | | 9.2.1.63 | TFCS for the UL. | _ | |
| DL DPCH Information | | 01 | | | YES | reject |
| >TFCS | 0 | | 9.2.1.63 | TFCS for the DL. | _ | , |
| >TFCI Signalling Mode | 0 | | 9.2.2.46 | | _ | |
| >Limited Power Increase | 0 | | 9.2.1.33 | | - | |
| DCHs to Modify | | 0 <maxno ofDCHs></maxno | | | GLOBAL | reject |
| >UL FP Mode | М | | 9.2.1.67 | | _ | |
| >ToAWS | М | | 9.2.1.58 | | - | |
| >ToAWE | Μ | | 9.2.1.57 | | - | |
| >DCH Specific Info | | 1 <maxno ofDCHs></maxno | | | - | |
| >>DCH ID | Μ | | 9.2.1.16 | | - | |
| >>Transport Format Set | 0 | | 9.2.1.64 | For the UL. | _ | |
| >>Transport Format Set | 0 | | 9.2.1.64 | For the DL. | _ | |
| >Allocation/Retention Priority | 0 | | 9.2.1.1 | | - | |
| >>Frame Handling Priority | 0 | | 9.2.1.29 | | - | |
| >>DRAC Control | 0 | | 9.2.2.13 | | | |
| DCHs to add | | 0 <maxno ofDCHs></maxno | | | GLOBAL | reject |
| >Payload CRC Presence Indicator | Μ | | 9.2.1.42 | | — | |
| >UL FP Mode | М | | 9.2.1.67 | | _ | |
| >ToAWS | М | | 9.2.1.58 | | _ | |
| >ToAWE | М | | 9.2.1.57 | | - | |
| >DCH Specific Info | | 1 <maxno ofDCHs></maxno | | | - | |
| >>DCH ID | М | | 9.2.1.16 | | - | |
| >>TrCh Source Statistics Descriptor | М | | 9.2.1.65 | | _ | |
| >>Transport Format Set | М | ļ | 9.2.1.64 | For the UL. | _ | |
| >>Transport Format Set | M | | 9.2.1.64 | For the DL. | — | |
| >>BLER | М | | 9.2.1.3<u>9.2.</u> <u>1.4</u> | For the UL. | - | |
| >>BLER | М | | 9.2.1.3<u>9.2.</u> <u>1.4</u> | For the DL. | - | |
| >Allocation/Retention Priority | Μ | | 9.2.1.1 | | - | |
| >>Frame Handling Priority | М | | 9.2.1.29 | | - | |
| >>QE-Selector | М | | 9.2.1.46A | | | |
| >>DRAC Control | М | | 9.2.2.13 | | - | |
| DCHs to Delete | | 0 <maxno ofDCHs></maxno | | | GLOBAL | reject |
| >DCH ID | М | | 9.2.1.16 | | _ | |
| Transmission Gap Pattern Sequence Information | 0 | | <u>9.2.2.47A</u> | | YES | reject |

Error! No text of specified style in document.

| Range Bound | Explanation |
|-------------|----------------------------------|
| MaxnoofDCHs | Maximum number of DCHs for a UE. |

9.1.16.2 TDD Message

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|-----------------------------------|----------|---|----------------|--------------|-------------|-------------|
| | | | and | Description | | Criticality |
| | | | Reference | | | |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | - | |
| Allowed Queuing Time | 0 | | 9.2.1.2 | | YES | reject |
| UL CCTrCH Information to | | 0 <maxnoof< td=""><td></td><td></td><td>EACH</td><td>notify</td></maxnoof<> | | | EACH | notify |
| modify | | CCTrCHs> | | | | |
| >CCTrCH ID | М | | 9.2.3.2 | | - | |
| >TFCS | М | | 9.2.1.63 | | - | |
| UL CCTrCH Information to | | 0 <maxnoof< td=""><td></td><td></td><td>EACH</td><td>notify</td></maxnoof<> | | | EACH | notify |
| delete | | CCTrCHs> | | | | |
| >CCTrCHID | M | | <u>9.2.3.2</u> | | - | |
| DL CCITCH Information to | | 0 <maxnoof< td=""><td></td><td></td><td>EACH</td><td>notify</td></maxnoof<> | | | EACH | notify |
| | N4 | CCTICHS> | 0.0.0.0 | | | |
| | M | | 9.2.3.2 | | _ | |
| >IFCS DL CCTrCH Information to | IVI | 0 maxpoof | 9.2.1.03 | | | notify/ |
| delete | | CCTrCHes | | | EACH | notity |
| | М | 001101132 | 0232 | | _ | |
| DCHs to Modify | | 0 <maxnoof< td=""><td><u>3.2.3.2</u></td><td></td><td>GLOBAL</td><td>reject</td></maxnoof<> | <u>3.2.3.2</u> | | GLOBAL | reject |
| | | DCHs> | | | GLOBAL | Tejeci |
| SUIL EP Mode | М | 201132 | 92167 | | _ | |
| | M | | 92158 | | _ | |
| >ToAWE | M | | 92157 | | _ | |
| >DCH Specific Info | | 1 <maxnoof< td=""><td>0.2.1.07</td><td></td><td>_</td><td></td></maxnoof<> | 0.2.1.07 | | _ | |
| | | DCHs> | | | | |
| >>DCH ID | М | 201102 | 9.2.1.16 | | _ | |
| >>CCTrCH ID | 0 | | 9.2.3.2 | UL CCTrCH | _ | |
| | • | | 0.2.0.2 | in which the | | |
| | | | | DCH is | | |
| | | | | mapped. | | |
| >>CCTrCH ID | 0 | | 9.2.3.2 | DL CCTrCH | - | |
| | | | | in which the | | |
| | | | | DCH is | | |
| | | | | mapped | | |
| >>Transport Format Set | 0 | | 9.2.1.64 | For the UL. | - | |
| >>Transport Format Set | 0 | | 9.2.1.64 | For the DL. | - | |
| >>Allocation/Retention | 0 | | 9.2.1.1 | | - | |
| Priority | | | | | | |
| >>Frame Handling | 0 | | 9.2.1.29 | | - | |
| Priority | | <u> </u> | | | | |
| DCHs to Add | | 0 <maxnoof< td=""><td></td><td></td><td>GLOBAL</td><td>reject</td></maxnoof<> | | | GLOBAL | reject |
| Devide and CDC Dresseres | N.4 | DCHS> | 0.0.1.40 | | | |
| >Payload CRC Presence | IVI | | 9.2.1.42 | | _ | |
| | M | | 0.2.1.67 | | | |
| | M | | 9.2.1.07 | | _ | |
| >TOAVIS | M | | 9.2.1.30 | | _ | |
| | IVI | 1 maxpoof | 9.2.1.57 | | _ | |
| SDCH Specific Into | | DCHs> | | | _ | |
| | M | 201132 | 92116 | | _ | |
| STrCh Source Statistics | M | | 0.2.1.10 | | _ | |
| Descriptor | IVI | | 3.2.1.00 | | _ | |
| | М | | 9232 | | _ | |
| >>00110111B | | | 0.2.0.2 | in which the | | |
| | | | | DCH is | | |
| | | | | mapped. | | |
| >>CCTrCH ID | Μ | | 9.2.3.2 | DL CCTrCH | _ | |
| | | | | in which the | | |
| | | | | DCH is | | |
| | | | | mapped | | |
| >>Transport Format Set | M | | 9.2.1.64 | For the UL. | - | |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-----------------------------------|---------------|-------------------------------------|---------------------------------------|--------------------------|-------------|-------------------------|
| >>Transport Format Set | М | | 9.2.1.64 | For the DL. | _ | |
| >>BLER | M | | 9.2.1.3 <u>9.2.</u> 1.4 | For the UL. | - | |
| >>BLER | М | | 9.2.1.3 9.2. 1.4 | For the DL. | _ | |
| >Allocation/Retention Priority | М | | 9.2.1.1 | | _ | |
| >>Frame Handling Priority | М | | 9.2.1.29 | | - | |
| >>QE-Selector | C- CoorDCH | | 9.2.1.46A | | _ | |
| DCHs to Delete | | 0 <maxnoof DCHs></maxnoof | | | GLOBAL | reject |
| >DCH ID | М | | 9.2.1.16 | | _ | |

| Condition | Explanation |
|-----------|---|
| CoorDCH | This IE is present only this DCH is part of a set of coordinated DCHs |
| | (number of instances of DCH Specific Info is greater than 1) |

| Range Bound | Explanation |
|----------------|-------------------------------------|
| MaxnoofDCHs | Maximum number of DCHs for a UE. |
| MaxnoofCCTrCHs | Maximum number of CCTrCHs for a UE. |

9.1.17 RADIO LINK RECONFIGURATION RESPONSE

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|---|-------------------|--|------------------------|---|-------------|-------------|
| | | | and | Description | | Criticality |
| Message Type | M | | 9 2 1 40 | | VES | reject |
| Transaction ID | M | | 9.2.1.59 | | - | Teject |
| RL Information Response | | 0 <maxno ofRLs></maxno | | | EACH | ignore |
| >RL ID | М | | 9.2.1.49 | | _ | |
| >Maximum Uplink SIR | 0 | | Uplink SIR 9.2.1.69 | | - | |
| >Minimum Uplink SIR | 0 | | Uplink SIR 9.2.1.69 | | - | |
| >Maximum DL TX Power | 0 | | DL Power 9.2.2.10 | | - | |
| >Minimum DL TX Power | 0 | | DL Power 9.2.2.10 | | - | |
| >Secondary CCPCH Info | | 01 | | | _ | |
| >>FDD S-CCPCH Offset | М | | 9.2.2.15 | Corresponds | _ | |
| | | | | to: τ _{S-CCPCH,k} , see ref. [8] | | |
| >>DL Scrambling Code | М | | 9.2.2.8 | · · · · | _ | |
| >>FDD DL Channelisation Code Number | М | | 9.2.2.14 | | - | |
| >>TFCS | М | | 9.2.1.63 | For the DL. | _ | |
| >>Secondary CCPCH | М | | 9.2.2.38 | | — | |
| Slot Format | - | | 0.0.1.55 | | | |
| >>TFCI Presence | C - SlotFormat | | 9.2.1.55 | | - | |
| >>Multiplexing Position | M | | 9.2.2.26 | | _ | |
| >>STID Indicator | M | 4 | 9.2.2.44 | | _ | |
| >>FACH/PCH Information | | 1 <maxfac Hcount+1></maxfac | | | _ | |
| >>>TFS | | | 9.2.1.64 | For each FACH, and the PCH when multiplexed on the same Secondary CCPCH | _ | |
| >>Scheduling Information | | 1 | | | - | |
| >>>IB_SG_REP | М | | 9.2.2.21 | | _ | |
| >>>Segment Information | | 1 <maxibse G></maxibse | | | _ | |
| >>>IB_SG_POS | Μ | | 9.2.2.20 | | _ | |
| >DCH Information Response | | 0 <maxno ofDCHs></maxno | | Only one DCH per set of co- ordinated DCHs shall be included. The IE group shall be included only once per DCH per set of combined | GLOBAL | ignore |

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|---------------------------------------|-----------------------------|--------------------------|-------------|-------------------------|
| >>DCH ID | М | | 9.2.1.16 | | _ | |
| >>Binding ID | М | | 9.2.1.3 | | - | |
| >>Transport Layer Address | М | | 9.2.1.62 | | - | |
| >DL Code Information | | 0 <maxnoof DLCodes</maxnoof | | | GLOBAL | ignore |
| >>DL Scrambling Code | М | | <u>9.2.2.11</u> | | - | |
| >>FDD DL Channelisation Code Number | М | | <u>9.2.2.14</u> | | - | |
| >>Transmission Gap Pattern Sequence Information Response | M | | <u>9.2.2.47A</u> | | _ | |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|------------|---|
| SlotFormat | This IE is present only if the Secondary CCPCH Slot Format is |
| | equal to any of the value 8 to 17 |

| Range Bound | Explanation |
|---------------------|---|
| MaxnoofDCHs | Maximum number of DCHs for a UE. |
| MaxnoofRLs | Maximum number of RLs for a UE. |
| MaxnoofDLCodes | Maximum number of Downlink Channelisation Codes. |
| MaxSysinfoFACHCount | Maximum number of references to system information blocks on the FACH |
| MaxIBSEG | Maximum number of segments for one Information Block |

9.1.18 RADIO LINK FAILURE INDICATION

| IE/Group Name | Presence | Range | IE type and | Semantics description | Criticality | Assigned Criticality |
|-----------------------------------|----------|--|----------------|--|-------------|-------------------------|
| | | | reference | uccomption | | ontroanty |
| Message Type | М | | 9.2.1.40 | | YES | ignore |
| Transaction ID | М | | 9.2.1.59 | | - | |
| CHOICE Reporting Object | М | | | Object for which the Failure shall be reported. | YES | ignore |
| > <u>RL<mark>"RL"</mark></u> | | | | | YES | ignore |
| >>RL Information | M | 1 <maxnoofrl s></maxnoofrl | | | EACH | ignore |
| >>>RL ID | М | | 9.2.1.49 | | - | |
| >>>Cause | М | | 9.2.1.5 | | - | |
| > <u>RLS<mark>"RL Set"</mark></u> | | | | | YES | ignore |
| >>RL Set Information | | 1 <maxnoofrl Sets></maxnoofrl | | | EACH | ignore |
| >>>RL Set ID | М | | 9.2.2.35 | | - | |
| >>>Cause | М | | 9.2.1.5 | | - | |

| Range bound | Explanation |
|---------------|---------------------------------------|
| MaxnoofRLs | Maximum number of RLs for one UE. |
| MaxnoofRLSets | Maximum number of RL Sets for one UE. |

9.1.19 RADIO LINK RESTORE INDICATION

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-----------------------------------|----------|---|-----------------------------|---|-------------|-------------------------|
| Message Type | Μ | | 9.2.1.40 | | YES | ignore |
| Transaction ID | Μ | | 9.2.1.59 | | - | |
| CHOICE Reporting Object | М | | | Object for which the Restoration shall be reported. | YES | ignore |
| > <u>RL</u> "RL" | | | | | YES | ignore |
| >>RL Information | | 1 <maxno ofRLs></maxno | | | EACH | ignore |
| >>>RL ID | М | | 9.2.1.49 | | _ | |
| > <u>RLS<mark>"RL Set"</mark></u> | | | | | YES | ignore |
| >>RL Set Information | | 1 <maxno ofRLSet s></maxno | | | EACH | ignore |
| >>>RL Set ID | М | | 9.2.2.35 | | _ | |

| Range bound | Explanation |
|---------------|---------------------------------------|
| MaxnoofRLs | Maximum number of RLs for one UE. |
| MaxnoofRLSets | Maximum number of RL Sets for one UE. |

9.1.20 DL POWER CONTROL REQUEST [FDD]

| IE/Group Name | Presence | Range | IE type and | Semantics description | Criticality | Assigned Criticality |
|-----------------------|-------------|---|----------------|-----------------------|-------------|-------------------------|
| | | | reference | | | ····· , |
| Message Type | М | | 9.2.1.40 | | YES | ignore |
| Transaction ID | М | | 9.2.1.59 | | _ | |
| Power Adjustment Type | Μ | | 9.2.2.28 | | YES | ignore |
| DL Reference Power | C- | | DL Power | | YES | ignore |
| | Common | | 9.2.2.10 | | | |
| DL Reference Power | C- | 1 <maxnoo< td=""><td></td><td></td><td>GLOBAL</td><td>ignore</td></maxnoo<> | | | GLOBAL | ignore |
| Information | Individual | fRLs> | | | | |
| >RL ID | Μ | | 9.2.1.49 | | _ | |
| >DL Reference Power | Μ | | DL Power | | - | |
| | | | 9.2.2.10 | | | |
| Max Adjustment Step | C- | | 9.2.2.23 | | YES | ignore |
| | CommonO | | | | | - |
| | rIndividual | | | | | |
| Adjustment Period | C- | | 9.2.2.22 | | YES | ignore |
| | CommonO | | | | | |
| | rIndividual | | | | | |
| Adjustment Ratio | C- | | <u>9.2.2.C</u> | | YES | ignore |
| | CommonO | | | | | |
| | rIndividual | | | | | |

| Condition | Explanation |
|--------------------|---|
| Common | This IE is present only "Adjustment Type " equals to 'Common' |
| Individual | This IE is present only "Adjustment Type " equals to 'Individual' |
| CommonOrIndividual | This IE is present only "Adjustment Type " equals to 'Common' or |
| | 'Individual' |

| Range Bound | Explanation |
|-------------|-----------------------------------|
| MaxnoofRLs | Maximum number of RLs for one UE. |

9.1.21 PHYSICAL CHANNEL RECONFIGURATION REQUEST

9.1.21.1 FDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--|----------|---|-----------------------------|-----------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | _ | • |
| RL Information | | 1 | | | YES | reject |
| >RL ID | М | | 9.2.1.49 | | - | |
| >DL Code Information | | 1 <maxnoof DLCodes></maxnoof | | | GLOBAL | notify |
| >>DL Scrambling Code | М | | 9.2.2.11 | | - | |
| >>FDD DL Channelisation Code Number | М | | 9.2.2.14 | | Ι | |

| Range bound | Explanation |
|----------------|---------------------------------------|
| MaxnoofDLcodes | Maximum number of DL codes for one UE |

9.1.21.2 TDD Message

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|---------------------------|----------|---|-----------|-------------|-------------|-------------|
| | | | and | description | | Criticality |
| | | | reference | | | · |
| Message Type | M | | 9.2.1.40 | | YES | reject |
| I ransaction ID | IVI | 1 | 9.2.1.59 | | - | |
| | N.4 | 1 | 0.0.4.40 | | YES | reject |
| >RLID | IVI | 4 | 9.2.1.49 | | - | • • |
| SUL COTICH Information | | 1 | | | GLOBAL | reject |
| | | <inaxinooi< td=""><td></td><td></td><td></td><td></td></inaxinooi<> | | | | |
| | M | 001101182 | 0.2.2.2 | | | |
| | IVI | 1 | 9.2.3.2 | | | notify. |
| >>> Popotition Poriod | 0 | 1 | 0227 | | TES | notity |
| | 0 | | 9.2.3.1 | | | |
| | 0 | | 9.2.3.0 | | | |
| | 0 | 0 to | 9.2.3.0A | | | |
| Information | | <pre>c to cmaxnoOf</pre> | | | — | |
| internation | | TS | | | | |
| >>>Time Slot | М | 10 | 92156 | | | |
| >>>>Midamble Shift | 0 | | 9234 | | _ | |
| and Burst Type | U | | 0.2.0.1 | | | |
| >>>TFCI Presence | 0 | | 92155 | | | |
| >>>UL Code | Ŭ | 0 to | 0.2.11.00 | | | |
| Information | | <maxnoof< td=""><td></td><td></td><td></td><td></td></maxnoof<> | | | | |
| | | DPCH> | | | | |
| >>>>DPCH ID | М | | 9.2.3.3 | | _ | |
| >>>>TDD | М | | 9.2.3.8 | | - | |
| Channelisation | | | | | | |
| Code | | | | | | |
| >DL CCTrCH Information | | 1 <maxno< td=""><td></td><td></td><td>GLOBAL</td><td>reject</td></maxno<> | | | GLOBAL | reject |
| | | ofCCTrCH | | | | |
| | | S> | | | | |
| >>CCTrCH ID | М | | 9.2.3.2 | | — | |
| >>DL DPCH Information | | 1 | | | YES | notify |
| >>>Repetition Period | 0 | | 9.2.3.7 | | - | |
| >>>Repetition Length | 0 | | 9.2.3.6 | | - | |
| >>>TDD DPCH Offset | 0 | | 9.2.3.8A | | - | |
| >>>DL Timeslot | | 0 to | | | - | |
| Information | | <maxnoof< td=""><td></td><td></td><td></td><td></td></maxnoof<> | | | | |
| | | 15 | | | | |
| >>>> Time Slot | M | | 9.2.1.56 | | _ | |
| >>>>Midamble Shift | 0 | | 9.2.3.4 | | — | |
| and Burst Type | | | | | | |
| >>>IFCI Presence | 0 | 0.45 | 9.2.1.55 | | — | |
| >>>>DL Code | | 0 10 | | | - | |
| information | | <maxhout< td=""><td></td><td></td><td></td><td></td></maxhout<> | | | | |
| | M | | 0.2.2.2 | | | |
| | | | 9.2.3.3 | | _ | |
| >>>>IDD Channelisation | | | 9.2.3.8 | | _ | |
| Code | | | | | | |
| | 1 | 1 | 1 | 1 | | |

| Range bound | Explanation |
|----------------|---|
| MaxnoofDPCHs | Maximum number of DPCHs for one CCTrCH. |
| MaxnoofCCTrCHs | Maximum number of CCTrCHs for a UE. |
| MaxnoofTS | Maximum number of Timeslots for a UE |

9.1.22 PHYSICAL CHANNEL RECONFIGURATION COMMAND

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------------|-----------------------|-------------|-------------------------|
| Message Type | Μ | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | - | |
| CFN | Μ | | 9.2.1.9 | | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | rignore |

9.1.23 PHYSICAL CHANNEL RECONFIGURATION FAILURE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------------|-----------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | - | |
| Cause | М | | 9.2.1.5 | | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

9.1.24 UPLINK SIGNALLING TRANSFER INDICATION

9.1.24.1 FDD Message

| IE/Group Name | Presence | Range | IE type and | Semantics description | Criticality | Assigned Criticality |
|---------------------------|----------|--|-----------------|-----------------------|-------------|-------------------------|
| | | | reference | | | |
| Message Type | Μ | | 9.2.1.40 | | YES | ignore |
| Transaction ID | М | | 9.2.1.59 | | - | |
| UC-Id | Μ | | 9.2.1.71 | | YES | ignore |
| SAI | М | | 9.2.1.52 | | YES | ignore |
| Cell GAI | 0 | | <u>9.2.1.5A</u> | | YES | Ignore |
| C-RNTI | М | | 9.2.1.14 | | YES | ignore |
| S-RNTI | М | | 9.2.1.54 | | YES | ignore |
| D-RNTI | 0 | | 9.2.1.24 | | YES | ignore |
| STTD Support Indicator | М | | 9.2.2.45 | | YES | Ignore |
| Closed Loop Mode1 Support | М | | 9.2.2.2 | | YES | Ignore |
| Indicator | | | | | | - |
| Closed Loop Mode2 Support | М | | 9.2.2.3 | | YES | Ignore |
| Indicator | | | | | | |
| L3 Information | М | | 9.2.1.32 | | YES | ignore |
| CN PS Domain Identifier | 0 | | 9.2.1.12 | | YES | ignore |
| CN CS Domain Identifier | 0 | | 9.2.1.11 | | YES | ignore |
| URA ID | М | | 9.2.1.70 | | YES | ignore |
| Multiple URAs Indicator | Μ | | 9.2.1.41 | | YES | ignore |
| RNCs with Cells in the | | 0 | | | GLOBAL | ignore |
| Accessed URA | | <maxrn< td=""><td></td><td></td><td></td><td>-</td></maxrn<> | | | | - |
| | | CinURA- | | | | |
| | | 1> | | | | |
| >RNC-Id | Μ | | 9.2.1.50 | | - | |

| Range bound | Explanation |
|-------------|----------------------------------|
| MaxRNCinURA | Maximum number of RNC in one URA |

9.1.24.2 TDD Message

| IE/Group Name | Presence | Range | IE type and | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|---|-----------------|-----------------------|-------------|-------------------------|
| | | | reference | | | |
| Message Type | M | | 9.2.1.40 | | YES | ignore |
| Transaction ID | M | | 9.2.1.59 | | - | |
| UC-Id | М | | 9.2.1.71 | | YES | ignore |
| SAI | М | | 9.2.1.52 | | YES | ignore |
| Cell GAI | 0 | | <u>9.2.1.5A</u> | | YES | Ignore |
| C-RNTI | Μ | | 9.2.1.14 | | YES | ignore |
| S-RNTI | М | | 9.2.1.54 | | YES | ignore |
| D-RNTI | 0 | | 9.2.1.24 | | YES | ignore |
| L3 Information | М | | 9.2.1.32 | | YES | ignore |
| CN PS Domain Identifier | 0 | | 9.2.1.12 | | YES | ignore |
| CN CS Domain Identifier | 0 | | 9.2.1.11 | | YES | ignore |
| URA ID | М | | 9.2.1.70 | | YES | ignore |
| Multiple URAs Indicator | М | | 9.2.1.41 | | YES | ignore |
| RNCs with Cells in the | | 0 | | | GLOBAL | ignore |
| Accessed URA | | <maxrn< td=""><td></td><td></td><td></td><td></td></maxrn<> | | | | |
| | | CinURA- | | | | |
| | | 1> | | | | |
| >RNC-Id | М | | 9.2.1.50 | | _ | |

| Range bound | Explanation |
|-------------|----------------------------------|
| MaxRNCinURA | Maximum number of RNC in one URA |

9.1.25 DOWNLINK SIGNALLING TRANSFER REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---------------------------|----------|-------|-----------------------------|-----------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | ignore |
| Transaction ID | М | | 9.2.1.59 | | _ | |
| C-Id | М | | 9.2.1.6 | | YES | ignore |
| D-RNTI | М | | 9.2.1.24 | | YES | ignore |
| L3 Information | М | | 9.2.1.32 | | YES | ignore |
| D-RNTI Release Indication | М | | 9.2.1.25 | | YES | ignore |

9.1.26 RELOCATION COMMIT

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|------------------|----------|-------|-----------------------------|-----------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | ianore |
| Transaction ID | M | | 9.2.1.59 | | - | |
| D-RNTI | 0 | | 9.2.1.24 | | YES | ignore |
| RANAP Relocation | 0 | | 9.2.1.47 | | YES | ignore |
| Information | | | | | | - |

9.1.27 PAGING REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--------------------------------------|----------|-------|-----------------------------|-----------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | ignore |
| Transaction ID | Μ | | 9.2.1.59 | | - | |
| CHOICE paging area | M | | | | YES | ignore |
| > <mark>"</mark> URA <mark>"</mark> | | | | | YES | ignore |
| >>URA-ID | Μ | | 9.2.1.70 | | - | |
| > <mark>"</mark> Cell <mark>"</mark> | | | | | YES | ignore |
| >>C-Id | Μ | | 9.2.1.6 | | _ | |
| SRNC-Id | М | | RNC-Id | | YES | ignore |
| | | | 9.2.1.50 | | | - |
| S-RNTI | Μ | | 9.2.1.53 | | YES | ignore |
| IMSI | Μ | | 9.2.1.31 | | _ | |
| DRX Cycle Length Coefficient | Μ | | 9.2.1.26 | | YES | ignore |

9.1.28 DEDICATED MEASUREMENT INITIATION REQUEST

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|---|----------|---|-----------|-------------|-------------|-------------|
| | | | Reference | Description | | Criticality |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | Μ | | 9.2.1.59 | | - | |
| Measurement Id | Μ | | 9.2.1.37 | | YES | reject |
| Dedicated Measurement Object Type | М | | 9.2.1.17 | | YES | reject |
| CHOICE Dedicated Measurement Object Type | M | | | | YES | ignore |
| > <u>RL"RL"</u> | | | | | YES | reject |
| >>RL Information | | 1 <maxn oofRLs></maxn | | | EACH | reject |
| >>>RL-ID | Μ | | 9.2.1.49 | | | |
| >>>DPCH ID | 0 | | 9.2.3.3 | TDD only | | |
| > <u>RLS"RLS"</u> | | | | FDD only | YES | reject |
| >>RL Set Information | | 1 <maxn oofRLSet s></maxn | | | EACH | reject |
| >>>RL-Set-ID | Μ | | 9.2.2.35 | | - | |
| Dedicated Measurement Type | Μ | | 9.2.1.18 | | YES | reject |
| Measurement Filter Coefficient | 0 | | 9.2.1.36 | | YES | reject |
| Report Characteristics | Μ | | 9.2.1.48 | | YES | reject |

| Range bound | Explanation |
|---------------|---|
| MaxnoofRLs | Maximum number of individual RLs a measurement can be started on. |
| MaxnoofRLSets | Maximum number of individual RL Sets a measurement can be started |
| | on. |

9.1.29 DEDICATED MEASUREMENT INITIATION RESPONSE

| IE/Group Name | Presence | Range | IE Type and | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------------------------------------|----------------|--|-------------|-------------------------|
| | | | Reference | | | |
| Message Type | Μ | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | Are both transaction id and Measuremen t id needed ? | _ | |
| Measurement Id | Μ | | 9.2.1.37 | | YES | ignore |
| CHOICE Dedicated Measurement Object Type | 0 | | | Dedicated Measurement Object Type the measurement was initiated with | YES | ignore |
| > <u>RL or ALL RL<mark>"RL" or "ALL</mark> RL"</u> | | | | | YES | ignore |
| >>RL Information | | 1 <maxno ofRLs></maxno | | | EACH | ignore |
| >>>RL ID | Μ | | 9.2.1.49 | | _ | |
| >>>DPCH ID | 0 | | 9.2.3.3 | TDD only | _ | |
| >>>Dedicated Measurement Value | Μ | | 9.2.1.19 | | - | |
| > <u>RLS or ALL RLS<mark>"RLS" or</mark> "ALL RLS"</u> | | | | FDD only | YES | ignore |
| >>RL Set Information | | 1 <maxno ofRLSets></maxno | | | EACH | ignore |
| >>>RL Set ID | Μ | | 9.2.2.35 | | _ | |
| >>>Dedicated Measurement Value | Μ | | 9.2.1.19 | | - | |
| CFN | 0 | | 9.2.1.9 | Dedicated Measuremen t Time Reference | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

| Range bound | Explanation |
|---------------|---|
| MaxnoofRLs | Maximum number of individual RLs the measurement can be started on. |
| MaxnoofRLSets | Maximum number of individual RL Sets the measurement can be started |
| | on. |

9.1.30 DEDICATED MEASUREMENT INITIATION FAILURE

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------------|--------------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | - | |
| Measurement Id | М | | 9.2.1.37 | | YES | ignore |
| Cause | М | | 9.2.1.5 | | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

9.1.31 DEDICATED MEASUREMENT REPORT

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|---|-----------------|---|-------------|---------------|-------------|-------------|
| | | | and | Description | | Criticality |
| Message Type | М | | 92140 | | YES | ignore |
| Transaction ID | M | | 9.2.1.59 | | - | ignore |
| Measurement Id | M | | 92137 | | YES | ianore |
| CHOICE Dedicated | M | | 0.2.11.01 | Dedicated | YES | ignore |
| Measurement Object T | vpe | | | Measurement | . 20 | ignore |
| | | | | Object Type | | |
| | | | | the | | |
| | | | | measurement | | |
| | | | | was initiated | | |
| | | | | with | | |
| > <u>RL or ALL RL"RL" o RL"</u> | <u>r "ALL</u> | | | | YES | ignore |
| >>RL Information | | 1 <maxnoo< td=""><td></td><td></td><td>EACH</td><td>ignore</td></maxnoo<> | | | EACH | ignore |
| | | TRLS> | 0.0.1.40 | | | |
| | M | | 9.2.1.49 | | | |
| | O | | 9.2.3.3 | | | |
| Measurement | <u>IVI</u> | | | | = | |
| Availability Indicat | or | | | | | |
| >>> <u>"Measuren</u> | nent | | | | YES | ignore |
| Available <mark>"</mark> | | | | | . 20 | ignore |
| >>>>Dedicate | ed M | | 9.2.1.19 | | - | |
| Measurement | Value | | | | | |
| >>> <mark>"</mark> Measuren | nent | NULL | <u>NULL</u> | | YES | ignore |
| not Available" | | | | | | |
| > <u>RLS or ALL RLS</u> "+ or "ALL RLS" | «LS" | | | FDD only | YES | ignore |
| >>RL Set Informa | ation | 1 <maxnoo fRLSets></maxnoo | | | EACH | ignore |
| >>>RL Set ID | Μ | | 9.2.2.35 | | _ | |
| >>>CHOICE | M | | | | = | |
| Measurement | | | | | | |
| Availability Indicat | or | | | | | |
| >>>> <mark>-</mark> Measuren Available <mark>-</mark> | nent | | | | YES | ignore |
| >>>>Dedicate Measurement | ed M Value | | 9.2.1.19 | | _ | |
| >>>> <mark>"</mark> Measurem | nent | NULL | NULL | | | |
| CEN | 0 | | 9219 | Dedicated | YES | ignore |
| | Ĭ | | 0.2.1.0 | Measuremen | | ignore |
| | | | | t Time | | |
| | | | | Reference | | |

| Range bound | Explanation |
|---------------|---|
| MaxnoofRLs | Maximum number of individual RLs the measurement can be started |
| | on. |
| MaxnoofRLSets | Maximum number of individual RL Sets the measurement can be started on. |

9.1.32 DEDICATED MEASUREMENT TERMINATION REQUEST

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------------|--------------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | ignore |
| Transaction ID | Μ | | 9.2.1.59 | | - | |
| Measurement Id | Μ | | 9.2.1.37 | | YES | ignore |

9.1.33 DEDICATED MEASUREMENT FAILURE INDICATION

| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------------|--------------------------|-------------|-------------------------|
| Message Type | Μ | | 9.2.1.40 | | YES | ignore |
| Transaction ID | Μ | | 9.2.1.59 | | _ | |
| Measurement Id | М | | 9.2.1.37 | | YES | ignore |
| Cause | Μ | | 9.2.1.5 | | YES | ignore |

9.1.34 COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------------|--|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | ignore |
| Transaction ID | М | | 9.2.1.59 | | Ι | |
| D-RNTI | М | | 9.2.1.24 | | YES | ignore |
| C-RNTI | 0 | | 9.2.1.14 | Release of an individual C-RNTI. | YES | ignore |

9.1.35 COMMON TRANSPORT CHANNEL RESOURCES REQUEST

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---------------------------------------|----------|-------|-----------------------------|---|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | Reject |
| Transaction ID | М | | 9.2.1.59 | | Ι | |
| D-RNTI | М | | 9.2.1.25 | | YES | Reject |
| C-ID | 0 | | <u>9.2.1.6</u> | | YES | Reject |
| Transport Bearer Request Indicator | M | | 9.2.1.61 | Request a new transport bearer or to use an existing bearer for the user plane. | YES | Reject |
| Transport Bearer ID | M | | 9.2.1.60 | Indicates the lur transport bearer to be used for the user plane. | YES | Reject |

9.1.36 COMMON TRANSPORT CHANNEL RESOURCES RESPONSE

9.1.36.1 FDD Message

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--|----------|---|---|--|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | М | | 9.2.1.59 | | _ | • |
| S-RNTI | М | | 9.2.1.53 | | YES | ignore |
| C-RNTI | 0 | | 9.2.1.14 | | YES | ignore |
| FACH Info for UE Selected S-CCPCH | | 01 | | | YES | ignore |
| >Priority Indicator & Initial Window Size | | 116 | | Provide Information for each priority class used | GLOBAL | ignore |
| >>FACH Priority Indicator | Μ | | Scheduling Priority Indicator 9.2.1.28 | | _ | |
| >>MAC-c/sh SDU Length | | 1 <maxnoo fMACcshS DUlengthsp erPriority></maxnoo | | | GLOBAL | ignore |
| >>>MAC-c/sh SDU Length | М | | 9.2.1.34 | | _ | |
| >>FACH Initial Window Size | М | | 9.2.1.27 | | _ | |
| FACH Info for DRNC Selected S-CCPCH | | 01 | | | YES | ignore |
| >FDD S-CCPCH Offset | Μ | | 9.2.2.15 | Corresponds to: T _{S-CCPCH,k} | - | |
| >DL Scrambling Code | М | | 9.2.2.8 | , | _ | |
| >FDD DL Channelisation Code Number | М | | 9.2.2.14 | | _ | |
| >TFCS | М | | 9.2.1.63 | For the DL. | _ | |
| >Secondary CCPCH Slot Format | М | | 9.2.2.38 | | _ | |
| >Multiplexing Position | М | | 9.2.2.26 | | - | |
| >STTD Indicator | М | | 9.2.2.44 | | - | |
| >Priority Indicator & Initial Window Size | | 116 | | Provide Information for each priority class used | GLOBAL | ignore |
| >>FACH Priority Indicator | М | | Scheduling Priority Indicator 9.2.1.28 | | _ | |
| >>MAC-c/sh SDU Length | | 1 <maxnoo fMACcshS DUlengthsp erPriority></maxnoo | | | GLOBAL | ignore |
| >>>MAC-c/sh SDU Length | М | | 9.2.1.34 | | — | |
| >>FACH Initial Window Size | М | | 9.2.1.27 | | _ | |
| RACH Info for DRNC Selected PRACH | | 01 | | | YES | ignore |
| >Preamble Signatures | Μ | | <u>9.2.2.31A</u> | | _ | |
| >RACH Minimum | М | | 9.2.2.33A | | - | |
| Spreading Factor | | | | | | |
| >Scrambling Code | М | | <u>9.2.2.37A</u> | | - | |

| Number | | | | | |
|-------------------------|---|---|------------------|--------|--------|
| >Puncture Limit | М | | <u>9.2.1.46</u> | - | |
| >RACH Sub channel | М | | <u>9.2.2.34A</u> | - | |
| Numbers | | | | | |
| URA ID | 0 | | <u>9.2.1.70</u> | YES | ignore |
| Multiple URAs Indicator | 0 | | <u>9.2.1.41</u> | YES | ignore |
| RNCs with Cells in the | | 0 | | GLOBAL | ignore |
| Accessed URA | | <maxrnci< td=""><td></td><td></td><td>-</td></maxrnci<> | | | - |
| | | nURA-1> | | | |
| >RNC-Id | Μ | | <u>9.2.1.50</u> | - | |
| Transport Layer Address | 0 | | 9.2.1.62 | YES | ignore |
| Binding Identity | 0 | | 9.2.1.3 | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | YES | ignore |

| Range Bound | Explanation | | | | |
|------------------------------------|--|--|--|--|--|
| MaxnoofMACcshSDUlengthsperPriority | Maximum number of different MAC-c/sh SDU | | | | |
| | Lengths. | | | | |
| MaxRNCinURA | Maximum number of RNC in one URA. | | | | |

9.1.36.2 TDD Message

| IE | E/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|------------|------------------------|-----------|------------|------------|----------------|-------------|-------------|
| | | | | and | description | | Criticality |
| | | | | reference | | | · |
| Messag | je Type | M | | 9.2.1.40 | | YES | reject |
| | | IVI N4 | | 9.2.1.59 | | | ignoro |
| C-PNTI | | | | 9.2.1.55 | | | ignore |
| FACHI | nfo for LIE Selected | 0 | 1 | 3.2.1.14 | | VES | ignore |
| S-CCP | CHs | | 4 | | | 120 | ignore |
| >Prio | rity Indicator & | | 116 | | Provide | GLOBAL | ignore |
| Initial | Window Size | | | | Information | | 0 |
| | | | | | for each | | |
| | | | | | priority class | | |
| | | N/ | | Schoduling | used | | |
| >>r/ | ACH FIIUIILY | IVI | | Priority | | _ | |
| maid | | | | Indicator | | | |
| | | | | 9.2.1.28 | | | |
| >>M | AC-c/sh SDU | | 1< | | | GLOBAL | ignore |
| Len | gth | | MaxnoofM | | | | - |
| | | | ACcshSDU | | | | |
| | | | lengthsper | | | | |
| | | N/ | Priority> | 02124 | | | |
| Í | enath | 171 | | 3.2.1.34 | | _ | |
| >>F | ACH Initial Window | М | | 9.2.1.27 | | _ | |
| Size | | | | - | | | |
| FACH | Info for DRNC | | 01 | | | YES | ignore |
| Selec | ted group of S- | | | | | | |
| CCPC | Hs | | | 0.04.00 | | | |
| >TFC | 5 | IVI | | 9.2.1.63 | | _ | |
| | | | | | supporting | | |
| | | | | | several | | |
| | | | | | Secondary | | |
| | | | | | CCPCHs | | |
| >Seco | ondary CCPCH | М | 1 | | | GLOBAL | ignore |
| | | | CCPCHes | | | | |
| >>T | DD Channelisation | М | 00101132 | 9.2.2.8 | | _ | |
| Cod | e | | | | | | |
| >>Ti | ime Slot | М | | 9.2.1.56 | | _ | |
| >>M | lidamble shift and | М | | 9.2.3.4 | | _ | |
| Burs | st Type | | | | | | |
| >>1 Cha | DD Physical | IVI | | 9.2.3.9 | | — | |
| | enetition Period | M | | 9237 | | _ | |
| >>R | epetition Length | M | | 9.2.3.6 | | _ | |
| >>P | riority Indicator & | | 116 | 0.2.010 | Provide | GLOBAL | ignore |
| Initia | al Window Size | | | | Information | | 5 |
| | | | | | for each | | |
| | | | | | priority class | | |
| | | N.4 | | Soboduling | used | | |
| >> | PACE PHONEY dicator | IVI | | Priority | | _ | |
| | | | | Indicator | | | |
| L | | | | 9.2.1.28 | | | |
| >> | >MAC-c/sh SDU | | 1< | | | GLOBAL | ignore |
| Le | ength | | MaxnoofM | | | | |
| | | | ACcshSDU | | | | |
| | | | Priority | | | | |
| | >>>>MAC-c/sh SDU | М | | 9.2.1.34 | | _ | |
| ĺ | Length | | | 0 | | | |
| >> | >FACH Initial | Μ | | 9.2.1.27 | | _ | |
| Window Size | | | | | |
|-------------------------|---|---|-----------------|--------|--------|
| RACH Info for DRNC | | 01 | | YES | ignore |
| Selected PRACH | | | | | - |
| >TDD Channelisation | М | | <u>9.2.3.8</u> | - | |
| Code | | | | | |
| >Time Slot | М | | <u>9.2.1.56</u> | - | |
| >PRACH Midamble | 0 | | <u>9.2.3.5A</u> | - | |
| URA ID | 0 | | <u>9.2.1.70</u> | YES | ignore |
| Multiple URAs Indicator | 0 | | <u>9.2.1.41</u> | YES | ignore |
| RNCs with Cells in the | | 0 | | GLOBAL | ignore |
| Accessed URA | | <maxrnci< td=""><td></td><td></td><td>-</td></maxrnci<> | | | - |
| | | nURA-1> | | | |
| >RNC-Id | М | | <u>9.2.1.50</u> | - | |
| Transport Layer Address | 0 | | 9.2.1.62 | YES | ignore |
| Binding Identity | 0 | | 9.2.1.3 | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | YES | ignore |

| Range Bound | Explanation |
|------------------------------------|--|
| MaxnoofMSCcshSDUlengthsperPriority | Maximum number of different MAC-c/sh SDU |
| | Lengths. |
| MaxnoofSCCPCHs | TBD |
| MaxRNCinURA | Maximum number of RNC in one URA. |

9.1.37 COMMON TRANSPORT CHANNEL RESOURCES FAILURE

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------------|-----------------------|-------------|-------------------------|
| Message Type | Μ | | 9.2.1.40 | | YES | reject |
| Transaction ID | Μ | | 9.2.1.59 | | _ | |
| S-RNTI | Μ | | 9.2.1.53 | | YES | ignore |
| Cause | Μ | | 9.2.1.5 | | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | ignore |

9.1.38 COMPRESSED MODE COMMAND [FDD]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------------|-----------------------|-------------|-------------------------|
| Message Type | М | | 9.2.1.40 | | YES | ignore |
| Transaction ID | Μ | | 9.2.1.59 | | _ | |
| Active Pattern Sequence Information | Μ | | <u>9.2.2.A</u> | | YES | ignore |

9.1.39 ERROR INDICATION

| IE/Group Name | Presence | Range | IE Type | Semantics | Criticality | Assigned |
|-------------------------|-----------|-------|-----------|-------------|-------------|-------------|
| | | | and | Description | | Criticality |
| | | | Reference | | | |
| Message Type | М | | 9.2.1.40 | | YES | ignore |
| Transaction ID | М | | 9.2.1.59 | | _ | |
| Cause | C_ifalone | | 9.2.1.5 | | YES | ignore |
| Criticality Diagnostics | C_ifalone | | 9.2.1.13 | | YES | ignore |

| Condition | Explanation |
|-----------|--|
| C_ifalone | At least either of Cause IE or Criticality Diagnostics IE shall be |
| | present. |

e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

| | | CHANGE F | REQI | JEST | Please page fo | see embedded h r instructions on l | elp file how to | e at the bottom of th o fill in this form con | nis rectly. |
|---|--|---|-------------------------|-------------------------------|--|---------------------------------------|--------------------|---|----------------|
| | | 25.423 | CR | 223 | r2 | Current Ve | rsio | n: <mark>3.3.0</mark> | |
| GSM (AA.BB) or 3G | (AA.BBB) specifica | ation number \uparrow | | ↑ (| CR number a | as allocated by M | CC sı | ipport team | |
| For submission | to: RAN#10 meeting # here | for ap | pproval mation | X | | stra Non-stra | ateg ateg | iC (for SI iC use or | MG hly) |
| FO | orm: CR cover sheet, v | ersion 2 for 3GPP and SMG | The lates | t version of th | is form is availa | able from: htp://ftp.3g | pp.org | /Information/CR-Form | -v2.doc |
| Proposed changed (at least one should be r | ge affects: marked with an X) | (U)SIM | ME | | UTRAN | / Radio 🛛 🗙 | | Core Network | |
| Source: | R-WG3 | | | | | Dat | <u>e:</u> | 2000-10-18 | |
| Subject: | Clarification | <mark>i on rules for usin</mark> g | g the tab | oular forr | nat. | | | | |
| Work item: | | | | | | | | | |
| Category:F(only one categoryBshall be markedCwith an X)D | Correction Correspond Addition of Functional Editorial m | ds to a correction i feature modification of fea odification | in an ea ature | rlier rele | ase | Release | <u>):</u> | Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00 | x |
| <u>Reason for</u> change: | If this CR is and the "As | not approved the signed Criticality" | re might column | Criticalit t be conf s. | s from th y" colum fusion on | e "25.921 so n. what is mea | ant k | by the "Range | at ." |
| Clauses affected | d: <u>2,</u> 9.1. | <mark>1, 9.1.2.x (new), 9</mark> | <mark>.1.2.y (</mark> r | new) | | | | | |
| Other specs uffected:Other 3G core specifications Other GSM core specifications \rightarrow List of CRs: \rightarrow List of CRS: | | | | | | | | | |
| Other comments: | | | | | | | | | |

help.doc

<----- double-click here for help and instructions on how to create a CR.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- [1] 3GPP TS 23.003: "Numbering, addressing and identification".
- [2] 3GPP TS 25.413: "UTRAN Iu Interface RANAP Signalling".
- [3] 3GPP TS 25.426: "UTRAN Iur and Iub Interface Data Transport & Transport Layer Signalling for DCH Data Streams".
- [4] 3GPP TS 25.427: "UTRAN Iur and Iub Interface User Plane Protocols for DCH Data Streams".
- [5] (void)
- [6] 3GPP TS 25.104: "UTRA (BS) FDD; Radio transmission and Reception"
- [7] 3GPP TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception".
- [8] 3GPP TS 25.211: "Physical Channels and Mapping of Transport Channels onto Physical Channels (FDD)".
- [9] 3GPP TS 25.212: "Multiplexing and Channel Coding (FDD)
- [10] UMTS 25.214: "Physical Layer Procedures (FDD)".
- [11] 3GPP TS 25.215: "Physical Layer Measurements (FDD)".
- [12] 3GPP TS 25.221: "Physical Channels and Mapping of Transport Channels onto Physical Channels (TDD)".
- [13] 3GPP TS 25.223: "Spreading and Modulation (TDD)".
- [14] 3GPP TS 25.225: "Physical Layer Measurements (TDD)".
- [15] 3GPP TS 25.304: "UE Procedures in Idle Mode"
- [16] 3GPP TS 25.331: "RRC Protocol Specification".
- [17] 3GPP TS 25.402: "Synchronisation in UTRAN, Stage 2".
- [18] X.680 (12/94): "Information technology Abstract Syntax Notation One (ASN.1): Specification of basic notation".
- [19] ITU-T Recommendation X.681 (12/97): "Information technology Abstract Syntax Notation One (ASN.1): Information object specification".
- [20] ITU-T Recommendation X.691 (12/97): "Information technology ASN.1 encoding rules -Specification of Packed Encoding Rules (PER)".
- [21] 3GPP TS 25.213: " Spreading and modulation (FDD)"
- [22] 3GPP TS 25.224: " Physical Layer Procedures (TDD)"
- [23] 3GPP TS 25.133: "Requirements for support of Radio Resource management (FDD)".
- [24] 3GPP TS 25.123: "Requirements for support of Radio Resource management (TDD)".
- [25] 3GPP TS 23.003: "Universal Graphical Area Description (GAD)".

| [26] | 3GPP TS 25.302: "Services Provided by the Physical Layer". |
|------|--|
| [27] | 3GPP TS 25.213: "Spreading and modulation (FDD)". |
| [28] | 3GPP TR 25.921: "Guidelines and Principles for Protocol Description and Error Handling". |

9.1.1 General

1

This subclause defines the structure of the messages required for the RNSAP protocol in tabular format. The corresponding ASN.1 definition is presented in section 9.3. In case there is contradiction between the tabular format in section 9.1 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional IEs, where the tabular format shall take precedence.

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NOTE: The messages have been defined in accordance to the guidelines specified in UMTS 25.921[28].

9.1.2.x Range

I

The Range column indicates the allowed number of copies of repetitive IEs/IE groups.

9.1.2.y Assigned Criticality

This column provides the actual criticality information as defined in chapter 10.3.2, if applicable.

R3-003201 GPP use the format TP-99xxx SMG, use the format P-99-xxx

| Chicago, USA, 20-24 November 2000 | | | | | | 1at TP-99xxx nat P-99-xxx | | | | | |
|---|------------------------------|--|---|--|---|---|--|---|--|---|---------------------------|
| | | | СНА | NGE F | REQ | UES | Pleas page | e see embe for instructio | dded help f ons on how | ile at the botton to fill in this forr | າ of this n correctly. |
| | | | 2 | 5.423 | CR | 224 | r4 | Currei | nt Versio | on: <mark>3.3.0</mark> | |
| GSM (AA.BB) or | 3G (/ | AA.BBB) specific | ation numbe | er↑ | | ↑ | CR numbe | r as allocate | d by MCC s | support team | |
| For submissic | on to | D: RAN #1 | 0 | for ap For infor | pproval mation | X | his form is an | no | Strate n-strate | gic (i gic L | for SMG Ise only) |
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| Source: | | R-WG3 | | | | | | | Date: | 20.Nov. 2 | 2000 |
| Subject: | | Correction | <mark>is to Tra</mark> | Insport Fo | ormat S | Set | | | | | |
| Work item: | | | | | | | | | | | |
| Category: (only one category shall be marked with an X) Reason for change: | F A B C D | Correction Correspon Addition of Functional Editorial m The coding the tabular Consequer Without this the tabular Changes for Changes for Changes for Changes for Marked yel | ds to a c feature modifica odificatio of the T format a <u>nces if no</u> s change format a <u>or R3:</u> <u>DNAL ha</u> e syntac <u>or R4:</u> <u>om R3-0</u> low. | orrection i ation of fea on fransmissi and in the ot accepte a, the sign and errone s been rer tically corr 002971 are | in an ea ature on Time ASN.1 alling o cous in t rect. Th e merge | e Interva code. f the TTI he ASN from Tra e comm | ease | X Re option "d dynamic ormatSe edited a | lease: dynamic vs. stat t-ModeE ccording ges rela | Phase 2 Release 9 Release 9 Release 9 Release 0 " is correct ic) is ambig OP to make gly. | ed in guous in are |
| <u>Clauses affec</u> <u>Other specs</u> <u>affected:</u> | ted C C N E C | 9.2.1.6 Other 3G con Other GSM of specificat AS test specificat SSS test specific D&M specific | 54; 9.3.4 re specif core tions sification ecification cations | ications s ns | X | \rightarrow List of \rightarrow Lis | of CRs: of CRs: of CRs: of CRs: of CRs: of CRs: | 25.433 | : CR275 | ir3 | |
| <u>Other</u> comments: | A A | Added in rev Added in rev | <mark>1: Inden</mark> 2: Sema | tation corr intics desc | rected cription | "Value " | dynamic | r for TDI | D only" | | |



<----- double-click here for help and instructions on how to create a CR.

9.2.1.64 Transport Format Set

The Transport Format Set is defined as the set of Transport Formats associated to a Transport Channel, e.g. DCH.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---|----------------------------------|---|---|--------------------------------------|
| Transport Format Set | | | | |
| >Dynamic Transport Format Information | | 1 <maxtfcount></maxtfcount> | | |
| >Number of Transport blocks | М | | INTEGER (0512) | |
| >>Transport Block Size | C – Blocks | | INTEGER (05000) | Bits |
| > <u>></u> CHOICE mode >> <u>></u> TDD | M | | | |
| <u>>>>>Transmission</u> Time Interval Information | <u>C-</u> TTIdynamic | 1 <maxttlcount></maxttlcount> | | |
| >>> <mark>≥≥</mark> Transmission Time Interval | M C- TTIdynamic | <mark>1<maxttlcount></maxttlcount></mark> | Enumerated(10, 20, 40, 80,) | msec |
| >Semi-static Transport Format Information | | <u>1</u> | | |
| >>Transmission Time Interval | C- ∓TIsemistati e <u>M</u> | | ENUMERAT ED (10, 20, 40, 80, <u>dynamic</u> ,) | msec Value "dynamic" for TDD only |
| >>Type of Channel Coding | М | | ENUMERAT ED (No coding, Convolutiona I. Turbo) | |
| >>Coding Rate | C – Coding | | ENUMERAT ED (1/2, 1/3,) | |
| >>Rate Matching Attribute | М | | INTEGER (1maxRM) | |
| >>CRC size | М | | ENUMERAT ED (0, 8, 12, 16, 24,) | |
| >>CHOICE mode | M | | | |
| >>>TDD | | | | |
| >>>2 nd Interleaving Mode | M | | Enumerated (Frame related, Timeslot related,) | |

| Condition | Explanation |
|---------------|---|
| Blocks | This IE is only present if "Number of Transport Blocks" is greater |
| | than 0. |
| Coding | This IE is only present if IE "Type of channel coding" is |
| | "Convolutional" or "Turbo" |
| TTIdynamic | This IE is mandatory if the "Transmission Time Interval" of the |
| | "Semi-static Transport Format Information" is "dynamic" not defined |
| | as semistatic parameter. Otherwise it is absent. |
| TTIsemistatic | This IE is mandatory if not defined as dynamic parameter. |
| | Otherwise it is absent. |

| Range bound | Explanation |
|-------------|--|
| MaxTFcount | The maximum number of different transport formats that can be |
| | included in the Transport format set for one transport channel. |
| MaxRM | The maximum number that could be set as rate matching attribute |
| | for a transport channel. |
| MaxTTIcount | The amount of different TTI that are possible for that transport |
| | format is. |

9.3.4 Information Element Definitions

```
TransmissionTimeIntervalDynamic ::= ENUMERATED {
    msec-10,
   msec-20,
   msec-40,
    msec-80,
TransmissionTimeIntervalSemiStatic ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80,
    dynamic,
    . . .
}
TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive
}
TransportBearerID
                        ::= INTEGER (0..4095)
TransportBearerRequestIndicator
                                    ::= ENUMERATED {
    bearer-requested,
    bearer-not-requested
}
TransportBlockSize
                            ::= INTEGER (0..5000)
-- Unit is bits
TransportFormatCombination-Beta ::= CHOICE {
    signalledGainFactors
                          SEQUENCE {
        betaC
                                BetaCD,
        betaD
                                BetaCD,
        refTFCNumber
                                RefTFCNumber
                                                OPTIONAL
    },
    refTFCNumber
                            RefTFCNumber
}
TFCS ::= SEQUENCE {
```

```
CHOICE {
    tFCSvalues
        no-Split-in-TFCI
                                    TFCS-TFCSList,
        split-in-TFCI
                                     SEQUENCE {
            transportFormatCombination-DCH
                                                 TFCS-DCHList,
            signallingMethod
                                                 CHOICE {
                tFCI-Range
                                                 TFCS-MapingOnDSCHList,
                explicit
                                                     TFCS-DSCHList
        }
   },
    iE-Extensions
                        ProtocolExtensionContainer { { TFCS-ExtIEs} }
                                                                             OPTIONAL,
    . . .
TFCS-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        CTFC
                            TFCS-CTFC,
        tFC-Beta
                        TransportFormatCombination-Beta
                                                             OPTIONAL,
                            ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs} }
        iE-Extensions
                                                                                          OPTIONAL,
    . . .
}
TFCS-TFCSList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
TFCS-CTFC ::= INTEGER (0..maxCTFC)
TFCS-DCHList ::= SEQUENCE (SIZE (1..maxTFCI1Combs)) OF
    SEQUENCE {
                            TFCS-CTFC,
        CTFC
                            ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs } }
        iE-Extensions
                                                                                          OPTIONAL,
    . . .
}
TFCS-DCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
TFCS-MapingOnDSCHList ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
    SEQUENCE {
        maxTFCI-field2-Value
                                    TFCS-MaxTFCI-field2-Value,
        cTFC-DSCH
                                TFCS-CTFC,
                                     ProtocolExtensionContainer { { TFCS-MapingOnDSCHList-ExtIEs } }
        iE-Extensions
                                                                                                          OPTIONAL,
    . . .
}
```

```
TFCS-MapingOnDSCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxTFCI2Combs-1)
TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF
    SEOUENCE {
       cTFC-DSCH
                                TFCS-CTFC,
                                    ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs} }
        iE-Extensions
                                                                                                  OPTIONAL,
    . . .
}
TFCS-DSCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
TransportFormatSet ::= SEQUENCE {
    dynamicParts
                            TransportFormatSet-DynamicPartList,
    semi-staticPart
                            TransportFormatSet-Semi-staticPart,
    iE-Extensions
                            ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    . . .
}
TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
}
TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEOUENCE {
        nrOfTransportBlocks
                                NrOfTransportBlocks,
                                TransportBlockSize
                                                         OPTIONAL
        transportBlockSize
        -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
                            TransportFormatSet-ModeDP,
        mode
                                ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-ExtIEs } } OPTIONAL,
        iE-Extensions
        . . .
TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
TransportFormatSet-ModeDP ::= CHOICE {
                        TDD-TransportFormatSet-ModeDPTransmissionTimeIntervalList,
    tdd
    -- This IE is mandatory if the "Transmission Time Interval" of the "Semi-static Transport Format Information" is "dynamic". Otherwise it is
absent.This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
    notApplicable
                        NULL,
    . . .
```

TDD-TransportFormatSet-ModeDP ::= SEQUENCE {

```
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```

```
transmissionTimeIntervalInformation TransmissionTimeIntervalInformation OPTIONAL,
    -- This IE is mandatory if the "Transmission Time Interval" of the "Semi-static Transport Format Information" is "dynamic". Otherwise it is absent.
                                            ProtocolExtensionContainer { { TDD-TransportFormatSet-ModeDP-ExtIEs } } OPTIONAL,
    iE-Extensions
TDD-TransportFormatSet-ModeDP-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  . . .
TransmissionTimeInterval InformationList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
    SEQUENCE {
        transmissionTimeInterval
                                    TransmissionTimeIntervalDynamic,
        iE-Extensions
                                    ProtocolExtensionContainer { {TransmissionTimeIntervalInformationList } } OPTIONAL,
        . . .
TransmissionTimeIntervalInformationList - ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    . . .
Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in 25.215/25.225
Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)
TransportFormatManagement ::= ENUMERATED {
    cell-based,
    ue-based,
    . . .
TransportFormatSet-Semi-staticPart ::= SEQUENCE {
                            TransmissionTimeIntervalSemiStatic,
    transmissionTime
                            ChannelCodingType,
    channelCoding
    codingRate
                        CodingRate
                                                OPTIONAL
    -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
    rateMatcingAttribute
                                RateMatchingAttribute,
                        CRC-Size,
    cRC-Size
    mode
                        TransportFormatSet-ModeSSP,
                            ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs} } OPTIONAL,
    iE-Extensions
    . . .
TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
TransportFormatSet-ModeSSP ::= CHOICE
    tdd
                    SecondInterleavingMode,
    notApplicable
                            NULL,
```

• • •

}

TSG-RAN Working Group 3 Meeting #16 Windsor, UK, 16th-20th October 2000

| CHANGE REQUEST Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. | | | | | | | |
|--|---|---|--|--|--|--|--|
| 25.423 | CR 226r1 | Current Versio | on: <mark>3.3.0</mark> | | | | |
| GSM (AA.BB) or 3G (AA.BBB) specification number ↑ ↑ CR number as allocated by MCC support team | | | | | | | |
| <mark>SG RAN #10</mark> for ap ^{∉ here} for infor ↑ | pproval X mation | strateç non-strateç | giC (for SMG giC use only) | | | | |
| Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc | | | | | | | |
| th an X) | | | | | | | |
| G3 | | Date: | October 2000 | | | | |
| Subject: Update of Physical Channel Reconfiguration procedure text, addressing optional IE's. | | | | | | | |
| | | | | | | | |
| ection esponds to a correction i tion of feature ctional modification of fea orial modification edure Text needed upda given in PHYSICAL CHAN to has been amended in sage. | n an earlier release ature ting to ensure hand NNEL RECONFIGU PHYSICAL CHANI | e X Release: dling of TDD UL and I JRATION REQUEST n | Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00 X DL DPCH optional nessage. | | | | |
| out this CR, the specifica | tion will be unclear | r and incomplete. | | | | | |
| 8.3.8.2; 9.1.22. | | | | | | | |
| 3G core specifications GSM core ecifications at specifications est specifications specifications | $ \begin{array}{c} \rightarrow & \text{List of C} \\ \rightarrow & \text{List of C} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \rightarrow & \text{List of C} \\ \rightarrow & \text{List of C} \\ \end{array} \\ \begin{array}{c} \rightarrow & \text{List of C} \\ \end{array} \\ \end{array} $ | CRs: CRs: CRs: CRs: CRs: CRs: | | | | | |
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Other comments: e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

8.3.8 Physical Channel Reconfiguration

8.3.8.1 General

The Physical Channel Reconfiguration procedure is used by the DRNC to request to SRNC the reconfiguration of one of its physical channels.

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

The Physical Channel Reconfiguration procedure shall not be initiated if a Prepared Reconfiguration exists as defined in subclause 3.1, or if a Synchronised Radio Link Reconfiguration procedure, Unsynchronised Radio Link Reconfiguration procedure or Radio Link Deletion procedure is ongoing.

8.3.8.2 Successful Operation



Figure 1: Physical Channel Reconfiguration procedure, Successful Operation

When the DRNC detects the need to modify one of its physical channels, it shall send a PHYSICAL CHANNEL RECONFIGURATION REQUEST to the SRNC.

The message contains the new value of the physical channel parameter(s) that shall be reconfigured and in which radio link.

Upon reception of the PHYSICAL CHANNEL RECONFIGURATION REQUEST, the SRNC shall decide an appropriate execution time for the change.

[TDD – The SRNC shall apply the new values for any of *TDD Channelisation Code* IE, *Burst Type* IE, *Midamble shift* IE, *Time Slot* IE, *TDD Physical Channel Offset* IE, *Repetition Period* IE, *Repetition Length* IE, or *TFCI presence* IE included in the *UL DPCH Information* IE given in the PHYSICAL CHANNEL RECONFIGURATION REQUEST message, otherwise the old values specified for this DPCH shall still apply.]

[TDD – The SRNC shall apply the new values for any of *TDD Channelisation Code* IE, *Burst Type* IE, *Midamble shift* IE, *Time Slot* IE, *TDD Physical Channel Offset* IE, *Repetition Period* IE, *Repetition Length* IE, or *TFCI presence* IE included in the *DL DPCH Information* IE given in the PHYSICAL CHANNEL RECONFIGURATION REQUEST message, otherwise the old values specified for this DPCH shall still apply.]

The SRNC shall respond with a PHYSICAL CHANNEL RECONFIGURATION COMMAND message to the DRNC that includes the *CFN* IE indicating the execution time.

At the CFN, the DRNS shall switch to the new configuration that has been requested, and release the resources related to the old physical channel configuration.

9.1.22 PHYSICAL CHANNEL RECONFIGURATION COMMAND

| IE/Group Name | Presence | Range | IE type | Semantics | Criticality | Assigned |
|-------------------------|----------|-------|-----------|-------------|-------------|-------------|
| | | | and | description | | Criticality |
| | | | reference | | | |
| Message Type | М | | 9.2.1.40 | | YES | reject |
| Transaction ID | Μ | | 9.2.1.59 | | _ | |
| CFN | Μ | | 9.2.1.9 | | YES | ignore |
| Criticality Diagnostics | 0 | | 9.2.1.13 | | YES | rignore + |