

**TSG-RAN Meeting #11
Palm Springs, CA, U.S.A., 13-16 March 2001**

RP-010160

Title: Agreed CRs to WI "RANimp-RRMopt"

Source: TSG-RAN WG3

Agenda item: 5.3.3

Tdoc_Num	Specification	CR_Num	Revision_Num	CR_Subject	CR_Category	WG_Status	Cur_Ver_Num	New_Ver_Num	Workitem
R3-011057	25.420	012	2	Introduction of SCCP Handling for Common Measurements on lur	B	agreed	3.2.0	4.0.0	RANimp-RRMopt
R3-010956	25.427	045	1	DPC Rate Reduction in Soft Handover	B	agreed	3.5.0	4.0.0	RANimp-RRMopt
R3-011013	25.423	320	2	DPC Rate Reduction in Soft Handover	B	agreed	3.4.0	4.0.0	RANimp-RRMopt
R3-011058	25.423	323	2	Introduction of the Common Measurement Procedures in RNSAP	B	agreed	3.4.0	4.0.0	RANimp-RRMopt
R3-011063	25.423	339	1	Introduction of Rate Control on DCHs	B	agreed	3.4.0	4.0.0	RANimp-RRMopt
R3-011014	25.433	373	2	DPC Rate Reduction in Soft Handover	B	agreed	3.4.1	4.0.0	RANimp-RRMopt
R3-011015	25.433	387	1	Limited Power Increase Range	B	agreed	3.4.1	4.0.0	RANimp-RRMopt

CR-Form-v3
CHANGE REQUEST
⌘ 25.420 CR 12 ⌘ rev 2 ⌘ Current version: 3.2.0 ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Introduction of SCCP Handling for Common Measurements on lur		
Source:	⌘ <u>R-WG3</u>		
Work item code:	⌘ RANimp-RRMopt	Date:	⌘ 23/2/01
Category:	⌘ B	Release:	⌘ R4
	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)		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)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		

Reason for change:	⌘ The introduction of common measurements on lur requires an extension to the SCCP handling specification, as it uses connections that are not related to a user context.
Summary of change:	⌘ Details of the connection establishment and release procedures are added to cover this case. Rev 1 – new figure 1a is corrected to align with procedure text (mandatory inclusion of measurement request message). Also correction to cover sheet. <u>Backwards Compatibility: This change is backwards compatible.</u>
Consequences if not approved:	⌘ It will not be possible to introduce common measurements on lur.

Clauses affected:	⌘ 4.5.1.1, 4.5.1.2, 4.5.1.3A (new), 4.5.1.4, 4.5.1.5		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘ If 25.420 CR14 (for UP WI) is approved by RAN, then this CR should be withdrawn (as CR14 introduces similar changes, but with some additions).		

How to create CRs using this form:

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

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

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.5 Iur Interface Characteristics

4.5.1 Uses of SCCP

4.5.1.1 General

The SCCP is used to support signalling messages between two RNCs. One user function of the SCCP, called Radio Network Subsystem Application Part (RNSAP), is defined. The RNSAP uses one signalling connection per DRNC and UE where a UE is having one or more active radio links for the transfer of layer 3 messages. RNSAP also uses one signalling connection per RNC providing common measurements to a particular RNC (i.e. if measurements are transferred in both directions between a pair of RNCs, then two SCCP connections are used).

Both connectionless and connection-oriented procedures are used to support the RNSAP. TS 25.423 explains whether connection oriented or connectionless services should be used for a layer 3 procedure.

The following subclauses describe the use of SCCP connections for RNSAP transactions. Subclause 2.2 describes the connection establishment procedures. Subclause 2.3 describes the connection release procedures. Subclause 2.4 describes abnormal conditions.

4.5.1.2 SCCP connection establishment

A new SCCP connection is established when information related to the communication between a UE and the network has to be exchanged between two RNCs, and no SCCP connection exists between the two RNCs involved, for the concerned UE.

In this case, the ~~An~~ SCCP connection is ~~always~~ established by the SRNC.

A new SCCP connection is established when a request for common measurements is made towards a particular RNC and no SCCP connection for common measurements has been established from the RNC requesting the measurements towards the one providing the measurements.

In this case, the SCCP connection is established by the RNC requesting the measurements.

~~The above case is the only case currently identified for SCCP connection establishment. Other cases may emerge in the future.~~

4.5.1.3 Establishment procedure initiated from the SRNC

The SCCP signalling connection establishment is initiated, by the SRNC, when the SRNC needs to request dedicated resources, i.e. a DCH, from a DRNC.

Initiation

- The SRNC sends the SCCP: CR message to the DRNC. The RADIO LINK SETUP REQUEST message may be included in the user data field of an SCCP Connection Request message.

Termination

1. Successful outcome:
 - The SCCP Connection Confirm message, which may optionally contain a connection oriented RNSAP message in the user data field, is returned to the SRNC.
2. Unsuccessful outcome:
 - If the SCCP signalling connection establishment fails, an SCCP Connection Refusal message will be sent back to the SRNC. This message may optionally contain a connection oriented RNSAP message.

For more information on how the RNSAP procedure Radio Link Setup is handled, please see the procedure Radio Link Setup in TS 25.423 [5].

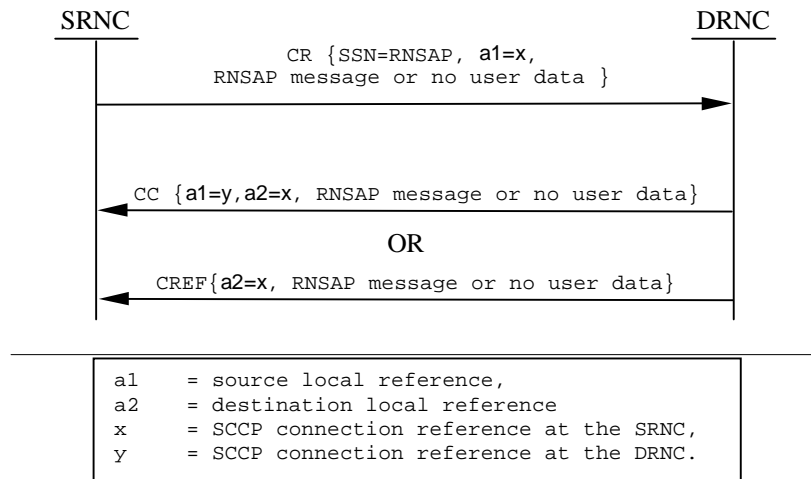


Figure 1: Setting-up of SCCP Signalling Connection

4.5.1.3A Establishment procedure initiated from an RNC requesting common measurements

The SCCP signalling connection establishment is initiated, by an RNC, when the RNC needs to request common measurements from another RNC and there is no signalling bearer existing for this purpose. For the description below, the RNC requesting the measurements is called RNC1 and the RNC being requested to provide the measurements is called RNC2.

Initiation

- The RNC1 sends the SCCP: CR message to the RNC2. The COMMON MEASUREMENT INITIATION REQUEST message shall be included in the user data field of the SCCP Connection Request message.

Termination

1. Successful outcome:

- The SCCP Connection Confirm message, which may optionally contain a connection oriented RNSAP message in the user data field, is returned to the RNC1.

2. Unsuccessful outcome:

- If the SCCP signalling connection establishment fails, an SCCP Connection Refusal message will be sent back to the RNC1. This message may optionally contain a connection oriented RNSAP message.

For more information on how the RNSAP procedure Common Measurement Initiation is handled, please see the procedure Common Measurement Initiation in TS 25.423 [5].

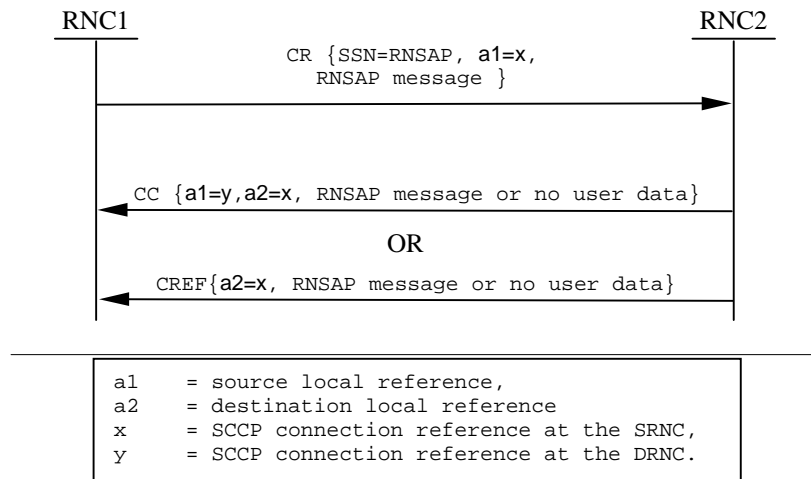


Figure 1a: Setting-up of SCCP Signalling Connection

4.5.1.4 SCCP connection release

An SCCP connection related to a specific UE is released when the SRNC realises that a given signalling connection is no longer required.

The SRNC sends an SCCP Released message.

An SCCP connection used for common measurements is released when the RNC1 (see 4.5.1.3A) realises that a given signalling connection is no longer required. The RNC1 sends an SCCP Released message.

4.5.1.5 General SCCP Abnormal Conditions

If a user-out-of-service information or signalling-point-inaccessible information is received by the RNSAP, no new attempt to establish SCCP connections towards the affected point code will be started until the corresponding user-in-service information or signalling-point-accessible information is received.

When a user-out-of-service information or signalling-point-inaccessible is received by an RNC, an optional timer may be started. When the timer expires, all the SCCP connections towards the affected point code will be released. When the user-in-service or signalling-point-accessible is received, the timer is stopped.

If for any reason an SCCP connection is released, the optional timer expires or a connection refusal is received while any of the RNSAP procedures are being performed or while a dedicated resource is still allocated, the following actions are taken:

At the SRNC:

- Any RNSAP procedure relating to that connection is abandoned.

At the DRNC:

- Any RNSAP procedure relating to that connection is abandoned;
- The DRNS resources (RL's) associated with the SCCP connection are released as soon as possible.

At an RNC which requested common measurements (RNC1):

- Any RNSAP procedure relating to that connection is abandoned.

At an RNC which is requested to provide common measurements (RNC2):

- Any RNSAP procedure relating to that connection is abandoned;
- The RNC2 shall terminate locally any common measurements related to that connection.

CHANGE REQUEST

⌘ **25.423** **CR 320** ⌘ rev **2** ⌘ Current version: **3.4.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ DPC Rate Reduction in Soft Handover		
Source:	⌘ R-WG3		
Work item code:	⌘ RANimp-RRMopt	Date:	⌘ February 2001
Category:	⌘ B	Release:	⌘ REL-4
	<p><i>Use <u>one</u> of the following categories:</i></p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>

Reason for change:	⌘ The WG1 and WG2 have specified procedures for DPC rate reduction in soft handover. This procedure is not supported by RAN3 specifications. The needed changes in the lub/lur specifications were agreed in RAN3#18 meeting: <ul style="list-style-type: none"> • Initialisation of the DPC mode in NBAP and RNSAP specifications • Change of the DPC mode in DCH FP in the Radio Interface Parameter Update frame
Summary of change:	⌘ <p>R1: When establishing a new Radio Link with the Radio Link Set Up Request message or with the Radio Link Addition Request message, the SRNC sends a new IE 'DPC Mode'</p> <p>(1) to request the flexibility to change the DPC mode during the life time of the RL and</p> <p>(2) to set the initial DPC mode value.</p> <p>If the DRNC does not support the User Plane DPC mode change procedure, it shall reject the request with a new cause code 'DPC Mode change not supported'.</p> <p>R2: IE-id added, IE name updated.</p>
Consequences if not approved:	⌘ The Work Task 'DPC Rate Reduction in soft handover' in the Work Item ' RRM optimisations for lur and lub' cannot be closed.
	This change is backward compatible.

Clauses affected: ⌘ 8.3.1.2, 8.3.1.3, 8.3.2.2, 8.3.2.3, 9.1.3.1, 9.1.6.1, 9.2.2.12A, 9.3.3, 9.3.4, 9.3.6

Other specs	⌘	<input checked="" type="checkbox"/>	Other core specifications	⌘	R3-010956, CR045 (25.427) R3-011014, CR373 (25.433)
affected:		<input type="checkbox"/>	Test specifications		
		<input type="checkbox"/>	O&M Specifications		
Other comments:	⌘				

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

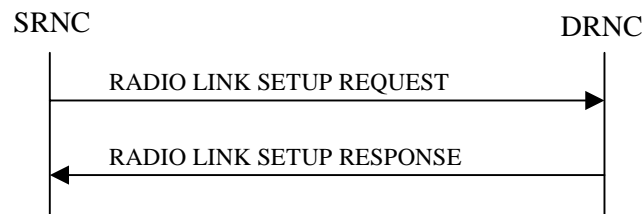


Figure 5: Radio Link Setup procedure: Successful Operation

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

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 $n \cdot "01" + "1"$ 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 $CFN \bmod 4 = 0$. 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 the time corresponding to the value of the *Allowed Queuing Time* IE before starting to execute the request.

[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 constraints 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 Time Slot ISCP Info* 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] subclause 5.2.1 for the inner loop DL power control.]

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

[FDD – 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 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).]

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

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

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

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

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

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

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.]

[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 subclause 8.3.9.]

[TDD – The DRNS shall use the list of RB Identities in the *RB Info* IE in the *USCH information* IE to map each *RB Identity* IE to the corresponding USCH.]

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.

If the *DSCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNC shall 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 *DSCH Scheduling Priority* IE and *MAC-c/sh SDU Length* 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* IE 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 and USCH of the RL.]

In case of a set of coordinated DCHs requiring a new transport bearer on Iur the *Binding ID* 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] and the node identification of the CN nodes connected to the RNC controlling the neighbouring cell if the UMTS 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 UMTS neighbouring cell.

If a UMTS 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 UMTS 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 the *Neighbouring FDD Cell Information* IE].

If there are GSM neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include the *Neighbouring GSM Cell Information* IE in the RADIO LINK SETUP RESPONSE message for each of the GSM

neighbouring cells. If available the DRNC shall include the *GSM Output Power IE* in the *Neighbouring GSM Cell Information IE*.

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

[FDD - If the *D-RNTI IE* was included the RADIO LINK SETUP REQUEST message the DRNC shall include the *Primary Scrambling Code IE*, the *UL UARFCN IE*, the *DL UARFCN IE*, and the *Primary CPICH Power 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 Scrambling Code Information IE* in the RADIO LINK SETUP RESPONSE message indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

[FDD –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].

For each Radio Link the DRNC shall include the *URA ID IE* of the cell , the *Multiple URAs 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 in the *URA Information IE* in the RADIO LINK SETUP RESPONSE message.

8.3.1.3 Unsuccessful Operation

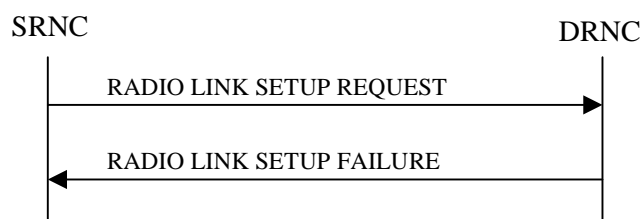


Figure 6: Radio Link Setup procedure: Unsuccessful Operation

In unsuccessful case (i.e. one or more RLs can not be 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.

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 Channel Type not Supported;
- DL Shared Channel Type not Supported;
- [TDD - UL Shared Channel Type not Supported];
- [FDD - UL Spreading Factor not Supported];
- [FDD - DL Spreading Factor not Supported];
- CM not Supported;-
- [FDD – DPC mode change not Supported].

Transport Layer Causes:

- Transport Resource Unavailable

Miscellaneous Causes:

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

8.3.1.4 Abnormal Conditions

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

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

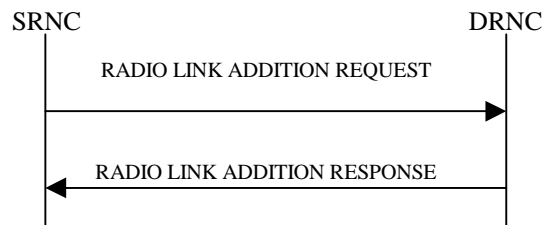


Figure 7: Radio Link Addition procedure: Successful Operation

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

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

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

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

[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* IE 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* IE 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, [TDD – and DSCH, 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 *DSCH Scheduling Priority* IE and *MAC-c/sh SDU Length* 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 UMTS neighbouring 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 UMTS neighbouring cell if the UMTS 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, *Cell Individual Offset* 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 Mode1 Support Indicator* IE, and *Closed Loop Mode2 Support Indicator* IE] of the UMTS neighbouring cell.

If there are GSM neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include the *Neighbouring GSM Cell Information* IE in the RADIO LINK ADDITION RESPONSE message for each of the GSM neighbouring cells. If available the DRNC shall include the *GSM Output Power* IE in the *Neighbouring GSM Cell Information* IE.

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 Scrambling Code Information IE* in the RADIO LINK ADDITION RESPONSE message to indicate the Scrambling code change method that it selects for each channelisation code]

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 ADDITION 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 for each of the previously existing and newly established RL Set(s) use the maximum value of the parameters N_OUTSYNC_IND and T_RLFAILURE, and the minimum value of the parameters N_INSYNC_IND, that are configured in the cells supporting the radio links of the RL Set].

For each Radio Link the DRNC shall include the *URA ID IE* of the cell, the *Multiple URAs 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 in the *URA Information IE* in the RADIO LINK ADDITION RESPONSE message.

8.3.2.3 Unsuccessful Operation

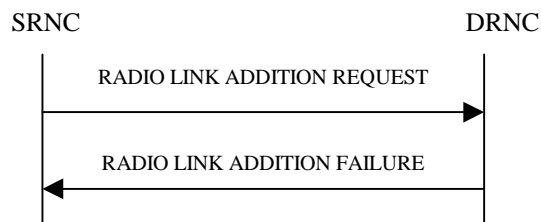


Figure 8: Radio Link Addition procedure: Unsuccessful Operation

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* 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 to be established in one cell that has the same UARCFN as 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".]

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 Elapsed;
- Number of DL Codes not Supported.
- [FDD – DPC mode change not Supported];

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

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

8.3.2.4 Abnormal Conditions

-

9.1.3 RADIO LINK SETUP REQUEST

9.1.3.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
SRNC-Id	M		RNC-Id 9.2.1.50		YES	reject
S-RNTI	M		9.2.1.53		YES	reject
D-RNTI	O		9.2.1.24		YES	reject
Allowed Queuing Time	O		9.2.1.2		YES	reject
UL DPCH Information		1			YES	reject
>UL Scrambling Code	M		9.2.2.53		–	
>Min UL Channelisation Code Length	M		9.2.2.25		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.24		–	
>Puncture Limit	M		9.2.1.46	For the UL.	–	
>TFCS	M		TFCS for the UL 9.2.1.63		–	
>UL DPCH Slot Format	M		9.2.2.52		–	
>Uplink SIR Target	O		Uplink SIR 9.2.1.69		–	
>Diversity mode	M		9.2.2.8		–	
>SSDT Cell Identity Length	O		9.2.2.41		–	
>S Field Length	O		9.2.2.36		–	
>DPC Mode	O		9.2.2.12A		YES	reject
DL DPCH Information		1			YES	reject
>TFCS	M		TFCS for the DL. 9.2.1.63		–	
>DL DPCH Slot Format	M		9.2.2.9		–	
>Number of DL Channelisation Codes	M		9.2.2.26A		–	
>TFCI Signalling Mode	M		9.2.2.46		–	
>TFCI Presence	C- SlotFormat		9.2.1.55		–	
>Multiplexing Position	M		9.2.2.26		–	
>Power Offset Information		1			–	
>>PO1	M		Power Offset 9.2.2.30	Power offset for the TFCI bits.	–	
>>PO2	M		Power Offset 9.2.2.30	Power offset for the TPC bits.	–	
>>PO3	M		Power Offset 9.2.2.30	Power offset for the pilot bits.	–	
>FDD TPC Downlink Step Size	M		9.2.2.16		–	
>Limited Power Increase	M		9.2.1.33		–	
>Inner Loop DL PC Status	M		9.2.2.21a		–	
DCH Information	M		DCH FDD Information 9.2.2.4A		YES	reject
DSCH Information	O		DSCH FDD Information 9.2.2.13A		YES	reject
RL Information		1...<max number of RLS>			EACH	notify
>RL ID	M		9.2.1.49		–	
>C-Id	M		9.2.1.6		–	

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
>First RLS Indicator	M		9.2.2.16A		-	
>Frame Offset	M		9.2.1.30		-	
>Chip Offset	M		9.2.2.1		-	
>Propagation Delay	O		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		9.2.2.32		-	
>SSDT Cell Identity	O		9.2.2.40		-	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.50		-	
Transmission Gap Pattern Sequence Information	O		9.2.2.47A		YES	reject
Active Pattern Sequence Information	O		9.2.2.A		YES	reject

Condition	Explanation
CodeLen	This IE is present only if <i>Min UL Channelisation Code length</i> IE equals to 4
SlotFormat	This IE is only present if the <i>DL DPCH Slot Format</i> IE 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 <i>RL Information</i> IE.
Diversity mode	This IE is present unless <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> IE is "none"
C_ifalone	Either <i>Initial DL TX Power</i> IE or <i>Primary CPICH Ec/No</i> IE shall be present.

Range bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.

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	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
Uplink SIR Target	M		Uplink SIR 9.2.1.69		YES	reject
RL Information		<i>1..<maxnoofRLs-1></i>			EACH	notify
>RL ID	M		9.2.1.49		–	
>C-Id	M		9.2.1.6		–	
>Frame Offset	M		9.2.1.30		–	
>Chip Offset	M		9.2.2.1		–	
>Diversity Control Field	M		9.2.2.6		–	
>Primary CPICH Ec/No	O		9.2.2.32		–	
>SSDT Cell Identity	O		9.2.2.40			
>Transmit Diversity Indicator	O		9.2.2.50		–	
Active Pattern Sequence Information	O		9.2.2A	Either all the already active Transmission Gap Sequence(s) are addressed (Transmission Gap Pattern sequence shall overlap with the existing one) or none of the transmission gap sequences is activated.	YES	reject
<u>DPC Mode</u>	<u>O</u>		<u>9.2.2.12A</u>		<u>YES</u>	<u>reject</u>

Range bound	Explanation
MaxnoofRLs	Maximum number of radio links for one UE.

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.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE Cause Group				
>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, 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 Temporarily not Available, Unspecified, Invalid CM Settings, Reconfiguration CFN not Elapsed, Number of DL Codes Not Supported, Dedicated Transport Channel Type not Supported, DL Shared Channel Type not Supported, UL Shared Channel Type not Supported, Common 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/Allocated, DPC Mode Change not Supported)	
>Transport Layer				
>>Transport Layer Cause	M		ENUMERATED (Transport Resource Unavailable, Unspecified, ...)	
>Protocol				
>>Protocol Cause			ENUMERATED (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),...)	
>Misc				
>>Miscellaneous Cause	M		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 Available	The value of the received <i>Diversity Control Field</i> IE was set to 'Must', but the DRNS cannot perform the requested combining
CM not Supported	The concerning cell(s) do not support Compressed Mode
Common Transport Channel Type not Supported	The concerning cell(s) do not support the RACH and/or FACH and/or CPCH Common Transport Channel Type
Dedicated Transport Channel Type not Supported	The concerning cell(s) do not support the Dedicated Transport Channel 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 Supported	The concerning cell(s) do not support the Downlink Shared Channel Type
<u>DPC Mode Change not Supported</u>	<u>The concerning cells do not support the DPC mode changes</u>
Invalid CM Settings	The concerning cell(s) consider the requested Compressed Mode settings invalid
Measurement not Supported For The Object	At least one of the concerning cell(s) does not support the requested measurement on the concerning object type
Measurement Temporarily not Available	The DRNS can temporarily not provide the requested measurement value
Number of DL Codes not Supported	The concerning cell(s) do not support the requested number of DL codes
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 Supported	The concerning cell(s) do not support the requested configuration i.e. power levels, Transport Formats, physical channel parameters,.....
Requested Tx Diversity mode not Supported	The concerning cell(s) do not support the requested transmit diversity mode
RL Already Activated/ Allocated	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 Destination Node B	The requested action cannot be performed due to lack of support of the 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 Use	The concerning UL scrambling code is already in use for another UE
UL SF not Supported	The concerning cell(s) do not support the requested UL SF
UL Shared Channel Type not Supported	The concerning cell(s) do not support the Uplink Shared Channel Type
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

9.2.2.12 Downlink Frame Type

Void

9.2.2.12A DPC Mode

The *DPC Mode* IE indicates the DPC mode to be applied [10].

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>DPC Mode</u>			ENUMERATED (Mode0, Mode1, ...)	<p>Mode0: The Node B shall estimate the UE transmitted TPC command and update the DL power in every slot</p> <p>Mode1: The Node B shall estimate the UE transmitted TPC command over three slots and shall update the DL power in every three slots</p>

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,
    AlphaValue,
    BLER,
    Block-STTD-Indicator,
    BindingID,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    ClosedLoopModel-SupportIndicator,
    ClosedLoopMode2-SupportIndicator,
    ClosedloopTimingadjustmentmode,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CNDomainType,
    Cause,
    CellParameterID,
    ChipOffset,
    CriticalityDiagnostics,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-FDD-Information,
    DCH-ID,
    DCH-InformationResponse,
    DCH-TDD-Information,
    DL-DPCH-SlotFormat,
```

DL-TimeslotISCP,
DL-Power,
DL-ScramblingCode,
DL-Timeslot-Information,
DL-TimeSlot-ISCP-Info,
DPC-Mode,
DPCH-ID,
DRACControl,
DRXCycleLengthCoefficient,
DedicatedMeasurementType,
DedicatedMeasurementValue,
DedicatedMeasurementValueInformation,
DiversityControlField,
DiversityMode,
DSCH-FDD-Information,
DSCH-FDD-InformationResponse,
DSCH-FlowControlInformation,
DSCH-FlowControlItem,
DSCH-TDD-Information,
DSCH-ID,
SchedulingPriorityIndicator,
FACH-FlowControlInformation,
FDD-DCHs-to-Modify,
FDD-DL-ChannelisationCodeNumber,
FDD-DL-CodeInformation,
FDD-S-CCPCH-Offset,
FDD-TPC-DownlinkStepSize,
FirstRLS-Indicator,
FNReportingIndicator,
FrameHandlingPriority,
FrameOffset,
GA-AccessPointPosition,
GA-Cell,
IMSI,
InnerLoopDLPCStatus,
L3-Information,
LimitedPowerIncrease,
MaximumAllowedULTxPower,
MaxNrDLPhysicalchannels,
MaxNrOFUL-DPCHs,
MaxNrTimeslots,
MaxNrULPhysicalchannels,
MeasurementFilterCoefficient,
MeasurementID,
MidambleShiftAndBurstType,
MinimumSpreadingFactor,
MinUL-ChannelisationCodeLength,
MultiplexingPosition,
Neighbouring-GSM-CellInformation,
Neighbouring-UMTS-CellInformation,
NrOfDLchannelisationcodes,
PagingCause,
PagingRecordType,

PDSCHCodeMapping,
PayloadCRC-PresenceIndicator,
PowerAdjustmentType,
PowerOffset,
PrimaryCCPCH-RSCP,
PrimaryCPICH-EcNo,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
PunctureLimit,
QE-Selector,
RANAP-RelocationInformation,
RB-Info,
RL-ID,
RL-Set-ID,
RNC-ID,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
Received-total-wide-band-power,
RxTimingDeviationForTA,
S-FieldLength,
S-RNTI,
SCH-TimeSlot,
SAI,
SN,
Secondary-CCPCH-Info,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
STTD-Indicator,
STTD-SupportIndicator,
AdjustmentPeriod,
ScaledAdjustmentRatio,
MaxAdjustmentStep,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-DCHs-to-Modify,
TDD-DL-Code-Information,
TDD-DPCHOffset,
TDD-PhysicalChannelOffset,
TDD-TPC-DownlinkStepSize,
TDD-UL-Code-Information,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TimeSlot,
TimingAdvanceApplied,
ToAWE,
ToAWS,
TransmitDiversityIndicator,

TransportBearerID,
TransportBearerRequestIndicator,
TFCS,
Transmission-Gap-Pattern-Sequence-Information,
Transmission-Gap-Pattern-Sequence-ScramblingCode-Information,
TransportFormatManagement,
TransportFormatSet,
TransportLayerAddress,
TrCH-SrcStatisticsDescr,
UARFCN,
UC-ID,
UL-DPCCH-SlotFormat,
UL-SIR,
UL-FP-Mode,
UL-PhysCH-SF-Variation,
UL-ScramblingCode,
UL-Timeslot-Information,
UL-TimeSlot-ISCP-Info,
URA-ID,
URA-Information,
USCH-ID,
USCH-Information
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,
maxNoOfUSCHs,
maxNrOfCCTrCHs,
maxNrOfDCHs,
maxNrOfETS,
maxNrOfDPCHs,
maxNrOfRLs,
maxNrOfRLSets,
maxNrOfRLs-1,
maxNrOfRLs-2,
maxNrOfULTs,
maxNrOfDLTs,

id-Active-Pattern-Sequence-Information,
id-AdjustmentRatio,
id-AllowedQueuingTime,

id-BindingID,
id-C-ID,
id-C-RNTI,
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,
id-CauseLevel-RL-SetupFailureFDD,
id-CauseLevel-RL-SetupFailureTDD,
id-ClosedLoopModel-SupportIndicator,
id-ClosedLoopMode2-SupportIndicator,
id-CNOriginatedPage-PagingRqst,
id-CriticalityDiagnostics,
id-D-RNTI,
id-D-RNTI-ReleaseIndication,
id-DCHs-to-Add-FDD,
id-DCHs-to-Add-TDD,
id-DCH-DeleteList-RL-ReconfPrepFDD,
id-DCH-DeleteList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfRqstFDD,
id-DCH-DeleteList-RL-ReconfRqstTDD,
id-DCH-FDD-Information,
id-DCH-TDD-Information,
id-FDD-DCHs-to-Modify,
id-TDD-DCHs-to-Modify,
id-DCH-InformationResponse,
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-PhyChReconfRqstTDD,
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-ReconfRqstTDD,
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD,
id-FDD-DL-CodeInformation,
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-DPC-Mode,
id-DSCHs-to-Add-FDD,
id-DSCHs-to-Add-TDD,
id-DSCH-DeleteList-RL-ReconfPrepTDD,
id-DSCH-Delete-RL-ReconfPrepFDD,
id-DSCH-FDD-Information,
id-DSCH-InformationListIE-RL-AdditionRspTDD,
id-DSCH-InformationListIEs-RL-SetupRspTDD,
id-DSCH-TDD-Information,
id-DSCH-FDD-InformationResponse,
id-DSCH-ModifyList-RL-ReconfPrepTDD,
id-DSCH-Modify-RL-ReconfPrepFDD,
id-DSCHsToBeAddedOrModified-FDD,
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD,
id-GA-AccessPointPosition,
id-GA-Cell,
id-IMSI,
id-InnerLoopDLPCStatus,
id-L3-Information,
id-AdjustmentPeriod,
id-MaxAdjustmentStep,
id-MeasurementFilterCoefficient,
id-MeasurementID,
id-Neighbouring-GSM-CellInformation,
id-PagingArea-PagingRqst,
id-FACH-FlowControlInformation,
id-PowerAdjustmentType,
id-ProcedureScope-DL-PC-Rqst,
id-PropagationDelay,
id-RANAP-RelocationInformation,
id-RL-Information-PhyChReconfRqstFDD,
id-RL-Information-PhyChReconfRqstTDD,
id-RL-Information-RL-AdditionRqstFDD,
id-RL-Information-RL-AdditionRqstTDD,
id-RL-Information-RL-DeletionRqst,
id-RL-Information-RL-FailureInd,
id-RL-Information-RL-ReconfPrepFDD,
id-RL-Information-RL-RestoreInd,
id-RL-Information-RL-SetupRqstFDD,

id-RL-Information-RL-SetupRqstTDD,
id-RL-InformationItem-DM-Rprt,
id-RL-InformationItem-DM-Rqst,
id-RL-InformationItem-DM-Rsp,
id-RL-InformationItem-RL-PreemptRequiredInd,
id-RL-InformationItem-RL-SetupRqstFDD,
id-RL-InformationList-RL-AdditionRqstFDD,
id-RL-InformationList-RL-DeletionRqst,
id-RL-InformationList-RL-PreemptRequiredInd,
id-RL-InformationList-RL-ReconfPrepFDD,
id-RL-InformationResponse-RL-AdditionRspTDD,
id-RL-InformationResponse-RL-ReconfReadyTDD,
id-RL-InformationResponse-RL-ReconfRspTDD,
id-RL-InformationResponse-RL-SetupRspTDD,
id-RL-InformationResponseItem-RL-AdditionRspFDD,
id-RL-InformationResponseItem-RL-ReconfReadyFDD,
id-RL-InformationResponseItem-RL-ReconfRspFDD,
id-RL-InformationResponseItem-RL-SetupRspFDD,
id-RL-InformationResponseList-RL-AdditionRspFDD,
id-RL-InformationResponseList-RL-ReconfReadyFDD,
id-RL-InformationResponseList-RL-ReconfRspFDD,
id-RL-InformationResponseList-RL-SetupRspFDD,
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-ReportCharacteristics,
id-Reporting-Object-RL-FailureInd,
id-Reporting-Object-RL-RestoreInd,
id-RxTimingDeviationForTA,
id-S-RNTI,
id-SAI,
id-SRNC-ID,
id-STTD-SupportIndicator,
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
id-timeSlot-ISCPList-DL-PC-Rqst-TDD,
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-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,
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-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-Information,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
id-USCHs-to-Add,
id-USCH-DeleteList-RL-ReconfPrepTDD,
id-USCH-InformationListIE-RL-AdditionRspTDD,
id-USCH-InformationListIEs-RL-SetupRspTDD,
id-USCH-Information,
id-USCH-ModifyList-RL-ReconfPrepTDD,
id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD
FROM RNSAP-Constants;

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

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

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SRNC-ID          CRITICALITY reject TYPE RNC-ID          PRESENCE mandatory } |
    { ID id-S-RNTI          CRITICALITY reject TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-D-RNTI          CRITICALITY reject TYPE D-RNTI          PRESENCE optional } |
    { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime PRESENCE optional } |

```



```

{ ID id-UL-DPCH-Information-RL-SetupRqstFDD CRITICALITY reject TYPE UL-DPCH-Information-RL-SetupRqstFDD PRESENCE mandatory } |
{ ID id-DL-DPCH-Information-RL-SetupRqstFDD CRITICALITY reject TYPE DL-DPCH-Information-RL-SetupRqstFDD PRESENCE mandatory } |
{ ID id-DCH-FDD-Information CRITICALITY reject TYPE DCH-FDD-Information PRESENCE mandatory } |
{ ID id-DSCH-FDD-Information CRITICALITY reject TYPE DSCH-FDD-Information PRESENCE optional } |
{ ID id-RL-Information-RL-SetupRqstFDD CRITICALITY notify TYPE RL-InformationList-RL-SetupRqstFDD PRESENCE mandatory } |
{ ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE optional } |
{ ID id-Active-Pattern-Sequence-Information CRITICALITY reject TYPE Active-Pattern-Sequence-Information PRESENCE optional },
...
}

```

```

UL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
  ul-ScramblingCode          UL-ScramblingCode,
  minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength,
  maxNrOfUL-DPCHs           MaxNrOfUL-DPCHs          OPTIONAL
  -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
  ul-PunctureLimit          PunctureLimit,
  ul-TFCS                   TFCS,
  ul-DPCCH-SlotFormat       UL-DPCCH-SlotFormat,
  ul-SIRTarget              UL-SIR          OPTIONAL,
  diversityMode             DiversityMode,
  sSDT-CellIdLength         SSDT-CellID-Length  OPTIONAL,
  s-FieldLength             S-FieldLength      OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DPC-Mode          CRITICALITY reject      EXTENSION DPC-Mode PRESENCE optional },
  ...
}

```

***** omitted part *****

```

-- *****
--
-- RADIO LINK ADDITION REQUEST FDD
--
-- *****

```

```

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

```

```

}

RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-SIRTarget          CRITICALITY reject  TYPE UL-SIR          PRESENCE mandatory } |
  { ID id-RL-InformationList-RL-AdditionRqstFDD  CRITICALITY notify  TYPE RL-InformationList-RL-AdditionRqstFDD  PRESENCE mandatory } |
  { ID id-Active-Pattern-Sequence-Information  CRITICALITY reject  TYPE Active-Pattern-Sequence-Information  PRESENCE optional },
  ...
}

RL-InformationList-RL-AdditionRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {RL-Information-RL-AdditionRqstFDD-IEs} }

RL-Information-RL-AdditionRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-AdditionRqstFDD  CRITICALITY notify  TYPE RL-Information-RL-AdditionRqstFDD  PRESENCE mandatory }
}

RL-Information-RL-AdditionRqstFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  c-ID          C-ID,
  frameOffset   FrameOffset,
  chipOffset    ChipOffset,
  diversityControlField  DiversityControlField,
  primaryCPICH-EcNo  PrimaryCPICH-EcNo  OPTIONAL,
  sSDT-CellID   SSDT-CellID  OPTIONAL,
  transmitDiversityIndicator  TransmitDiversityIndicator  OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-AdditionRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkAdditionRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  { ID id-DPC-Mode          CRITICALITY reject  EXTENSION  DPC-Mode          PRESENCE optional },
  ...
}

```

9.3.4 Information Element Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxCodeNumComp-1,
    maxFACHCountPlus1,
    maxIBSEG,
    maxNoOfDSCHs,
    maxNoOfUSCHs,
    maxNoTFCIGroups,
    maxNoCodeGroups,
    maxNrOfDCHs,
    maxNrOfDL-Codes,
    maxNrOfDLTs,
    maxNrOfDPCHs,
    maxNrOfErrors,
    maxNrOfFDDNeighboursPerRNC,
    maxNrOfMACcshSDU-Length,
    maxNrOfNeighbouringRNCs,
    maxNrOfTDDNeighboursPerRNC,
    maxNrOfTS,
    maxNrOfULTs,
    maxNrOfGSMNeighboursPerRNC,
    maxRateMatching,
    maxNrOfPoints,
    maxNoOfRB,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxCTFC,
    maxRNCinURA-1,
    maxTFCI1Combs,
    maxTFCI2Combs,
    maxTFCI2Combs-1,
    maxTGPS,
    maxTTI-Count,

    id-Neighbouring-UMTS-CellInformationItem
FROM RNSAP-Constants
```

```

    Criticality,
    ProcedureID,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM RNSAP-CommonDataTypes

    ProtocolIE-Single-Container{},
    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-IES,
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

Active-Pattern-Sequence-Information ::= SEQUENCE {
    cMConfigurationChangeCFN          CFN,
    transmission-Gap-Pattern-Sequence-Status  Transmission-Gap-Pattern-Sequence-Status-List  OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Active-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

AdjustmentPeriod          ::= INTEGER(1..256)
-- Unit Frame

AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel          PriorityLevel,
    pre-emptionCapability  Pre-emptionCapability,
    pre-emptionVulnerability  Pre-emptionVulnerability,
    iE-Extensions          ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    ...
}

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

AllowedQueuingTime        ::= INTEGER (1..60)
-- seconds

AlphaValue                ::= INTEGER (0..8)
-- Actual value = Alpha / 8

-- B

BCC ::= BIT STRING (SIZE (3))

BCCH-ARFCN ::= INTEGER (0..1023)

```

```
BetaCD ::= INTEGER (0..15)

BindingID ::= OCTET STRING (SIZE (1..4,...))

BLER ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

Block-STTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

BSIC ::= SEQUENCE {
    nCC      NCC,
    bCC      BCC
}

-- C

Cause ::= CHOICE {
    radioNetwork      CauseRadioNetwork,
    transport         CauseTransport,
    protocol          CauseProtocol,
    misc              CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    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-temporarily-not-available,  
unspecified,  
invalid-CM-settings,  
reconfiguration-CFN-not-elapsed,  
number-of-DL-codes-not-supported,  
dedicated-transport-channel-type-not-supported,  
dl-shared-channel-type-not-supported,  
ul-shared-channel-type-not-supported,  
common-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-allocated,  
...  
dpc-mode-change-not-supported
```

***** Partly omitted *****

```

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

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

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

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

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

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

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

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

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

DCH-InformationResponseItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

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

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

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

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

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

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

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                    RSCP-Value, -- TDD only
    rxTimingDeviationValue  Rx-Timing-Deviation-Value, -- TDD only
    roundTripTime          Round-Trip-Time-Value, -- FDD only
    ...
}

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

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

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

DedicatedMeasurementnotAvailable ::= NULL

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

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

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

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

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

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

D-RNTI-ReleaseIndication ::= ENUMERATED {
    release-D-RNTI,

```

```

    not-release-D-RNTI
}

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

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

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

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

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

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

DL-TimeSlot-ISCP-InfoItem ::= SEQUENCE {
    timeSlot                TimeSlot,
    dL-TimeSlotISCP         DL-TimeSlotISCP,
    iE-Extensions           ProtocolExtensionContainer { { DL-TimeSlot-ISCP-InfoItem-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

```

```
}  
DPCH-ID                ::= INTEGER (0..239)  
  
DPCHConstantValue ::= INTEGER (-10..10)  
-- Unit dB, Step 1dB
```

9.3.6 Constant Definitions

***** Partly omitted *****

```
-- *****
--
-- IEs
--
-- *****
```

id-AllowedQueuingTime	ProtocolIE-ID ::= 4
id-BindingID	ProtocolIE-ID ::= 5
id-C-ID	ProtocolIE-ID ::= 6
id-C-RNTI	ProtocolIE-ID ::= 7
id-CFN	ProtocolIE-ID ::= 8
id-CN-CS-DomainIdentifier	ProtocolIE-ID ::= 9
id-CN-PS-DomainIdentifier	ProtocolIE-ID ::= 10
id-Cause	ProtocolIE-ID ::= 11
id-CriticalityDiagnostics	ProtocolIE-ID ::= 20
id-D-RNTI	ProtocolIE-ID ::= 21
id-D-RNTI-ReleaseIndication	ProtocolIE-ID ::= 22
id-DCHs-to-Add-FDD	ProtocolIE-ID ::= 26
id-DCHs-to-Add-TDD	ProtocolIE-ID ::= 27
id-DCH-DeleteList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 30
id-DCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 31
id-DCH-DeleteList-RL-ReconfRqstFDD	ProtocolIE-ID ::= 32
id-DCH-DeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 33
id-DCH-FDD-Information	ProtocolIE-ID ::= 34
id-DCH-TDD-Information	ProtocolIE-ID ::= 35
id-FDD-DCHs-to-Modify	ProtocolIE-ID ::= 39
id-TDD-DCHs-to-Modify	ProtocolIE-ID ::= 40
id-DCH-InformationResponse	ProtocolIE-ID ::= 43
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD	ProtocolIE-ID ::= 44
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 45
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 46
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 47
id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD	ProtocolIE-ID ::= 48
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 49
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD	ProtocolIE-ID ::= 50
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 51

id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 52
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 53
id-FDD-DL-CodeInformation	ProtocolIE-ID ::= 54
id-DL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 59
id-DL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 60
id-DL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 61
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD	ProtocolIE-ID ::= 62
id-DL-DPCH-InformationItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 63
id-DL-DPCH-InformationItem-RL-SetupRspTDD	ProtocolIE-ID ::= 64
id-DLReferencePower	ProtocolIE-ID ::= 67
id-DLReferencePowerList-DL-PC-Rqst	ProtocolIE-ID ::= 68
id-DL-ReferencePowerInformation-DL-PC-Rqst	ProtocolIE-ID ::= 69
id-DPC-Mode	ProtocolIE-ID ::= 12
id-DRXCycleLengthCoefficient	ProtocolIE-ID ::= 70
id-DedicatedMeasurementObjectType-DM-Rprt	ProtocolIE-ID ::= 71
id-DedicatedMeasurementObjectType-DM-Rqst	ProtocolIE-ID ::= 72
id-DedicatedMeasurementObjectType-DM-Rsp	ProtocolIE-ID ::= 73
id-DedicatedMeasurementType	ProtocolIE-ID ::= 74
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD	ProtocolIE-ID ::= 82
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD	ProtocolIE-ID ::= 83

CHANGE REQUEST

⌘ **25.423 CR 323** ⌘ rev **2** ⌘ Current version: **3.4.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Introduction of the Common Measurement Procedures in RNSAP		
Source:	⌘ R-WG3		
Work item code:	⌘ RANimp-RRMopt	Date:	⌘ 2001-02-26
Category:	⌘ B	Release:	⌘ REL-4
	<i>Use <u>one</u> of the following categories:</i> 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.		<i>Use <u>one</u> of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ For enhanced radio resource management, it is required to pass cell load information between RNCs. Thus a set of Common Measurement Procedures are needed over the lur interface.
Summary of change:	⌘ Introduction of Common Measurement Procedures in RNSAP. <u>R1: Inclusion of specific measurements, and other corrections.</u> <u>R2: Re-use of existing IEs where appropriate.</u> This change is backward compatible.
Consequences if not approved:	⌘ If this CR is not approved, the radio resource management function in the UTRAN will not be able to use cell load information, except within a single RNC area.

Clauses affected:	⌘ 3.1, 7, 8.1, 8.5, 9.1, 9.2.1, 9.2.1.28A, 9.2.1.37, 9.2.1.38, 9.2.1.39, 9.3.2, 9.3.3, 9.3.4, 9.3.6. + some new sections.		
Other specs Affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘ Will be merged with similar CR327 from LCS work if both are approved. The merged CR is 337.		

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

Elementary Procedure: RNSAP protocol consists of Elementary Procedures (EPs). An Elementary Procedure is a unit of interaction between two RNCs. An EP consists of an initiating message and possibly a response message. Two kinds of EPs are used:

- **Class 1:** Elementary Procedures with response (success or failure);
- **Class 2:** Elementary Procedures without response.

For Class 1 EPs, the types of responses can be as follows:

Successful

- A signalling message explicitly indicates that the elementary procedure successfully completed with the receipt of the response.

Unsuccessful

- A signalling message explicitly indicates that the EP failed.
- On time supervision expiry (i.e. absence of expected response). Whether or not any Class 1 procedure will have a timer on RNSAP is FFS. To be sorted out when discussing the details of the error cases.

Class 2 EPs are considered always successful.

Prepared Reconfiguration: A Prepared Reconfiguration exists when the Synchronised Radio Link Reconfiguration Preparation procedure has been completed successfully. The Prepared Reconfiguration does not exist any more after either of the procedures Synchronised Radio Link Reconfiguration Commit or Synchronised Radio Link Reconfiguration Cancellation has been completed.

UE Context: The UE Context contains the necessary information for the DRNC for communication with a specific UE. The UE Context is created by the Radio Link Setup procedure or by the Uplink Signalling Transfer procedure when the UE makes its first access in a cell controlled by the DRNS. The UE Context is deleted by the Radio Link Deletion procedure or by the Common Transport Channel Resources Release procedure when neither any Radio Links nor any common transport channels are established towards the concerning UE. The UE Context is identified by the SCCP Connection for messages using connection oriented mode of the signalling bearer and the D-RNTI for messages using connectionless mode of the signalling bearer, unless specified otherwise in the procedure text.

Common Measurement Context: The Common Measurement context is created by the first Common Measurement Initiation Procedure initiated by one RNC and requested from another RNC. The Common Measurement Context is deleted by the Common Measurement Termination or the Common Measurement Failure procedure when there is no more Common Measurement to be provided by the requested RNC to the requesting RNC. The Common Measurement Context is identified by an SCCP connection as, for Common Measurements, only the connection oriented mode of the signalling bearer is used.

7 Functions of RNSAP

The RNSAP protocol has the following functions:

- Radio Link Management. This function allows the SRNC to manage radio links using dedicated resources in a DRNS;
- Physical Channel Reconfiguration. This function allows the DRNC to reallocate the physical channel resources for a Radio Link;
- Radio Link Supervision. This function allows the DRNC to report failures and restorations of a Radio Link;
- Compressed Mode Control [FDD]. This function allows the SRNC to control the usage of compressed mode within a DRNS;
- Measurements on Dedicated Resources. This function allows the SRNC to initiate measurements on dedicated resources in the DRNS. The function also allows the DRNC to report the result of the measurements;
- DL Power Drifting Correction [FDD]. This function allows the SRNC to adjust the DL power level of one or more Radio Links in order to avoid DL power drifting between the Radio Links;
- CCCH Signalling Transfer. This function allows the SRNC and DRNC to pass information between the UE and the SRNC on a CCCH controlled by the DRNS;
- Paging. This function allows the SRNC to page a UE in a URA or a cell in the DRNS;
- Common Transport Channel Resources Management. This function allows the SRNC to utilise Common Transport Channel Resources within the DRNS (excluding DSCH resources for FDD);
- Relocation Execution. This function allows the SRNC to finalise a Relocation previously prepared via other interfaces;
- Reporting of General Error Situations. This function allows reporting of general error situations, for which function specific error messages have not been defined.
- DL Power Timeslot Correction [TDD]. This function enables the DRNS to apply an individual offset to the transmission power in each timeslot according to the downlink interference level at the UE.
- [Measurements on Common Resources. This function allows an RNC to request from another RNC to initiate measurements on Common Resources. The function also allows the requested RNC to report the result of the measurements.](#)

The mapping between the above functions and RNSAP elementary procedures is shown in the table 1.

Table 1: Mapping between functions and RNSAP elementary procedures

Function	Elementary Procedure(s)
Radio Link Management	a) Radio Link Setup b) Radio Link Addition c) Radio Link Deletion d) Unsynchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Synchronised Radio Link Reconfiguration Cancellation h) Radio Link Pre-emption
Physical Channel Reconfiguration	Physical Channel Reconfiguration
Radio Link Supervision	a) Radio Link Failure b) Radio Link Restoration
Compressed Mode Control [FDD]	a) Radio Link Setup b) Radio Link Addition c) Compressed Mode Command d) Unsynchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Synchronised Radio Link Reconfiguration Cancellation
Measurements on Dedicated Resources	a) Measurement Initiation b) Measurement Reporting c) Measurement Termination d) Measurement Failure
DL Power Drifting Correction [FDD]	Downlink Power Control
CCCH Signalling Transfer	a) Uplink Signalling Transfer b) Downlink Signalling Transfer
Paging	Paging
Common Transport Channel Resources Management	a) Common Transport Channel Resources Initiation b) Common Transport Channel Resources Release
Relocation Execution	Relocation Commit
Reporting of General Error Situations	Error Indication
Measurements on Common Resources	a) Common Measurement Initiation b) Common Measurement Reporting c) Common Measurement Termination d) Common Measurement Failure
DL Power Timeslot Correction [TDD]	Downlink Power Timeslot Control

8 RNSAP Procedures

8.1 Elementary Procedures

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

Table 2: Class 1

Elementary Procedure	Initiating Message	Successful Outcome	Unsuccessful Outcome	
		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	
Common Transport Channel Resources Initialisation	COMMON TRANSPORT CHANNEL RESOURCES REQUEST	COMMON TRANSPORT CHANNEL RESOURCES RESPONSE	COMMON TRANSPORT CHANNEL RESOURCES FAILURE	
Common Measurement Initiation	COMMON MEASUREMENT INITIATION REQUEST	COMMON MEASUREMENT INITIATION RESPONSE	COMMON MEASUREMENT INITIATION FAILURE	

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

Table 3: Class 2

Elementary Procedure	Initiating Message
Uplink Signalling Transfer	UPLINK SIGNALLING TRANSFER INDICATION
Downlink Signalling Transfer	DOWNLINK SIGNALLING TRANSFER REQUEST
Relocation Commit	RELOCATION COMMIT
Paging	PAGING REQUEST
Synchronised Radio Link Reconfiguration Commit	RADIO LINK RECONFIGURATION COMMIT
Synchronised Radio Link Reconfiguration Cancellation	RADIO LINK RECONFIGURATION 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 Command [FDD]	COMPRESSED MODE COMMAND
Common Transport Channel Resources Release	COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST
Error Indication	ERROR INDICATION
Downlink Power Timeslot Control [TDD]	DL POWER TIMESLOT CONTROL REQUEST
Radio Link Pre-emption	RADIO LINK PREEMPTION REQUIRED INDICATION
Common Measurement Reporting	COMMON MEASUREMENT REPORT
Common Measurement Termination	COMMON MEASUREMENT TERMINATION REQUEST
Common Measurement Failure	COMMON MEASUREMENT FAILURE INDICATION

8.5.x Common Measurement Initiation

8.5.x.1 General

This procedure is used by an RNC to request the initiation of measurements of common resources to another RNC. The requesting RNC is referred to as RNC₁ and the RNC to which the request is sent is referred to as RNC₂.

This procedure uses the signalling bearer connection for the relevant Common Measurement Context.

8.5.x.2 Successful Operation

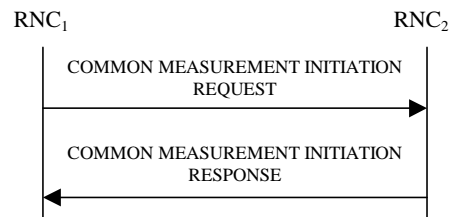


Figure x: Common Measurement Initiation procedure: Successful Operation

The procedure is initiated with a COMMON MEASUREMENT INITIATION REQUEST message sent from the RNC₁ to the RNC₂.

Upon reception, the RNC₂ 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.

[TDD- If the Time Slot Information is provided in the *Common Measurement Object Type IE*, the measurement request shall apply to the requested time slot individually.]

If the *SFN Reporting Indicator IE* is set to "FN Reporting Required", the *SFN 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 SFN shall be the SFN 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 *SFN 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]. Furthermore, if the *SFN IE* is present and if the *Common Measurement Object Type IE* is set to "UP Neighbouring Cell", then the *SFN IE* relates to the Radio Frames of the Reference Cell identified by the first *UTRAN Cell Identifier IE*.

Common measurement type

If the *Common Measurement Type IE* is set to 'load', the RNC₂ shall initiate measurements of uplink and downlink load on the measured object. If either uplink or downlink load satisfies the requested report characteristics, the RNC₂ shall report the result of both uplink and downlink measurements.

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 RNC₂ shall report the result of the requested measurement immediately.

If the *Report Characteristics IE* is set to 'Periodic', the RNC₂ shall periodically initiate a Measurement Reporting procedure for this measurement, with the requested report frequency.

If the *Report Characteristics IE* is set to 'Event A', the RNC₂ 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 RNC₂ shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event B', the RNC₂ 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 RNC₂ shall use the value zero for the hysteresis time.

If the *Report Characteristics* IE is set to 'Event C', the RNC₂ 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 RNC₂ 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 RNC₂ shall initiate the Measurement Reporting procedure when the measured entity rises above the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided, the RNC₂ shall initiate the Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity falls below the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the RNC₂ shall initiate the Common Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the RNC₂ shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the RNC₂ 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 RNC₂ shall initiate the Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). When the conditions for Report A are met and the *Report Periodicity* IE is provided the RNC₂ shall also initiate the Measurement Reporting procedure periodically. If the conditions for Report A have been met and the measured entity rises above the 'Measurement Threshold 2' and stays there for the 'Measurement Hysteresis Time', the RNC₂ shall initiate the Common Measurement Reporting procedure (Report B) as well as terminating any corresponding periodic reporting. If 'Measurement Threshold 2' is not present, the RNC₂ shall use 'Measurement Threshold 1' instead. If no 'Measurement Hysteresis Time' is provided, the RNC₂ 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 RNC₂ is required to perform reporting for a common measurement object, in accordance with the conditions provided in the COMMON MEASUREMENT INITIATION REQUEST message, as long as the object exists. If no common measurement object(s) for which a measurement is defined exists any more the RNC₂ shall terminate the measurement locally without reporting this to RNC₁.

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 RNC₂ shall initiate a Measurement Reporting procedure immediately, and then continue with the measurements as specified in the COMMON 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 RNC₂ was able to initiate the measurement requested by RNC₁ it shall respond with the COMMON 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 COMMON MEASUREMENT INITIATION RESPONSE message shall contain the measurement result.

8.5.x.3 Unsuccessful Operation

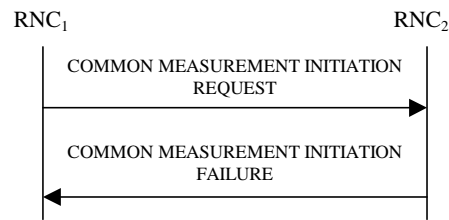


Figure y: Common Measurement Initiation procedure: Unsuccessful Operation

If the Common Measurement Type received in the *Common Measurement Type* IE is not 'load', and if the Common Measurement Type received in the *Common Measurement Type* IE is not defined in ref. [11] or [15] to be measured on the Common Measurement Object Type received in the *Common Measurement Object Type* IE in the COMMON MEASUREMENT INITIATION REQUEST message the RNC₂ shall regard the Common Measurement Initiation procedure as failed.

If the requested measurement cannot be initiated, the RNC₂ shall send a COMMON MEASUREMENT INITIATION FAILURE message. The message shall include the same Measurement ID that was used in the COMMON MEASUREMENT INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

Typical cause values are as follows:

Radio Network Layer Cause

- Measurement not supported for the object.
- Measurement Temporarily not Available

8.5.x.4 Abnormal Conditions

=

8.5.x Common Measurement Reporting

8.5.x.1 General

This procedure is used by an RNC to report the result of measurements requested by another RNC using the Common Measurement Initiation.

This procedure uses the signalling bearer connection for the relevant Common Measurement Context.

8.5.x.2 Successful Operation



Figure z: Common Measurement Reporting procedure: Successful Operation

If the requested measurement reporting criteria are met, the RNC₂ shall initiate a Measurement Reporting procedure. Unless specified below, the meaning of the parameters are given in other specifications.

The Common Measurement ID IE shall be set to the Common Measurement ID provided by RNC₁ when initiating the measurement with the Common Measurement Initiation procedure.

If the achieved measurement accuracy does not fulfil the given accuracy requirement, the Measurement not available shall be reported.

8.5.x.3 Abnormal Conditions

=

8.5.x Common Measurement Termination

8.5.x.1 General

This procedure is used by an RNC to terminate a measurement previously requested by the Common Measurement Initiation procedure.

This procedure uses the signalling bearer connection for the relevant Common Measurement Context.

8.5.x.2 Successful Operation



Figure xx: Common Measurement Termination procedure: Successful Operation

This procedure is initiated with a COMMON MEASUREMENT TERMINATION REQUEST message.

Upon reception, RNC₂ shall terminate reporting of measurements corresponding to the Common Measurement ID.

8.5.x.3 Abnormal Conditions

=

8.5.x Common Measurement Failure

8.5.x.1 General

This procedure is used by **an RNC** to notify **another RNC** that a measurement previously requested by the Common Measurement Initiation procedure can no longer be reported.

This procedure uses the signalling bearer connection for the relevant Common Measurement Context.

8.5.x.2 Successful Operation



Figure 15: Common Measurement Failure procedure: Successful Operation

This procedure is initiated with a COMMON MEASUREMENT FAILURE INDICATION message, sent from RNC₂ to RNC₁ to inform the RNC₁ that a previously requested measurement can no longer be reported. RNC₂ has locally terminated the indicated measurement.

8.5.x.3 Abnormal Conditions

=

9.1.x COMMON MEASUREMENT INITIATION REQUEST

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>	<u>Criticality</u>	<u>Assigned Criticality</u>
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		=	
Measurement ID	M		9.2.1.37		YES	reject
Common Measurement Object Type	M		9.2.1.x		YES	reject
CHOICE <i>Common Measurement Object Type</i>	M				YES	reject
>Cell					=	
>>UTRAN Cell Identifier	M		9.2.1.71		=	
>> Time Slot	O		9.2.1.56	TDD Only	=	
Common Measurement Type	M		9.2.1.x		YES	reject
Measurement Filter Coefficient	O		9.2.1.41		YES	reject
Report Characteristics	M		9.2.1.48		YES	reject
SFN reporting indicator	M		FN reporting indicator 9.2.1.28A		YES	reject
SFN	O		9.2.1.x		YES	reject

9.1.x COMMON MEASUREMENT INITIATION RESPONSE

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>	<u>Criticality</u>	<u>Assigned Criticality</u>
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		=	
Measurement ID	M		9.2.1.37		YES	ignore
CHOICE <i>Common Measurement Object Type</i>	O			Common Measurement Object Type that the measurement was initiated with.	YES	ignore
>Cell					=	
>>Common Measurement value	M		9.2.1.x		YES	ignore
SFN	O		9.2.1.x	Common Measurement Time Reference	YES	ignore
Criticality Diagnostics	O		9.2.1.13		YES	ignore

9.1.x COMMON MEASUREMENT INITIATION FAILURE

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>	<u>Criticality</u>	<u>Assigned Criticality</u>
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		=	
Measurement ID	M		9.2.1.37		YES	ignore
Cause	M		9.2.1.5		YES	ignore
Criticality Diagnostics	O		9.2.1.13		YES	ignore

9.1.x COMMON MEASUREMENT REPORT

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>	<u>Criticality</u>	<u>Assigned Criticality</u>
<u>Message Type</u>	<u>M</u>		<u>9.2.1.40</u>		<u>YES</u>	<u>ignore</u>
<u>Transaction ID</u>	<u>M</u>		<u>9.2.1.59</u>		<u>=</u>	
<u>Measurement ID</u>	<u>M</u>		<u>9.2.1.37</u>		<u>YES</u>	<u>ignore</u>
<u>CHOICE Common Measurement Object Type</u>	<u>M</u>			<u>Common Measurement Object Type that the measurement was initiated with.</u>	<u>YES</u>	<u>ignore</u>
<u>>Cell</u>					<u>=</u>	
<u>>>Common Measurement Value Information</u>	<u>M</u>		<u>9.2.1.x</u>		<u>YES</u>	<u>ignore</u>
<u>SFN</u>	<u>O</u>		<u>9.2.1.x</u>	<u>Common Measurement Time Reference</u>	<u>YES</u>	<u>ignore</u>

9.1.yy COMMON MEASUREMENT TERMINATION REQUEST

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>	<u>Criticality</u>	<u>Assigned Criticality</u>
<u>Message Type</u>	<u>M</u>		<u>9.2.1.40</u>		<u>YES</u>	<u>ignore</u>
<u>Transaction ID</u>	<u>M</u>		<u>9.2.1.59</u>		<u>=</u>	
<u>Measurement ID</u>	<u>M</u>		<u>9.2.1.37</u>		<u>YES</u>	<u>ignore</u>

9.1.zz COMMON MEASUREMENT FAILURE INDICATION

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>	<u>Criticality</u>	<u>Assigned Criticality</u>
<u>Message Type</u>	<u>M</u>		<u>9.2.1.40</u>		<u>YES</u>	<u>ignore</u>
<u>Transaction ID</u>	<u>M</u>		<u>9.2.1.59</u>		<u>=</u>	
<u>Measurement ID</u>	<u>M</u>		<u>9.2.1.37</u>		<u>YES</u>	<u>ignore</u>
<u>Cause</u>	<u>M</u>		<u>9.2.1.5</u>		<u>YES</u>	<u>ignore</u>

9.2.1.28A FN reporting indicator

Frame Number reporting indicator.

Indicates if the [SFN or](#) CFN shall be included together with the reported measurement value.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
FN reporting indicator			ENUMERATED(FN reporting required, FN reporting not required)	

9.2.1.38 Measurement Increase/Decrease Threshold

The Measurement Increase/Decrease Threshold defines the threshold that shall trigger Event C or D.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
SIR	<i>C – Threshold</i>		INTEGER(0..62)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 62: 31dB
SIR Error	<i>C – Threshold</i>		INTEGER(0..124)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 124: 62 dB (FDD only)
Transmitted Code Power	<i>C – Threshold</i>		INTEGER(0..112,...)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 112: 56 dB
RSCP	<i>C – Threshold</i>		INTEGER(0..80)	0: 0 dB 1: 0.5 dB 2: 1 dB ... 80: 40dB (TDD only)
Round Trip Time	<i>C – Threshold</i>		INTEGER(0..32766)	0: 0 chips 1: 0.0625 chips 2: 0.1250 chips ... 32766: 2047.875 chips (FDD only)
<u>Load</u>	<u><i>C- Threshold</i></u>		<u>INTEGER(0..9)</u>	<u>Units are the same as for the Uplink Load Value IE and Downlink Load Value IE.</u>
<u>Transmitted Carrier Power</u>	<u><i>C- Threshold</i></u>		<u>INTEGER(0..100)</u>	<u>According to mapping in [23] and [24].</u>
<u>Received Total Wide Band Power</u>	<u><i>C- Threshold</i></u>		<u>INTEGER(0..620)</u>	<u>0: 0dB 1: 0.1dB 2: 0.2dB ... 620: 62dB</u>
<u>UL Timeslot ISCP</u>	<u><i>C- Threshold</i></u>		<u>INTEGER(0..126)</u>	<u>0: 0dB 1: 0.5dB 2: 1dB ... 126: 63dB Only applicable for TDD.</u>

Condition	Explanation
<i>Threshold</i>	Only one measurement threshold can be present at the same time.

9.2.1.39 Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event A, B, E or F.

Information Element / Group Name	Presence	Range	IE Type and Reference	Semantics Description
SIR	<i>C – Threshold</i>		INTEGER(0..63)	According to mapping in ref. [23] and [24].
SIR Error	<i>C – Threshold</i>		INTEGER(0..125)	According to mapping in [23], (FDD only)
Transmitted Code Power	<i>C – Threshold</i>		INTEGER(0..127)	According to mapping in ref. [23] and [24].
RSCP	<i>C – Threshold</i>		INTEGER(0..81)	According to mapping in ref. [24] (TDD only)
Rx Timing Deviation	<i>C - Threshold</i>		INTEGER(0..2047)	According to mapping in [24] (TDD only)
Round Trip Time	<i>C – Threshold</i>		INTEGER(0..32767)	According to mapping in [23] (FDD only)
<u>Load</u>	<u><i>C- Threshold</i></u>		<u>INTEGER(0..9)</u>	<u>0 is the minimum indicated load, and 9 is the maximum indicated load.</u>
<u>Transmitted Carrier Power</u>	<u><i>C- Threshold</i></u>		<u>INTEGER(0..100)</u>	<u>According to mapping in [23] and [24].</u>
<u>Received Total Wide Band Power</u>	<u><i>C- Threshold</i></u>		<u>INTEGER(0..621)</u>	<u>According to mapping in [23] and [24].</u>
<u>UL Timeslot ISCP</u>	<u><i>C- Threshold</i></u>		<u>INTEGER(0..127)</u>	<u>According to mapping in [24]. Only applicable for TDD.</u>

Condition	Explanation
<i>Threshold</i>	Only one measurement threshold can be present at the same time.

9.2.1.40 Message Type

The Message Type uniquely identifies the message being sent.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Message Type				
>Procedure ID		1		
>>Procedure Code	M		ENUMERATED (RL Setup, RL Addition, RL Deletion, Synchronised RL Reconfiguration Preparation, Synchronised RL Reconfiguration Commit, Synchronised RL Reconfiguration Cancel, Unsynchronised RL Reconfiguration Request, RL Failure, RL Restoration, DL Power Control, DL Power Timeslot Control, Physical Channel Reconfiguration, UL Signalling Transfer, DL Signalling Transfer, Relocation Commit, Paging, Measurement Initiation, Measurement Reporting, Measurement Termination, Measurement Failure, Common Transport Channel Resources Initiation, Common Transport Channel Resources Release, Compressed Mode Command, Error Indication, ... Common Measurement Initiation , Common Measurement Reporting , Common Measurement Termination , Common Measurement Failure)	
>>Ddmode	M		ENUMERATED (FDD, TDD, Common, ...)	Common = common to FDD and TDD.
>Type of Message	M		ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)	

9.2.1.x Common Measurement Object Type

The Common Measurement Object type indicates the type of object that the measurement is to be performed on.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>
Common Measurement Object Type			ENUMERATED (CELL,...)	

9.2.1.x Common Measurement Type

The Common Measurement Type identifies which measurement that shall be performed.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>
Common Measurement Type			ENUMERATED (load, transmitted carrier power, received total wide band power, UL timeslot ISCP, ...)	UL timeslot ISCP shall only be used by TDD.

9.2.1.x Common Measurement Value

The Common Measurement Value shall be the most recent value for this measurement, for which the reporting criteria were met.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>
Load Value	C- MeasValue		9.2.1.y	
Transmitted Carrier Power Value	C- MeasValue		Transmitted Carrier Power 9.2.1.x	
Received Total Wide Band Power Value	C- MeasValue		Received Total Wide Band Power 9.2.2.35A	
UL Timeslot ISCP Value	C- MeasValue		UL Timeslot ISCP 9.2.3.13A	Only applicable for TDD.

<u>Condition</u>	<u>Explanation</u>
MeasValue	Only one measurement value can be present at the same time.

9.2.1.x Common Measurement Value Information

The Common Measurement Value Information IE provides information both on whether or not the Common Measurement Value is provided in the message or not and if provided also the Common Measurement Value itself.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>
<u>CHOICE Measurement Availability</u>	<u>M</u>			
<u>>Measurement Available</u>				
<u>>>Common Measurement value</u>	<u>M</u>		<u>9.2.1.x</u>	
<u>>Measurement not Available</u>			<u>NULL</u>	

9.2.1.x Load Value

The *Load Value* IE contains the load for both the uplink and downlink.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>
<u>Uplink Load Value</u>	<u>M</u>		<u>INTEGER(0..9)</u>	<u>Value 0 shall indicate the minimum load, and 9 shall indicate the maximum load. Load should be measured on a linear scale.</u>
<u>Downlink Load Value</u>	<u>M</u>		<u>INTEGER(0..9)</u>	<u>Value 0 shall indicate the minimum load, and 9 shall indicate the maximum load. Load should be measured on a linear scale.</u>

9.2.1.x Transmitted Carrier Power

The *Transmitted Carrier Power* IE contains the Transmitted Carrier Power in a cell, as defined in [11] & [14].

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE Type and Reference</u>	<u>Semantics Description</u>
<u>Transmitted Carrier Power</u>			<u>INTEGER(0..100)</u>	<u>According to mapping in [23] and [24].</u>

9.2.1.37 Measurement ID

The Measurement Id uniquely identifies ~~any a dedicated measurement on dedicated resources requested over RNSAP~~ within a UE context, or a common measurement within a Common Measurement Context.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Measurement ID			INTEGER(0 .. 2 ²⁰ -1)	

9.2.1.x SFN

System Frame Number of the cell, see ref. [17].

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>SFN</u>			<u>Integer (0..4095)</u>	

<u>Range bound</u>	<u>Explanation</u>
<u><i>maxnoofMeasNCell</i></u>	<u>Maximum number of neighbouring cells on which measurements can be performed.</u>

9.3.2 Elementary Procedure Definitions

*** UNCHANGED TEXT IS OMITTED ***

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

IMPORTS

```
    Criticality,
    ProcedureID,
    TransactionID
```

FROM RNSAP-CommonDataTypes

```

CommonMeasurementInitiationRequest,
CommonMeasurementInitiationResponse,
CommonMeasurementInitiationFailure,
CommonMeasurementReport,
CommonMeasurementTerminationRequest,
CommonMeasurementFailureIndication,
CommonTransportChannelResourcesFailure,
CommonTransportChannelResourcesRequest,
CommonTransportChannelResourcesReleaseRequest,
CommonTransportChannelResourcesResponseFDD,
CommonTransportChannelResourcesResponseTDD,
CompressedModeCommand,
DedicatedMeasurementFailureIndication,
DedicatedMeasurementInitiationFailure,
DedicatedMeasurementInitiationRequest,
DedicatedMeasurementInitiationResponse,
DedicatedMeasurementReport,
DedicatedMeasurementTerminationRequest,
DL-PowerControlRequest,
DL-PowerTimeslotControlRequest,
DownlinkSignallingTransferRequest,
ErrorIndication,
PagingRequest,
PhysicalChannelReconfigurationCommand,
PhysicalChannelReconfigurationFailure,
PhysicalChannelReconfigurationRequestFDD,
PhysicalChannelReconfigurationRequestTDD,
PrivateMessage,
RadioLinkAdditionFailureFDD,
RadioLinkAdditionFailureTDD,
RadioLinkAdditionRequestFDD,
RadioLinkAdditionRequestTDD,
RadioLinkAdditionResponseFDD,
RadioLinkAdditionResponseTDD,
RadioLinkDeletionRequest,
RadioLinkDeletionResponse,
RadioLinkFailureIndication,
RadioLinkPreemptionRequiredIndication,
RadioLinkReconfigurationCancel,
RadioLinkReconfigurationCommit,
RadioLinkReconfigurationFailure,
RadioLinkReconfigurationPrepareFDD,
RadioLinkReconfigurationPrepareTDD,
RadioLinkReconfigurationReadyFDD,
RadioLinkReconfigurationReadyTDD,
RadioLinkReconfigurationRequestFDD,
RadioLinkReconfigurationRequestTDD,
RadioLinkReconfigurationResponseFDD,
RadioLinkReconfigurationResponseTDD,
RadioLinkRestoreIndication,
RadioLinkSetupFailureFDD,
RadioLinkSetupFailureTDD,
RadioLinkSetupRequestFDD,
RadioLinkSetupRequestTDD,
RadioLinkSetupResponseFDD,
RadioLinkSetupResponseTDD,
RelocationCommit,
UplinkSignallingTransferIndicationFDD,
UplinkSignallingTransferIndicationTDD
```

FROM RNSAP-PDU-Contents

```
id-commonMeasurementFailure,  
id-commonMeasurementInitiation,  
id-commonMeasurementReport,  
id-commonMeasurementTermination,  
id-commonTransportChannelResourcesInitialisation,  
id-commonTransportChannelResourcesRelease,  
id-compressedModeCommand,  
id-downlinkPowerControl,  
id-downlinkSignallingTransfer,  
id-downlinkPowerTimeslotControl,  
id-errorIndication,  
id-measurementFailure,  
id-measurementInitiation,  
id-measurementReporting,  
id-measurementTermination,  
id-paging,  
id-physicalChannelReconfiguration,  
id-privateMessage,  
id-radioLinkAddition,  
id-radioLinkDeletion,  
id-radioLinkFailure,  
id-radioLinkPreemption,  
id-radioLinkRestoration,  
id-radioLinkSetup,  
id-relocationCommit,  
id-synchronisedRadioLinkReconfigurationCancellation,  
id-synchronisedRadioLinkReconfigurationCommit,  
id-synchronisedRadioLinkReconfigurationPreparation,  
id-unsynchronisedRadioLinkReconfiguration,  
id-uplinkSignallingTransfer  
FROM RNSAP-Constants;
```

```
*** UNCHANGED TEXT IS OMITTED ***
```

```

-- *****
--
-- Interface Elementary Procedure List
--
-- *****

RNSAP-ELEMENTARY-PROCEDURES RNSAP-ELEMENTARY-PROCEDURE ::= {
    RNSAP-ELEMENTARY-PROCEDURES-CLASS-1      |
    RNSAP-ELEMENTARY-PROCEDURES-CLASS-2      |
    RNSAP-ELEMENTARY-PROCEDURES-CLASS-3      |
    ...
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURE ::= {
    radioLinkSetupFDD
    radioLinkSetupTDD
    radioLinkAdditionFDD
    radioLinkAdditionTDD
    radioLinkDeletion
    synchronisedRadioLinkReconfigurationPreparationFDD
    synchronisedRadioLinkReconfigurationPreparationTDD
    unSynchronisedRadioLinkReconfigurationFDD
    unSynchronisedRadioLinkReconfigurationTDD
    physicalChannelReconfigurationFDD
    physicalChannelReconfigurationTDD
    measurementInitiation
    commonTransportChannelResourcesInitialisationFDD
    commonTransportChannelResourcesInitialisationTDD
    ...
    commonMeasurementInitiation
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= {
    uplinkSignallingTransferFDD
    uplinkSignallingTransferTDD
    downlinkSignallingTransfer
    relocationCommit
    paging
    synchronisedRadioLinkReconfigurationCommit
    synchronisedRadioLinkReconfigurationCancellation
    radioLinkFailure
    radioLinkPreemption
    radioLinkRestoration
    measurementReporting
    measurementTermination
    measurementFailure
    downlinkPowerControlFDD
    downlinkPowerTimeslotControl
    compressedModeCommandFDD
    commonTransportChannelResourcesRelease
    errorIndication
    privateMessage
    ...
    commonMeasurementReporting
    commonMeasurementTermination
    commonMeasurementFailure
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 RNSAP-ELEMENTARY-PROCEDURE ::= {
    ...
}

```

```
-- *****  
--  
-- Interface Elementary Procedures  
--  
-- *****
```

```
*** UNCHANGED TEXT IS OMITTED ***
```

```
commonMeasurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE CommonMeasurementInitiationRequest  
  SUCCESSFUL OUTCOME CommonMeasurementInitiationResponse  
  UNSUCCESSFUL OUTCOME CommonMeasurementInitiationFailure  
  PROCEDURE ID { procedureCode id-commonMeasurementInitiation, ddMode common }  
  CRITICALITY reject  
}  
  
commonMeasurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE CommonMeasurementReport  
  PROCEDURE ID { procedureCode id-commonMeasurementReporting, ddMode common }  
  CRITICALITY ignore  
}  
  
commonMeasurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE CommonMeasurementTerminationRequest  
  PROCEDURE ID { procedureCode id-commonMeasurementTermination, ddMode common }  
  CRITICALITY ignore  
}  
  
commonMeasurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {  
  INITIATING MESSAGE CommonMeasurementFailureIndication  
  PROCEDURE ID { procedureCode id-commonMeasurementFailure, ddMode common }  
  CRITICALITY ignore  
}  
  
END
```

9.3.3 PDU Definitions

*** UNCHANGED TEXT IS OMITTED ***

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

IMPORTS

```
Active-Pattern-Sequence-Information,
AllocationRetentionPriority,
AllowedQueuingTime,
AlphaValue,
BLER,
Block-STTD-Indicator,
BindingID,
C-ID,
C-RNTI,
CCTrCH-ID,
CFN,
ClosedLoopModel-SupportIndicator,
ClosedLoopMode2-SupportIndicator,
Closedlooptimingadjustmentmode,
CN-CS-DomainIdentifier,
CN-PS-DomainIdentifier,
CNDomainType,
Cause,
CellParameterID,
ChipOffset,
CommonMeasurementType,
CommonMeasurementValue,
CommonMeasurementValueInformation,
CriticalityDiagnostics,
D-RNTI,
D-RNTI-ReleaseIndication,
DCH-FDD-Information,
DCH-ID,
DCH-InformationResponse,
DCH-TDD-Information,
DL-DPCH-SlotFormat,
DL-TimeslotISCP,
DL-Power,
DL-ScramblingCode,
DL-Timeslot-Information,
DL-TimeSlot-ISCP-Info,
DPCH-ID,
DRACControl,
DRXCycleLengthCoefficient,
```


DedicatedMeasurementType,
DedicatedMeasurementValue,
DedicatedMeasurementValueInformation,
DiversityControlField,
DiversityMode,
DSCH-FDD-Information,
DSCH-FDD-InformationResponse,
DSCH-FlowControlInformation,
DSCH-FlowControlItem,
DSCH-TDD-Information,
DSCH-ID,
SchedulingPriorityIndicator,
FACH-FlowControlInformation,
FDD-DCHs-to-Modify,
FDD-DL-ChannelisationCodeNumber,
FDD-DL-CodeInformation,
FDD-S-CCPCH-Offset,
FDD-TPC-DownlinkStepSize,
FirstRLS-Indicator,
FNReportingIndicator,
FrameHandlingPriority,
FrameOffset,
GA-AccessPointPosition,
GA-Cell,
IMSI,
InnerLoopDLPCStatus,
L3-Information,
LimitedPowerIncrease,
MaximumAllowedULTxPower,
MaxNrDLPhysicalchannels,
MaxNrOfUL-DPCHs,
MaxNrTimeslots,
MaxNrULPhysicalchannels,
MeasurementFilterCoefficient,
MeasurementID,
MidambleShiftAndBurstType,
MinimumSpreadingFactor,
MinUL-ChannelisationCodeLength,
MultiplexingPosition,
Neighbouring-GSM-CellInformation,
Neighbouring-UMTS-CellInformation,
NrOfDLchannelisationcodes,
PagingCause,
PagingRecordType,
PDSCHCodeMapping,
PayloadCRC-PresenceIndicator,
PowerAdjustmentType,
PowerOffset,
PrimaryCCPCH-RSCP,
PrimaryCPICH-EcNo,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,

PunctureLimit,
QE-Selector,
RANAP-RelocationInformation,
RB-Info,
RL-ID,
RL-Set-ID,
RNC-ID,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
Received-total-wide-band-power,
RxTimingDeviationForTA,
S-FieldLength,
S-RNTI,
SCH-TimeSlot,
SAI,
SN,
Secondary-CCPCH-Info,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
STTD-Indicator,
STTD-SupportIndicator,
AdjustmentPeriod,
ScaledAdjustmentRatio,
MaxAdjustmentStep,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-DCHs-to-Modify,
TDD-DL-Code-Information,
TDD-DPCHOffset,
TDD-PhysicalChannelOffset,
TDD-TPC-DownlinkStepSize,
TDD-UL-Code-Information,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TimeSlot,
TimingAdvanceApplied,
ToAWE,
ToAWS,
TransmitDiversityIndicator,
TransportBearerID,
TransportBearerRequestIndicator,
TFCS,
Transmission-Gap-Pattern-Sequence-Information,
Transmission-Gap-Pattern-Sequence-ScramblingCode-Information,
TransportFormatManagement,
TransportFormatSet,
TransportLayerAddress,
TrCH-SrcStatisticsDescr,

UARFCN,
UC-ID,
UL-DPCCH-SlotFormat,
UL-SIR,
UL-FP-Mode,
UL-PhysCH-SF-Variation,
UL-ScramblingCode,
UL-Timeslot-Information,
UL-TimeSlot-ISCP-Info,
URA-ID,
URA-Information,
USCH-ID,
USCH-Information
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,
maxNoOfUSCHs,
maxNrOfCCTrCHs,
maxNrOfDCHs,
maxNrOfTS,
maxNrOfDPCHs,
maxNrOfRLs,
maxNrOfRLSets,
maxNrOfRLs-1,
maxNrOfRLs-2,
maxNrOfULTs,
maxNrOfDLTs,

id-Active-Pattern-Sequence-Information,
id-AdjustmentRatio,
id-AllowedQueuingTime,
id-BindingID,
id-C-ID,
id-C-RNTI,
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,
id-CauseLevel-RL-SetupFailureFDD,
id-CauseLevel-RL-SetupFailureTDD,
id-ClosedLoopModel-SupportIndicator,
id-ClosedLoopMode2-SupportIndicator,
id-CNOriginatedPage-PagingRqst,
id-CommonMeasurementObjectType-CM-Rprt,
id-CommonMeasurementObjectType-CM-Rqst,
id-CommonMeasurementObjectType-CM-Rsp,
id-CommonMeasurementType,
id-CriticalityDiagnostics,
id-D-RNTI,
id-D-RNTI-ReleaseIndication,
id-DCHs-to-Add-FDD,
id-DCHs-to-Add-TDD,
id-DCH-DeleteList-RL-ReconfPrepFDD,
id-DCH-DeleteList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfRqstFDD,
id-DCH-DeleteList-RL-ReconfRqstTDD,
id-DCH-FDD-Information,
id-DCH-TDD-Information,
id-FDD-DCHs-to-Modify,
id-TDD-DCHs-to-Modify,
id-DCH-InformationResponse,
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-PhyChReconfRqstTDD,
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-ReconfRqstTDD,
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD,
id-FDD-DL-CodeInformation,
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-DSCHs-to-Add-FDD,
id-DSCHs-to-Add-TDD,
id-DSCH-DeleteList-RL-ReconfPrepTDD,
id-DSCH-Delete-RL-ReconfPrepFDD,
id-DSCH-FDD-Information,
id-DSCH-InformationListIE-RL-AdditionRspTDD,
id-DSCH-InformationListIEs-RL-SetupRspTDD,
id-DSCH-TDD-Information,
id-DSCH-FDD-InformationResponse,
id-DSCH-ModifyList-RL-ReconfPrepTDD,
id-DSCH-Modify-RL-ReconfPrepFDD,
id-DSCHsToBeAddedOrModified-FDD,
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD,
id-GA-AccessPointPosition,
id-GA-Cell,
id-IMSI,
id-InnerLoopDLPCStatus,
id-L3-Information,
id-AdjustmentPeriod,
id-MaxAdjustmentStep,
id-MeasurementFilterCoefficient,
id-MeasurementID,
id-Neighbouring-GSM-CellInformation,
id-PagingArea-PagingRqst,
id-FACH-FlowControlInformation,
id-PowerAdjustmentType,
id-ProcedureScope-DL-PC-Rqst,
id-PropagationDelay,
id-RANAP-RelocationInformation,
id-RL-Information-PhyChReconfRqstFDD,
id-RL-Information-PhyChReconfRqstTDD,
id-RL-Information-RL-AdditionRqstFDD,
id-RL-Information-RL-AdditionRqstTDD,
id-RL-Information-RL-DeletionRqst,
id-RL-Information-RL-FailureInd,
id-RL-Information-RL-ReconfPrepFDD,
id-RL-Information-RL-RestoreInd,
id-RL-Information-RL-SetupRqstFDD,
id-RL-Information-RL-SetupRqstTDD,
id-RL-InformationItem-DM-Rprt,
id-RL-InformationItem-DM-Rqst,
id-RL-InformationItem-DM-Rsp,
id-RL-InformationItem-RL-PreemptRequiredInd,
id-RL-InformationItem-RL-SetupRqstFDD,

id-RL-InformationList-RL-AdditionRqstFDD,
 id-RL-InformationList-RL-DeletionRqst,
 id-RL-InformationList-RL-PreemptRequiredInd,
 id-RL-InformationList-RL-ReconfPrepFDD,
 id-RL-InformationResponse-RL-AdditionRspTDD,
 id-RL-InformationResponse-RL-ReconfReadyTDD,
 id-RL-InformationResponse-RL-ReconfRspTDD,
 id-RL-InformationResponse-RL-SetupRspTDD,
 id-RL-InformationResponseItem-RL-AdditionRspFDD,
 id-RL-InformationResponseItem-RL-ReconfReadyFDD,
 id-RL-InformationResponseItem-RL-ReconfRspFDD,
 id-RL-InformationResponseItem-RL-SetupRspFDD,
 id-RL-InformationResponseList-RL-AdditionRspFDD,
 id-RL-InformationResponseList-RL-ReconfReadyFDD,
 id-RL-InformationResponseList-RL-ReconfRspFDD,
 id-RL-InformationResponseList-RL-SetupRspFDD,
 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-ReportCharacteristics,
 id-Reporting-Object-RL-FailureInd,
 id-Reporting-Object-RL-RestoreInd,
 id-RxTimingDeviationForTA,
 id-S-RNTI,
 id-SAI,
[id-SFN](#),
[id-SFNReportingIndicator](#),
 id-SRNC-ID,
 id-STD-SupportIndicator,
 id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
 id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
 id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
 id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
 id-timeSlot-ISCPList-DL-PC-Rqst-TDD,
 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-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
 id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
 id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,

```

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-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-Information,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
id-USCHs-to-Add,
id-USCH-DeleteList-RL-ReconfPrepTDD,
id-USCH-InformationListIE-RL-AdditionRspTDD,
id-USCH-InformationListIEs-RL-SetupRspTDD,
id-USCH-Information,
id-USCH-ModifyList-RL-ReconfPrepTDD,
id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD
FROM RNSAP-Constants;

```

```

**** UNCHANGED TEXT IS OMITTED ****

```

```

-- *****
--
-- COMMON MEASUREMENT INITIATION REQUEST
--
-- *****

```

```

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

```

```

CommonMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID      id-MeasurementID          CRITICALITY reject          TYPE      MeasurementID          PRESENCE mandatory
  } |
  { ID      id-CommonMeasurementObjectType-CM-Rqst          CRITICALITY reject          TYPE      CommonMeasurementObjectType-CM-Rqst          PRESENCE
  mandatory } |
}

```

```

-- This IE represents both the Common Measurement Object Type IE and the choice based on the Common Measurement Object Type
-- as described in the tabular message format in subclause 9.1.

```

```

{ ID id-CommonMeasurementType CRITICALITY reject TYPE CommonMeasurementType PRESENCE mandatory }|
{ ID id-MeasurementFilterCoefficient CRITICALITY reject TYPE MeasurementFilterCoefficient PRESENCE
optional }|
{ ID id-ReportCharacteristics CRITICALITY reject TYPE ReportCharacteristics PRESENCE mandatory
}|
{ ID id-SFNReportingIndicator CRITICALITY reject TYPE FNReportingIndicator PRESENCE mandatory
}|
{ ID id-SFN CRITICALITY reject TYPE SFN PRESENCE optional
},
...
}

CommonMeasurementInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

CommonMeasurementObjectType-CM-Rqst ::= CHOICE {
cell Cell-CM-Rqst,
...
}

Cell-CM-Rqst ::= SEQUENCE {
uC-ID uC-ID,
timeSlot TimeSlot OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { CellItem-CM-Rqst-ExtIEs } } OPTIONAL,
...
}

CellItem-CM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- COMMON MEASUREMENT INITIATION RESPONSE
--
-- *****

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

CommonMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-MeasurementID CRITICALITY ignore TYPE MeasurementID PRESENCE mandatory }|
{ ID id-CommonMeasurementObjectType-CM-Rsp CRITICALITY ignore TYPE CommonMeasurementObjectType-CM-Rsp PRESENCE optional
}|
{ ID id-SFN CRITICALITY ignore TYPE SFN PRESENCE optional }|
{ ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
...
}

```



```

CommonMeasurementInitiationResponse-
    ...
}

CommonMeasurementObjectType-CM-Rsp ::= CHOICE {
    cell Cell-CM-Rsp,
    ...
}

Cell-CM-Rsp ::= SEQUENCE {
    commonMeasurementValue CommonMeasurementValue,
    iE-Extensions ProtocolExtensionContainer { { CellItem-CM-Rsp-ExtIEs} } OPTIONAL,
    ...
}

CellItem-CM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON MEASUREMENT INITIATION FAILURE
--
-- *****

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

CommonMeasurementInitiationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID CRITICALITY ignore TYPE MeasurementID PRESENCE mandatory }|
    { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory }|
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

CommonMeasurementInitiationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON MEASUREMENT REPORT
--
-- *****

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

```

```

CommonMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
  { ID      id-MeasurementID      CRITICALITY ignore      TYPE      MeasurementID      PRESENCE mandatory }|
  { ID      id-CommonMeasurementObjectType-CM-Rprt  CRITICALITY ignore      TYPE      CommonMeasurementObjectType-CM-Rprt  PRESENCE mandatory
  }|
  { ID      id-SFN                  CRITICALITY ignore      TYPE      SFN                  PRESENCE optional },
  ...
}

CommonMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

CommonMeasurementObjectType-CM-Rprt ::= CHOICE {
  cell          Cell-CM-Rprt,
  ...
}

Cell-CM-Rprt ::= SEQUENCE {
  commonMeasurementValueInformation CommonMeasurementValueInformation,
  iE-Extensions          ProtocolExtensionContainer {{ CellItem-CM-Rprt-ExtIEs }} OPTIONAL,
  ...
}

CellItem-CM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON MEASUREMENT TERMINATION REQUEST
--
-- *****

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

CommonMeasurementTerminationRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID      id-MeasurementID      CRITICALITY ignore      TYPE      MeasurementID      PRESENCE mandatory},
  ...
}

CommonMeasurementTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON MEASUREMENT FAILURE INDICATION

```

```
--  
-- *****  
  
CommonMeasurementFailureIndication ::= SEQUENCE {  
    protocolIEs          ProtocolIE-Container    {{CommonMeasurementFailureIndication-IEs}},  
    protocolExtensions  ProtocolExtensionContainer {{CommonMeasurementFailureIndication-Extensions}} OPTIONAL,  
    ...  
}  
  
CommonMeasurementFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {  
    { ID      id-MeasurementID      CRITICALITY ignore      TYPE      MeasurementID      PRESENCE mandatory } |  
    { ID      id-Cause              CRITICALITY ignore      TYPE      Cause              PRESENCE mandatory } ,  
    ...  
}  
  
CommonMeasurementFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}
```

END

9.3.4 Information Element Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxCodeNumComp-1,
    maxFACHCountPlus1,
    maxIBSEG,
    maxNoOfDSCHs,
    maxNoOfUSCHs,
    maxNoTFCIGroups,
    maxNoCodeGroups,
    maxNrOfDCHs,
    maxNrOfDL-Codes,
    maxNrOfDLTs,
    maxNrOfDPCHs,
    maxNrOfErrors,
    maxNrOfFDDNeighboursPerRNC,
    maxNrOfMACcshSDU-Length,
    maxNrOfNeighbouringRNCs,
    maxNrOfTDDNeighboursPerRNC,
    maxNrOfTS,
    maxNrOfULTs,
    maxNrOfGSMNeighboursPerRNC,
    maxRateMatching,
    maxNrOfPoints,
    maxNoOfRB,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxCTFC,
    maxRNCinURA-1,
    maxTFCI1Combs,
    maxTFCI2Combs,
    maxTFCI2Combs-1,
    maxTGPS,
```

```

maxTTI-Count,

id-Neighbouring-UMTS-CellInformationItem
FROM RNSAP-Constants

Criticality,
ProcedureID,
ProtocolIE-ID,
TransactionID,
TriggeringMessage
FROM RNSAP-CommonDataTypes

ProtocolIE-Single-Container{},
ProtocolExtensionContainer{},
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

Active-Pattern-Sequence-Information ::= SEQUENCE {
    cmConfigurationChangeCFN          CFN,
    transmission-Gap-Pattern-Sequence-Status  Transmission-Gap-Pattern-Sequence-Status-List  OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Active-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

AdjustmentPeriod          ::= INTEGER(1..256)
-- Unit Frame

AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel          PriorityLevel,
    pre-emptionCapability  Pre-emptionCapability,
    pre-emptionVulnerability  Pre-emptionVulnerability,
    iE-Extensions          ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    ...
}

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

AllowedQueuingTime          ::= INTEGER (1..60)
-- seconds

AlphaValue          ::= INTEGER (0..8)
-- Actual value = Alpha / 8

-- B

```

```
BCC ::= BIT STRING (SIZE (3))

BCCH-ARFCN ::= INTEGER (0..1023)

BetaCD ::= INTEGER (0..15)

BindingID          ::= OCTET STRING (SIZE (1..4,...))

BLER               ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

Block-STTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

BSIC ::= SEQUENCE {
    nCC      NCC,
    bCC      BCC
}

-- C

Cause ::= CHOICE {
    radioNetwork      CauseRadioNetwork,
    transport         CauseTransport,
    protocol           CauseProtocol,
    misc               CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    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-temporarily-not-available,
    unspecified,
    invalid-CM-settings,
    reconfiguration-CFN-not-elapsed,
    number-of-DL-codes-not-supported,
    dedicated-transport-channel-type-not-supported,
    dl-shared-channel-type-not-supported,
    ul-shared-channel-type-not-supported,
    common-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-allocated,
    ...
}

CauseTransport ::= ENUMERATED {
    transport-resource-unavailable,
    unspecified,
    ...
}

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

CCTrCH-ID ::= INTEGER (0..15)

CellIndividualOffset ::= INTEGER (-20..20)

CellParameterID ::= INTEGER (0..127,...)

CFN ::= INTEGER (0..255)

CGI ::= SEQUENCE {
    LAI SEQUENCE {
        pLMN-ID PLMN-ID,
        lAC LAC,
        iE-Extensions ProtocolExtensionContainer { {LAI-ExtIEs} } OPTIONAL,
        ...
    },
}

```

```

    cI          CI,
    iE-Extensions ProtocolExtensionContainer { {CGI-ExtIEs} } OPTIONAL
}

```

```

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

```

```

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

```

```

ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding,
    ...
}

```

```

ChipOffset          ::= INTEGER (0..38399)

```

```

CI                  ::= OCTET STRING (SIZE (2))

```

```

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,
    ...
}

```

```

CommonMeasurementType ::= ENUMERATED {
    load,
    transmitted-carrier-power,
    received-total-wide-band-power,
    uplink-timeslot-iscp,
    ...
}

```



```

}

CommonMeasurementValue ::= CHOICE {
  loadValue          LoadValue,
  transmittedCarrierPowerValue  INTEGER(0..100),
  receivedTotalWideBandPowerValue  INTEGER(0..621),
  uplinkTimeslotISCPValue          UL-Timeslot-ISCP,
  ...
}

LoadValue ::= SEQUENCE {
  uplinkLoadValue      INTEGER(0..9),
  downlinkLoadValue    INTEGER(0..9)
}

CommonMeasurementValueInformation ::= CHOICE {
  measurementAvailable      CommonMeasurementAvailable,
  measurementnotAvailable   NULL
}

CommonMeasurementAvailable ::= SEQUENCE {
  commonmeasurementValue    CommonMeasurementValue,
  ie-Extensions              ProtocolExtensionContainer { { CommonMeasurementAvailableItem-ExtIEs} } OPTIONAL,
  ...
}

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

CRC-Size ::= ENUMERATED {
  v0,
  v8,
  v12,
  v16,
  v24,
  ...
}

CriticalityDiagnostics ::= SEQUENCE {
  procedureID          ProcedureID          OPTIONAL,
  triggeringMessage    TriggeringMessage    OPTIONAL,
  procedureCriticality Criticality          OPTIONAL,
  transactionID        TransactionID        OPTIONAL,
  iEsCriticalityDiagnostics    CriticalityDiagnostics-IE-List OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
  ...
}

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

```

```

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
  SEQUENCE {
    iECriticality          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,
  iE-Extensions    ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs} } OPTIONAL
}

```

```

CN-CS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

CN-PS-DomainIdentifier ::= SEQUENCE {
  pLMN-ID          PLMN-ID,
  LAC              LAC,
  rAC              RAC,
  iE-Extensions    ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL
}

```

```

CN-PS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

CNDomainType ::= ENUMERATED {
  cs-domain,
  ps-domain,
  dont-care,
  ...
}

```

-- See in [16]

```

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

```

-- D

```

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

```

```

DCH-FDD-InformationItem ::= SEQUENCE {
  payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
  ul-FP-Mode                   UL-FP-Mode,
  toAWS                         ToAWS,
  toAWE                         ToAWE,
}

```

Release 2000**168**

```

    dCH-SpecificInformationList
    iE-Extensions
    ...
}

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

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

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

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

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

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

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

DCH-InformationResponseItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

DCH-TDD-InformationItem ::= SEQUENCE {
    payloadCRC-PresenceIndicator
    ul-FP-Mode
    toAWS
    toAWE
    PayloadCRC-PresenceIndicator,
    UL-FP-Mode,
    ToAWS,
    ToAWE,

```

Release 2000**169**

```
dCH-SpecificInformationList          DCH-Specific-          TDD-InformationList,
iE-Extensions                        ProtocolExtensionContainer { {DCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
...
}

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

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

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

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

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               RSCP-Value, -- TDD only
rxTimingDeviationValue Rx-Timing-Deviation-Value, -- TDD only
roundTripTime      Round-Trip-Time-Value, -- FDD only
...
}

DedicatedMeasurementValueInformation ::= CHOICE {
```

Release 2000**170**

```
    measurementAvailable          DedicatedMeasurementAvailable,
    measurementnotAvailable       DedicatedMeasurementnotAvailable
}

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

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

DedicatedMeasurementnotAvailable ::= NULL

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

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

DiversityMode                     ::= ENUMERATED {
    none,
    sTTD,
    closedLoopModel1,
    closedLoopMode2,
    ...
}

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

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

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

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

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

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

```

}

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

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

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

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

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

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

DL-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

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

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

```

Release 2000**172**

```

DSCH-FDD-Information ::= SEQUENCE {
    dsch-Specific-Information
        pdSCH-RL-ID
        tFCS
        iE-Extensions
        ...
}

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

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

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

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

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

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

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

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

```

Release 2000**173**

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

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

DSCH-FlowControlItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

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

-- E

EventA ::= SEQUENCE {
    measurementTreshold      MeasurementThreshold,
    measurementHysteresisTime MeasurementHysteresisTime OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { {EventA-ExtIEs} } OPTIONAL,
    ...
}

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

EventB ::= SEQUENCE {
    measurementTreshold      MeasurementThreshold,
    measurementHysteresisTime MeasurementHysteresisTime OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { {EventB-ExtIEs} } OPTIONAL,
    ...
}
```


Release 2000**174**

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

EventC ::= SEQUENCE {
    measurementIncreaseDecreaseThreshold MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime MeasurementChangeTime,
    iE-Extensions ProtocolExtensionContainer { {EventC-ExtIEs} } OPTIONAL,
    ...
}

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

EventD ::= SEQUENCE {
    measurementIncreaseDecreaseThreshold MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime MeasurementChangeTime,
    iE-Extensions ProtocolExtensionContainer { {EventD-ExtIEs} } OPTIONAL,
    ...
}

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

EventE ::= SEQUENCE {
    measurementThreshold1 MeasurementThreshold,
    measurementThreshold2 MeasurementThreshold OPTIONAL,
    measurementHysteresisTime MeasurementHysteresisTime OPTIONAL,
    reportPeriodicity ReportPeriodicity OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {EventE-ExtIEs} } OPTIONAL,
    ...
}

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

EventF ::= SEQUENCE {
    measurementThreshold1 MeasurementThreshold,
    measurementThreshold2 MeasurementThreshold OPTIONAL,
    measurementHysteresisTime MeasurementHysteresisTime OPTIONAL,
    reportPeriodicity ReportPeriodicity OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {EventF-ExtIEs} } OPTIONAL,
    ...
}

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

-- F

FACH-FlowControlInformation ::= SEQUENCE (SIZE (1..16)) OF FACH-FlowControlInformationItem

```
FACH-FlowControlInformationItem ::= SEQUENCE {
    fACH-SchedulingPriority      SchedulingPriorityIndicator,
    mAC-c-sh-SDU-Lengths       MAC-c-sh-SDU-LengthList,
    fACH-InitialWindowSize     FACH-InitialWindowSize,
    iE-Extensions              ProtocolExtensionContainer { {FACH-FlowControlInformationItem-ExtIEs} } OPTIONAL,
    ...
}
```

```
FACH-FlowControlInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
FACH-InitialWindowSize      ::= INTEGER { unlimited(255) } (0..255)
-- Number of frames MAC-c-sh SDUs.
-- 255 = Unlimited number of FACH data frames
```

FACH-PCH-InformationList ::= SEQUENCE (SIZE(1..maxFACHCountPlus1)) OF FACH-PCH-InformationItem

```
FACH-PCH-InformationItem ::= SEQUENCE {
    transportFormatSet      TransportFormatSet,
    iE-Extensions          ProtocolExtensionContainer { { FACH-PCH-InformationItem-ExtIEs} } OPTIONAL,
    ...
}
```

```
FACH-PCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

FDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifyItem

```
FDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode              UL-FP-Mode          OPTIONAL,
    toAWS                   ToAWS              OPTIONAL,
    toAWE                   ToAWE              OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    dCH-SpecificInformationList FDD-DCHs-to-ModifySpecificInformationList,
    iE-Extensions          ProtocolExtensionContainer { {FDD-DCHs-to-ModifyItem-ExtIEs} } OPTIONAL,
    ...
}
```

```
FDD-DCHs-to-ModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

FDD-DCHs-to-ModifySpecificInformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifySpecificItem

```
FDD-DCHs-to-ModifySpecificItem ::= SEQUENCE {
    dCH-ID                  DCH-ID,
    ul-TransportformatSet   TransportFormatSet      OPTIONAL,
```

Release 2000**176**

```
dl-TransportformatSet                TransportFormatSet    OPTIONAL,
allocationRetentionPriority            AllocationRetentionPriority    OPTIONAL,
frameHandlingPriority                  FrameHandlingPriority    OPTIONAL,
dRACControl                            DRACControl            OPTIONAL,
iE-Extensions                          ProtocolExtensionContainer { {FDD-DCHs-to-ModifySpecificItem-ExtIEs} } OPTIONAL,
...
}

FDD-DCHs-to-ModifySpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

FDD-DL-ChannelisationCodeNumber ::= INTEGER (0..511)
-- According to the mapping in [27]. The maximum value is equal to the DL spreading factor -1--

FDD-DL-CodeInformation ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF FDD-DL-CodeInformationItem

FDD-DL-CodeInformationItem ::= 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 { {FDD-DL-CodeInformationItem-ExtIEs} } OPTIONAL,
...
}

FDD-DL-CodeInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

FDD-S-CCPCH-Offset                    ::= INTEGER (0..149)

FDD-TPC-DownlinkStepSize ::= ENUMERATED {
step-size0-5,
step-size1,
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)
```

Release 2000**177**

```
FrameOffset ::= INTEGER (0..255)
-- Frames

-- G

GapLength ::= INTEGER (1..14)
-- Unit Slot

GapDuration ::= INTEGER (1..144,...)
-- Unit Frame

GA-Cell ::= SEQUENCE (SIZE (1..maxNrOfPoints)) OF
  SEQUENCE {
    geographicalCoordinate GeographicalCoordinate,
    iE-Extensions ProtocolExtensionContainer { {GA-Cell-ExtIEs} } OPTIONAL,
    ...
  }

GA-Cell-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

GA-AccessPointPosition ::= SEQUENCE {
  geographicalCoordinate GeographicalCoordinate,
  iE-Extensions ProtocolExtensionContainer { {GA-AccessPoint-ExtIEs} } OPTIONAL,
  ...
}

GA-AccessPoint-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

GeographicalCoordinate ::= SEQUENCE {
  latitudeSign ENUMERATED { north, south },
  latitude INTEGER (0..8388607),
  longitude INTEGER (-8388608..8388607),
  iE-Extensions ProtocolExtensionContainer { {GeographicalCoordinate-ExtIEs} } OPTIONAL,
  ...
}

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

GSM-Output-Power ::= SEQUENCE { -- Value range (and type?) to be aligned with WG2!!!!!!!!!!!!!!
}

-- H

-- I

IB-SchedulingInformation ::= SEQUENCE {
  iB-SG-Rep IB-SG-REP,
```

Release 2000**178**

```
    iB-segmentInformationList      IB-          SegmentInformationList,
    iE-Extensions                  ProtocolExtensionContainer { { IB-SchedulingInformation-ExtIEs } } OPTIONAL,
    ...
}

IB-SchedulingInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IB-SegmentInformationList ::= SEQUENCE (SIZE(1..maxIBSEG)) OF IB-SegmentInformationItem

IB-SegmentInformationItem ::= SEQUENCE {
    iB-SG-POS                      IB-SG-POS,
    iE-Extensions                  ProtocolExtensionContainer { { IB-SegmentInformationItem-ExtIEs } } OPTIONAL,
    ...
}

IB-SegmentInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IB-SG-POS ::= INTEGER (0..4094)
-- Only even positions allowed

IB-SG-REP ::= ENUMERATED {rep4, rep8, rep16, rep32, rep64, rep128, rep256, rep512, rep1024, rep2048, rep4096}

IMSI ::= OCTET STRING (SIZE(3..8))

InnerLoopDLPCStatus ::= ENUMERATED {active, inactive}

-- J
-- K
-- L

LAC ::= OCTET STRING (SIZE (2)) --(EXCEPT ('0000'H|'FFFF'H))

LimitedPowerIncrease ::= ENUMERATED {
    used,
    not-used
}

Load-Value-IncrDecrThresh ::= INTEGER(0..9)
Load-Value ::= INTEGER(0..9)

L3-Information ::= BIT STRING

-- M

MaxNrOfUL-DPCHs ::= INTEGER (1..6)

MAC-c-sh-SDU-Length ::= INTEGER (1..5000)
```

```

MAC-c-sh-SDU-LengthList ::=
OF MAC-c-sh-SDU-Length

MaximumAllowedULTxPower ::= INTEGER (-50..33)

MaxNrDLPhysicalchannels ::= INTEGER (1..224)

MaxNrTimeslots ::= INTEGER (1..14)

MaxNrULPhysicalchannels ::= INTEGER (1..2)

MaxTFCIvalue ::= INTEGER (1..1023)

MeasurementAvailabilityIndicator ::= ENUMERATED {
    measurementAvailable,
    measurementnotAvailable
}

MeasurementFilterCoefficient ::= ENUMERATED{k0, k1, k2, k3, k4, k5, k6, k7, k8, k9, k11, k13, k15, k17, k19,...}
-- Measurement Filter Coefficient to be used for measurement

MeasurementID ::= INTEGER (0..1048575)

MinimumSpreadingFactor ::= INTEGER (1..16)

Multi-code-info ::= INTEGER (1..16)

MultipleURAsIndicator ::= ENUMERATED {
    multiple-URAs-exist,
    single-URA-exists
}

MaxAdjustmentStep ::= INTEGER(1..10)
-- Unit Slot

MeasurementChangeTime ::= INTEGER (1..6000,...)
-- The MeasurementChangeTime gives the MeasurementChangeTime
-- in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10 ms

MeasurementHysteresisTime ::= INTEGER (1..6000,...)
-- The MeasurementHysteresisTime gives the
-- MeasurementHysteresisTime in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10ms

MeasurementIncreaseDecreaseThreshold ::= CHOICE {
    sir SIR-Value-IncrDecrThres,
    sir-error SIR-Error-Value-IncrDecrThres,
    transmitted-code-power Transmitted-Code-Power-Value-IncrDecrThres,
    rscp RSCP-Value-IncrDecrThres,
    round-trip-time Round-Trip-Time-IncrDecrThres,

```

```

.../
load                               Load-Value-IncrDecrThres,
transmitted-carrier-power          Transmitted-Carrier-Power-Value-IncrDecrThres,
received-total-wide-band-power     Received-Total-Wideband-Power-Value-IncrDecrThres,
ul-timeslot-iscp                   UL-Timeslot-ISCP-Value-IncrDecrThres
}

MeasurementThreshold ::= CHOICE {
    sir                               SIR-Value,
    sir-error                         SIR-Error-Value,
    transmitted-code-power           Transmitted-Code-Power-Value,
    rscp                              RSCP-Value,
    rx-timing-deviation              Rx-Timing-Deviation-Value,
    round-trip-time                  Round-Trip-Time-Value,
    .../
    load                               Load-Value,
    transmitted-carrier-power          Transmitted-Carrier-Power-Value,
    received-total-wide-band-power     Received-Total-Wideband-Power-Value,
    ul-timeslot-iscp                   UL-Timeslot-ISCP-Value
}

MidambleShiftAndBurstType ::= CHOICE {
    type1                             CHOICE {
        defaultMidamble              NULL,
        commonMidamble                NULL,
        ueSpecificMidamble            MidambleShiftLong,
        ...
    },
    type2                             CHOICE {
        defaultMidamble              NULL,
        commonMidamble                NULL,
        ueSpecificMidamble            MidambleShiftShort,
        ...
    },
    type3                             CHOICE {
        defaultMidamble              NULL,
        ueSpecificMidamble            MidambleShiftLong,
        ...
    },
    ...
}

MidambleShiftLong ::= INTEGER (0..15)

MidambleShiftShort ::= INTEGER (0..5)

MinUL-ChannelisationCodeLength ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
}

```

```

    v64,
    v128,
    v256
}

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- N

NCC ::= BIT STRING (SIZE (3))

Neighbouring-UMTS-CellInformation ::= SEQUENCE (SIZE (1..maxNrOfNeighbouringRNCs)) OF ProtocolIE-Single-Container {{ Neighbouring-UMTS-CellInformationItemIE }}

Neighbouring-UMTS-CellInformationItemIE RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-UMTS-CellInformationItem    CRITICALITY ignore    TYPE    Neighbouring-UMTS-CellInformationItem    PRESENCE mandatory }
}

Neighbouring-UMTS-CellInformationItem ::= SEQUENCE {
    rNC-ID                                RNC-ID,
    cN-PS-DomainIdentifier                CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier                CN-CS-DomainIdentifier    OPTIONAL,
    neighbouring-FDD-CellInformation      Neighbouring-FDD-CellInformation    OPTIONAL,
    neighbouring-TDD-CellInformation      Neighbouring-TDD-CellInformation    OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { {Neighbouring-UMTS-CellInformationItem-ExtIEs} } OPTIONAL,
    ...
}

Neighbouring-UMTS-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Neighbouring-FDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF Neighbouring-FDD-CellInformationItem

Neighbouring-FDD-CellInformationItem ::= 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,
    closedLoopMode1-SupportIndicator      ClosedLoopMode1-SupportIndicator    OPTIONAL,
    closedLoopMode2-SupportIndicator      ClosedLoopMode2-SupportIndicator    OPTIONAL,
    iE-Extensions                         ProtocolExtensionContainer { { Neighbouring-FDD-CellInformationItem-ExtIEs } } OPTIONAL,
    ...
}

```



```

Neighbouring-FDD-CellInformationItem-      ExtIEs RNSAP-      PROTOCOL-EXTENSION ::= {
}
...
}

Neighbouring-GSM-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfGSMNeighboursPerRNC,...)) OF Neighbouring-GSM-CellInformationItem

Neighbouring-GSM-CellInformationItem ::= SEQUENCE {
  CGI                      CGI,
  q-Offset-Serving-to-Neighbour  Q-Offset-Serving-to-Neighbour,
  q-RxlevMin                Q-RxlevMin,
  maximumAllowedULTxPower    MaximumAllowedULTxPower,
  bSIC                       BSIC,
  bCCH-ARFCN                 BCCCH-ARFCN,
  gSM-Output-Power           GSM-Output-Power OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { { Neighbouring-GSM-CellInformationItem-ExtIEs} } OPTIONAL,
  ...
}

Neighbouring-GSM-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
...
}

Neighbouring-TDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfTDDNeighboursPerRNC,...)) OF Neighbouring-TDD-CellInformationItem

Neighbouring-TDD-CellInformationItem ::= 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    OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { { Neighbouring-TDD-CellInformationItem-ExtIEs} } OPTIONAL,
  ...
}

Neighbouring-TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
...
}

NrOfDLchannelisationcodes ::= INTEGER (1..8)

NrOfTransportBlocks ::= INTEGER (0..512)

-- O
-- P

```

```

PagingCause ::= ENUMERATED {
    terminating-conversational-call,
    terminating-streaming-call,
    terminating-interactive-call,
    terminating-background-call,
    sms,
    ...
}
-- See in [16]

PagingRecordType ::= ENUMERATED {
    imsi-gsm-map,
    tmsi-gsm-map,
    p-tmsi-gsm-map,
    imsi-ds-41,
    tmsi-ds-41,
    ...
}
-- See 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,
    signallingMethod           PDSCHCodeMapping-SignallingMethod,
    iE-Extensions              ProtocolExtensionContainer { { PDSCHCodeMapping-ExtIEs } } OPTIONAL,
    ...
}

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

PDSCHCodeMapping-SignallingMethod ::= CHOICE {
    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,

```

Release 2000**184**

```
multi-code-info      Multi-      code-info,
start-CodeNumber    CodeNumber,
stop-CodeNumber     CodeNumber,
iE-Extensions       ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-CodeRange-ExtIEs } } OPTIONAL,
...
}

PDSCHCodeMapping-SignallingMethod-CodeRange-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

PDSCHCodeMapping-SignallingMethod-TFCIRange ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
SEQUENCE {
maxTFCIvalue        MaxTFCIvalue,
spreadingFactor     SpreadingFactor,
multi-code-info     Multi-code-info,
codeNumber          CodeNumber,
iE-Extensions       ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-TFCIRange-ExtIEs } } OPTIONAL,
...
}

PDSCHCodeMapping-SignallingMethod-TFCIRange-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

PDSCHCodeMapping-SignallingMethod-Explicit ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF
SEQUENCE {
spreadingFactor     SpreadingFactor,
multi-code-info     Multi-code-info,
codeNumber          CodeNumber,
iE-Extensions       ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-Explicit-ExtIEs } } OPTIONAL,
...
}

PDSCHCodeMapping-SignallingMethod-Explicit-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Periodic ::= SEQUENCE {
reportPeriodicity   ReportPeriodicity,
iE-Extensions       ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
...
}

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

PLMN-ID ::= OCTET STRING (SIZE(3))

PowerAdjustmentType ::= ENUMERATED {
none,
common,
```

```
    individual
}

PowerOffset          ::= INTEGER (0..24)

Pre-emptionCapability ::= ENUMERATED {
    shall-not-trigger-pre-emption,
    may-trigger-pre-emption
}

Pre-emptionVulnerability ::= ENUMERATED {
    not-pre-emptable,
    pre-emptable
}

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

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

PrimaryCCPCH-RSCP       ::= INTEGER (0..91)
-- According to mapping in [14]

PrimaryScramblingCode   ::= INTEGER (0..511)

PriorityLevel           ::= INTEGER (0..15)
-- 0 = spare, 1 = highest priority, ...14 = lowest priority and 15 = no priority

PropagationDelay        ::= INTEGER (0..255)

PunctureLimit          ::= INTEGER (0..15)
-- 0: 40%; 1: 44%; ... 14: 96%; 15: 100

-- Q

QE-Selector ::= ENUMERATED {
    selected,
    non-selected
}

Q-Offset-Serving-to-Neighbour ::= INTEGER (-50..50)

Q-RxlevMin ::= INTEGER (-58..-13)
-- Actual value = (IE value * 2) + 1
-- Range -115 to -25 dBm, Step 2 dB

-- R

RAC                    ::= OCTET STRING (SIZE(1))

RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute  ::= INTEGER (1..maxRateMatching)
```

```
RB-Identity ::= INTEGER (0..31)

RB-Info ::= SEQUENCE (SIZE(1..maxNoOfRB)) OF RB-Identity

Received-Total-Wideband-Power-Value ::= Received-total-wide-band-power

Received-Total-Wideband-Power-Value-IncrDecrThres ::= INTEGER(0..620)
-- Unit dB Step 0.1dB
-- e.g. value 100 means 10dB

RefTFCNumber ::= INTEGER (0..15)

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64
}

RepetitionNumber ::= INTEGER (1..256)

ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF,
    ...
}

ReportPeriodicity ::= CHOICE {
    ten-msec          INTEGER (1..6000,...),
    -- The Report Periodicity gives the reporting periodicity in number of 10 ms periods.
    -- E.g. value 6000 means 60000ms (i.e. 1min)
    -- Unit ms, Step 10ms
    min               INTEGER (1..60,...),
    -- Unit min, Step 1min
    ...
}

RL-ID ::= INTEGER (0..31)

RL-Set-ID ::= INTEGER (0..31)
```

```

RNC-ID ::= INTEGER (0..4095)

Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)

Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [23]

RSCP-Value ::= INTEGER (0..81)
-- According to mapping in [24]

RSCP-Value-IncrDecrThres ::= INTEGER (0..80)

Received-total-wide-band-power ::= INTEGER (0..621)
-- According to mapping in [23]

RxTimingDeviationForTA ::= INTEGER (0..127)
-- As specified in [5], ch. 6.2.7.6

Rx-Timing-Deviation-Value ::= INTEGER (0..2047)

-- S

SAC ::= OCTET STRING (SIZE (2))

SAI ::= SEQUENCE {
    pLMN-ID PLMN-ID,
    LAC LAC,
    sAC SAC,
    iE-Extensions ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}

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

SCH-TimeSlot ::= INTEGER (0..6)

ScaledAdjustmentRatio ::= INTEGER(0..100)
-- AdjustmentRatio = ScaledAdjustmentRatio / 100

Secondary-CCPCH-Info ::= 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,
    iB-schedulingInformation IB-SchedulingInformation,

```

Release 2000**188**

```
iE-Extensions
...
}

Secondary-CCPCH-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

SecondInterleavingMode ::= ENUMERATED {
frame-related,
timeslot-related,
...
}

SIR-Error-Value ::= INTEGER (0..125)

SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)

SIR-Value ::= INTEGER (0..63)
-- According to mapping in 25.215/25.225

SIR-Value-IncrDecrThres ::= INTEGER (0..62)

SecondaryCCPCH-SlotFormat ::= INTEGER (0..17,...)
-- refer to 25.211

SN ::= TimeSlot

S-FieldLength ::= ENUMERATED {
v1,
v2,
...
}

SpreadingFactor ::= INTEGER (4| 8| 16| 32| 64| 128| 256)

S-RNTI ::= INTEGER (0..1048575)
-- From 0 to 2^20-1

SSDT-CellID ::= ENUMERATED {
a,
b,
c,
d,
e,
f,
g,
h
}

SSDT-CellID-Length ::= ENUMERATED {
short,
medium,
```

```
    long
}

SSDT-Indication ::= ENUMERATED {
    sSDT-active-in-the-UE,
    sSDT-not-active-in-the-UE
}

SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-supported,
    sSDT-not-supported
}

STTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

STTD-SupportIndicator ::= ENUMERATED {
    sTTD-Supported,
    sTTD-not-Supported
}

SyncCase ::= INTEGER (1..2,...)

-- T

TDD-ChannelisationCode ::= ENUMERATED {
    chCode1div1,
    chCode2div1,
    chCode2div2,
    chCode4div1,
    chCode4div2,
    chCode4div3,
    chCode4div4,
    chCode8div1,
    chCode8div2,
    chCode8div3,
    chCode8div4,
    chCode8div5,
    chCode8div6,
    chCode8div7,
    chCode8div8,
    chCode16div1,
    chCode16div2,
    chCode16div3,
    chCode16div4,
    chCode16div5,
    chCode16div6,
    chCode16div7,
    chCode16div8,
    chCode16div9,
    chCode16div10,
```



```

    chCode16div11,
    chCode16div12,
    chCode16div13,
    chCode16div14,
    chCode16div15,
    chCode16div16,
    ...
}

TDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF TDD-DCHs-to-ModifyItem

TDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode                UL-FP-Mode    OPTIONAL,
    toAWS                     ToAWS        OPTIONAL,
    toAWE                     ToAWE        OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    dCH-SpecificInformationList TDD-DCHs-to-ModifySpecificInformationList,
    iE-Extensions            ProtocolExtensionContainer { {TDD-DCHs-to-ModifyItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DCHs-to-ModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DCHs-to-ModifySpecificInformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF TDD-DCHs-to-ModifySpecificItem

TDD-DCHs-to-ModifySpecificItem ::= 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,
    iE-Extensions            ProtocolExtensionContainer { {TDD-DCHs-to-ModifySpecificItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DCHs-to-ModifySpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DL-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationItem

TDD-DL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID                  DPCH-ID,
    tDD-ChannelisationCode   TDD-ChannelisationCode,
    iE-Extensions            ProtocolExtensionContainer { {TDD-DL-Code-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DL-Code-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```
    ...
}

TDD-DPCHOffset ::= CHOICE {
    initialOffset      INTEGER (0..255),
    noinitialOffset    INTEGER (0..63)
}

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}

TDD-UL-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationItem

TDD-UL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions          ProtocolExtensionContainer { {TDD-UL-Code-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    ...
}

TFCI-Presence ::= ENUMERATED {
    present,
    not-present
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

TGD ::= INTEGER (0|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence

TGPRC ::= INTEGER (0..63)
-- 0 = infinity
```

```

TGPSID          ::= INTEGER (1.. maxTGPS)

TGSN            ::= INTEGER (0..14)

TimeSlot        ::= INTEGER (0..14)

TimingAdvanceApplied ::= ENUMERATED {
    yes,
    no
}

ToAWE           ::= INTEGER (0..2559)

ToAWS           ::= INTEGER (0..1279)

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength  OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        tGPL2           GapDuration OPTIONAL,
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method Downlink-Compressed-Mode-Method  OPTIONAL,
        -- This IE is only present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method Uplink-Compressed-Mode-Method  OPTIONAL,
        -- This IE is only present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
        dL-FrameType    DL-FrameType,
        delta-SIR1       DeltaSIR,
        delta-SIR-after1 DeltaSIR,
        delta-SIR2       DeltaSIR  OPTIONAL,
        delta-SIR-after2 DeltaSIR  OPTIONAL,
        iE-Extensions    ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-ScramblingCode-Information ::= ENUMERATED{
    code-change,
    nocode-change
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGPRC           TGPRC,
        tGCFN           CFN,
    }

```

```

    iE-Extensions
    Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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
}

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- according to mapping in [23] and [24]

Transmitted-Carrier-Power-Value-IncrDecrThres ::= INTEGER(0..100)
-- according to mapping in [23] and [24]

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,

```

```

    iE-Extensions
    SignalledGainFactors-ExtIEs } } OPTIONAL,
    ...
  },
  refTFCNumber          RefTFCNumber,
  ...
}

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

TFCS ::= SEQUENCE {
  tFCSvalues            CHOICE {
    no-Split-in-TFCI   TFCS-TFCSList,
    split-in-TFCI      SEQUENCE {
      transportFormatCombination-DCH   TFCS-DCHList,
      signallingMethod                  CHOICE {
        tFCI-Range                      TFCS-MappingOnDSCHList,
        explicit                          TFCS-DSCHList,
        ...
      },
      iE-Extensions                      ProtocolExtensionContainer { { Split-in-TFCI-ExtIEs } } OPTIONAL,
      ...
    },
    ...
  },
  iE-Extensions          ProtocolExtensionContainer { { TFCS-ExtIEs } } OPTIONAL,
  ...
}

Split-in-TFCI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCS)) OF
  SEQUENCE {
    cTFC                TFCS-CTFC,
    tFC-Beta            TransportFormatCombination-Beta    OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs } } OPTIONAL,
    ...
  }

TFCS-TFCSList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TFCS-CTFC ::= CHOICE {
  ctfc2bit                INTEGER (0..3),

```

Release 2000**195**

```

ctfc4bit          INTEGER (0..15),
ctfc6bit          INTEGER (0..63),
ctfc8bit          INTEGER (0..255),
ctfc12bit         INTEGER (0..4095),
ctfc16bit         INTEGER (0..65535),
ctfcmaxbit        INTEGER (0..maxCTFC)
}

TFCS-DCHList ::= SEQUENCE (SIZE (1..maxTFCCICombs)) OF
  SEQUENCE {
    cTFC          TFCS-CTFC,
    iE-Extensions ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs } } OPTIONAL,
    ...
  }

TFCS-DCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TFCS-MappingOnDSCHList ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
  SEQUENCE {
    maxTFCI-field2-Value      TFCS-MaxTFCI-field2-Value,
    cTFC-DSCH                 TFCS-CTFC,
    iE-Extensions             ProtocolExtensionContainer { { TFCS-MappingOnDSCHList-ExtIEs } } OPTIONAL,
    ...
  }

TFCS-MappingOnDSCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxTFCI2Combs-1)

TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF
  SEQUENCE {
    cTFC-DSCH          TFCS-CTFC,
    iE-Extensions     ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs } } 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
SEQUENCE {
    nrOfTransportBlocks      NrOfTransportBlocks,
    transportBlockSize      TransportBlockSize OPTIONAL
    -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
    mode                     TransportFormatSet-ModeDP,
    iE-Extensions            ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd                     TDD-TransportFormatSet-ModeDP,
    notApplicable           NULL,
    ...
}

TDD-TransportFormatSet-ModeDP ::= SEQUENCE {
    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.
    iE-Extensions                          ProtocolExtensionContainer { {TDD-TransportFormatSet-ModeDP-ExtIEs} } OPTIONAL,
    ...
}

TDD-TransportFormatSet-ModeDP-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransmissionTimeIntervalInformation ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
SEQUENCE {
    transmissionTimeInterval      TransmissionTimeIntervalDynamic,
    iE-Extensions                ProtocolExtensionContainer { {TransmissionTimeIntervalInformation-ExtIEs} } OPTIONAL,
    ...
}

TransmissionTimeIntervalInformation-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 {
    transmissionTime      TransmissionTimeIntervalSemiStatic,
    channelCoding          ChannelCodingType,
    codingRate             CodingRate OPTIONAL
    -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
    rateMatchingAttribute RateMatchingAttribute,
    cRC-Size              CRC-Size,
    mode                  TransportFormatSet-ModeSSP,
    iE-Extensions         ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd                SecondInterleavingMode,
    notApplicable      NULL,
    ...
}

TransportLayerAddress ::= BIT STRING (SIZE(1..160, ...))

TrCH-SrcStatisticsDescr ::= ENUMERATED {
    speech,
    rRC,
    unknown,
    ...
}

TxDiversityIndicator ::= ENUMERATED {
    true,
    false
}

-- U

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

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

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

UL-Timeslot-InformationItem ::= SEQUENCE {

```


Release 2000**198**

```

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

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

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

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

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

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

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

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

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

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

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

```

Release 2000**199**

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

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

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

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

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

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

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

UL-TimeslotISCP ::= INTEGER (0..81)
-- According to mapping in [14]

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

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

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

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

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

```

}

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

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

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

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

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

-- V
-- W
-- X
-- Y
-- Z

END

```

9.3.5 Common Definitions

```

-- *****
--
-- Common definitions
--
-- *****

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****

```

```

--
-- Extension constants
--
-- *****

maxPrivateIEs          INTEGER ::= 65535
maxProtocolExtensions  INTEGER ::= 65535
maxProtocolIEs        INTEGER ::= 65535

-- *****
--
-- Common Data Types
--
-- *****

Criticality      ::= ENUMERATED { reject, ignore, notify }

Presence        ::= ENUMERATED { optional, conditional, mandatory }

PrivateIE-ID    ::= CHOICE {
    local          INTEGER (0.. maxPrivateIEs),
    global         OBJECT IDENTIFIER
}

ProcedureCode   ::= INTEGER (0..255)

ProcedureID ::= SEQUENCE {
    procedureCode   ProcedureCode,
    ddMode          ENUMERATED { tdd, fdd, common, ... }
}

ProtocolExtensionID ::= INTEGER (0..maxProtocolExtensions)

ProtocolIE-ID    ::= INTEGER (0..maxProtocolIEs)

TransactionID   ::= CHOICE {
    shortTransActionId  INTEGER (0..127),
    longTransActionId   INTEGER (0..32767)
}

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome, outcome }

END

```

9.3.6 Constant Definitions

```

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

```

```

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes;

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

id-commonTransportChannelResourcesInitialisation      ProcedureCode ::= 0
id-commonTransportChannelResourcesRelease             ProcedureCode ::= 1
id-compressedModeCommand                             ProcedureCode ::= 2
id-downlinkPowerControl                              ProcedureCode ::= 3
id-downlinkPowerTimeslotControl                      ProcedureCode ::= 4
id-downlinkSignallingTransfer                        ProcedureCode ::= 5
id-errorIndication                                  ProcedureCode ::= 6
id-measurementFailure                               ProcedureCode ::= 7
id-measurementInitiation                            ProcedureCode ::= 8
id-measurementReporting                              ProcedureCode ::= 9
id-measurementTermination                           ProcedureCode ::= 10
id-paging                                            ProcedureCode ::= 11
id-physicalChannelReconfiguration                   ProcedureCode ::= 12
id-privateMessage                                   ProcedureCode ::= 13
id-radioLinkAddition                                ProcedureCode ::= 14
id-radioLinkDeletion                                ProcedureCode ::= 15
id-radioLinkFailure                                 ProcedureCode ::= 16
id-radioLinkPreemption                              ProcedureCode ::= 17
id-radioLinkRestoration                             ProcedureCode ::= 18
id-radioLinkSetup                                   ProcedureCode ::= 19
id-relocationCommit                                 ProcedureCode ::= 20
id-synchronisedRadioLinkReconfigurationCancellation ProcedureCode ::= 21
id-synchronisedRadioLinkReconfigurationCommit        ProcedureCode ::= 22
id-synchronisedRadioLinkReconfigurationPreparation   ProcedureCode ::= 23
id-unsynchronisedRadioLinkReconfiguration            ProcedureCode ::= 24
id-uplinkSignallingTransfer                          ProcedureCode ::= 25
id-commonMeasurementFailure                          ProcedureCode ::= 26
id-commonMeasurementInitiation                       ProcedureCode ::= 27
id-commonMeasurementReporting                        ProcedureCode ::= 28
id-commonMeasurementTermination                     ProcedureCode ::= 29

-- *****
--

```

Release 2000

203

```
-- Lists
--
-- *****

maxCodeNumComp-1          INTEGER ::= 255
maxRateMatching           INTEGER ::= 256
maxNoCodeGroups           INTEGER ::= 256
maxNoOfDSCHs              INTEGER ::= 10
maxNoOfFRB                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
maxNrOfULTs               INTEGER ::= 15
maxNrOfDLTs               INTEGER ::= 15
maxRNCinURA-1           INTEGER ::= 15
maxTTI-Count              INTEGER ::= 4
maxCTFC                   INTEGER ::= 16777215
maxNrOfNeighbouringRNCs   INTEGER ::= 10
maxNrOfFDDNeighboursPerRNC INTEGER ::= 256
maxNrOfGSMNeighboursPerRNC 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
--
-- *****

id-AllowedQueuingTime     ProtocolIE-ID ::= 4
id-BindingID              ProtocolIE-ID ::= 5
id-C-ID                   ProtocolIE-ID ::= 6
id-C-RNTI                 ProtocolIE-ID ::= 7
id-CFN                    ProtocolIE-ID ::= 8
id-CN-CS-DomainIdentifier ProtocolIE-ID ::= 9
```

id-CN-PS-DomainIdentifier	ProtocolIE-ID ::= 10
id-Cause	ProtocolIE-ID ::= 11
id-CriticalityDiagnostics	ProtocolIE-ID ::= 20
id-D-RNTI	ProtocolIE-ID ::= 21
id-D-RNTI-ReleaseIndication	ProtocolIE-ID ::= 22
id-DCHs-to-Add-FDD	ProtocolIE-ID ::= 26
id-DCHs-to-Add-TDD	ProtocolIE-ID ::= 27
id-DCH-DeleteList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 30
id-DCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 31
id-DCH-DeleteList-RL-ReconfRqstFDD	ProtocolIE-ID ::= 32
id-DCH-DeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 33
id-DCH-FDD-Information	ProtocolIE-ID ::= 34
id-DCH-TDD-Information	ProtocolIE-ID ::= 35
id-FDD-DCHs-to-Modify	ProtocolIE-ID ::= 39
id-TDD-DCHs-to-Modify	ProtocolIE-ID ::= 40
id-DCH-InformationResponse	ProtocolIE-ID ::= 43
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD	ProtocolIE-ID ::= 44
id-DL-CCTrCH-InformationListItem-RL-ReconfReadyTDD	ProtocolIE-ID ::= 45
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 46
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 47
id-DL-CCTrCH-InformationListItem-PhyChReconfRqstTDD	ProtocolIE-ID ::= 48
id-DL-CCTrCH-InformationListItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 49
id-DL-CCTrCH-InformationListItem-RL-SetupRspTDD	ProtocolIE-ID ::= 50
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 51
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 52
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 53
id-FDD-DL-CodeInformation	ProtocolIE-ID ::= 54
id-DL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 59
id-DL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 60
id-DL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 61
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD	ProtocolIE-ID ::= 62
id-DL-DPCH-InformationItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 63
id-DL-DPCH-InformationItem-RL-SetupRspTDD	ProtocolIE-ID ::= 64
id-DLReferencePower	ProtocolIE-ID ::= 67
id-DLReferencePowerList-DL-PC-Rqst	ProtocolIE-ID ::= 68
id-DL-ReferencePowerInformation-DL-PC-Rqst	ProtocolIE-ID ::= 69
id-DRXCycleLengthCoefficient	ProtocolIE-ID ::= 70
id-DedicatedMeasurementObjectType-DM-Rprt	ProtocolIE-ID ::= 71
id-DedicatedMeasurementObjectType-DM-Rqst	ProtocolIE-ID ::= 72
id-DedicatedMeasurementObjectType-DM-Rsp	ProtocolIE-ID ::= 73
id-DedicatedMeasurementType	ProtocolIE-ID ::= 74
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD	ProtocolIE-ID ::= 82
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD	ProtocolIE-ID ::= 83
id-IMSI	ProtocolIE-ID ::= 84
id-L3-Information	ProtocolIE-ID ::= 85
id-AdjustmentPeriod	ProtocolIE-ID ::= 90
id-MaxAdjustmentStep	ProtocolIE-ID ::= 91
id-MeasurementFilterCoefficient	ProtocolIE-ID ::= 92
id-MeasurementID	ProtocolIE-ID ::= 93
id-Neighbouring-GSM-CellInformation	ProtocolIE-ID ::= 13
id-Neighbouring-UMTS-CellInformationItem	ProtocolIE-ID ::= 95
id-PagingArea-PagingRqst	ProtocolIE-ID ::= 102
id-FACH-FlowControlInformation	ProtocolIE-ID ::= 103

id-PowerAdjustmentType	ProtocolIE-ID ::= 107
id-ProcedureScope-DL-PC-Rqst	ProtocolIE-ID ::= 108
id-RANAP-RelocationInformation	ProtocolIE-ID ::= 109
id-RL-Information-PhyChReconfRqstFDD	ProtocolIE-ID ::= 110
id-RL-Information-PhyChReconfRqstTDD	ProtocolIE-ID ::= 111
id-RL-Information-RL-AdditionRqstFDD	ProtocolIE-ID ::= 112
id-RL-Information-RL-AdditionRqstTDD	ProtocolIE-ID ::= 113
id-RL-Information-RL-DeletionRqst	ProtocolIE-ID ::= 114
id-RL-Information-RL-FailureInd	ProtocolIE-ID ::= 115
id-RL-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 116
id-RL-Information-RL-RestoreInd	ProtocolIE-ID ::= 117
id-RL-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 118
id-RL-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 119
id-RL-InformationItem-DM-Rprt	ProtocolIE-ID ::= 120
id-RL-InformationItem-DM-Rqst	ProtocolIE-ID ::= 121
id-RL-InformationItem-DM-Rsp	ProtocolIE-ID ::= 122
id-RL-InformationItem-RL-PreemptRequiredInd	ProtocolIE-ID ::= 2
id-RL-InformationItem-RL-SetupRqstFDD	ProtocolIE-ID ::= 123
id-RL-InformationList-RL-AdditionRqstFDD	ProtocolIE-ID ::= 124
id-RL-InformationList-RL-DeletionRqst	ProtocolIE-ID ::= 125
id-RL-InformationList-RL-PreemptRequiredInd	ProtocolIE-ID ::= 1
id-RL-InformationList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 126
id-RL-InformationResponse-RL-AdditionRspTDD	ProtocolIE-ID ::= 127
id-RL-InformationResponse-RL-ReconfReadyTDD	ProtocolIE-ID ::= 128
id-RL-InformationResponse-RL-SetupRspTDD	ProtocolIE-ID ::= 129
id-RL-InformationResponseItem-RL-AdditionRspFDD	ProtocolIE-ID ::= 130
id-RL-InformationResponseItem-RL-ReconfReadyFDD	ProtocolIE-ID ::= 131
id-RL-InformationResponseItem-RL-ReconfRspFDD	ProtocolIE-ID ::= 132
id-RL-InformationResponseItem-RL-SetupRspFDD	ProtocolIE-ID ::= 133
id-RL-InformationResponseList-RL-AdditionRspFDD	ProtocolIE-ID ::= 134
id-RL-InformationResponseList-RL-ReconfReadyFDD	ProtocolIE-ID ::= 135
id-RL-InformationResponseList-RL-ReconfRspFDD	ProtocolIE-ID ::= 136
id-RL-InformationResponse-RL-ReconfRspTDD	ProtocolIE-ID ::= 28
id-RL-InformationResponseList-RL-SetupRspFDD	ProtocolIE-ID ::= 137
id-RL-ReconfigurationFailure-RL-ReconfFail	ProtocolIE-ID ::= 141
id-RL-Set-InformationItem-DM-Rprt	ProtocolIE-ID ::= 143
id-RL-Set-InformationItem-DM-Rqst	ProtocolIE-ID ::= 144
id-RL-Set-InformationItem-DM-Rsp	ProtocolIE-ID ::= 145
id-RL-Set-Information-RL-FailureInd	ProtocolIE-ID ::= 146
id-RL-Set-Information-RL-RestoreInd	ProtocolIE-ID ::= 147
id-ReportCharacteristics	ProtocolIE-ID ::= 152
id-Reporting-Object-RL-FailureInd	ProtocolIE-ID ::= 153
id-Reporting-Object-RL-RestoreInd	ProtocolIE-ID ::= 154
id-S-RNTI	ProtocolIE-ID ::= 155
id-SAI	ProtocolIE-ID ::= 156
id-SRNC-ID	ProtocolIE-ID ::= 157
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD	ProtocolIE-ID ::= 159
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD	ProtocolIE-ID ::= 160
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD	ProtocolIE-ID ::= 161
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD	ProtocolIE-ID ::= 162
id-TransportBearerID	ProtocolIE-ID ::= 163
id-TransportBearerRequestIndicator	ProtocolIE-ID ::= 164
id-TransportLayerAddress	ProtocolIE-ID ::= 165

id-UC-ID	ProtocolIE-ID ::= 166
id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD	ProtocolIE-ID ::= 167
id-UL-CCTrCH-InformationAddItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 168
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 169
id-UL-CCTrCH-InformationAddList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 170
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 171
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 172
id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD	ProtocolIE-ID ::= 173
id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 174
id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 175
id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD	ProtocolIE-ID ::= 176
id-UL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 177
id-UL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 178
id-UL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 179
id-UL-DPCH-InformationItem-PhyChReconfRqstTDD	ProtocolIE-ID ::= 180
id-UL-DPCH-InformationItem-RL-AdditionRspTDD	ProtocolIE-ID ::= 181
id-UL-DPCH-InformationItem-RL-SetupRspTDD	ProtocolIE-ID ::= 182
id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 183
id-UL-SIRTarget	ProtocolIE-ID ::= 184
id-URA-Information	ProtocolIE-ID ::= 185
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD	ProtocolIE-ID ::= 188
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD	ProtocolIE-ID ::= 189
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD	ProtocolIE-ID ::= 190
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD	ProtocolIE-ID ::= 191
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD	ProtocolIE-ID ::= 192
id-Active-Pattern-Sequence-Information	ProtocolIE-ID ::= 193
id-AdjustmentRatio	ProtocolIE-ID ::= 194
id-CauseLevel-RL-AdditionFailureFDD	ProtocolIE-ID ::= 197
id-CauseLevel-RL-AdditionFailureTDD	ProtocolIE-ID ::= 198
id-CauseLevel-RL-ReconfFailure	ProtocolIE-ID ::= 199
id-CauseLevel-RL-SetupFailureFDD	ProtocolIE-ID ::= 200
id-CauseLevel-RL-SetupFailureTDD	ProtocolIE-ID ::= 201
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD	ProtocolIE-ID ::= 205
id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD	ProtocolIE-ID ::= 206
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 207
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 208
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 209
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 210
id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 212
id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 213
id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 214
id-DSCHs-to-Add-TDD	ProtocolIE-ID ::= 215
id-DSCHs-to-Add-FDD	ProtocolIE-ID ::= 216
id-DSCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 217
id-DSCH-Delete-RL-ReconfPrepFDD	ProtocolIE-ID ::= 218
id-DSCH-FDD-Information	ProtocolIE-ID ::= 219
id-DSCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 220
id-DSCH-InformationListIEs-RL-SetupRspTDD	ProtocolIE-ID ::= 221
id-DSCH-TDD-Information	ProtocolIE-ID ::= 222
id-DSCH-FDD-InformationResponse	ProtocolIE-ID ::= 223
id-DSCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 226
id-DSCH-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 227
id-DSCH-Modify-RL-ReconfPrepFDD	ProtocolIE-ID ::= 228

id-DSCHsToBeAddedOrModified-FDD	ProtocolIE-ID ::= 229
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD	ProtocolIE-ID ::= 230
id-GA-AccessPointPosition	ProtocolIE-ID ::= 231
id-GA-Cell	ProtocolIE-ID ::= 232
id-Transmission-Gap-Pattern-Sequence-Information	ProtocolIE-ID ::= 255
id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD	ProtocolIE-ID ::= 256
id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD	ProtocolIE-ID ::= 257
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 258
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 259
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 260
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 261
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 262
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 263
id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 264
id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD	ProtocolIE-ID ::= 265
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD	ProtocolIE-ID ::= 266
id-USCHs-to-Add	ProtocolIE-ID ::= 267
id-USCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 268
id-USCH-InformationListIE-RL-AdditionRspTDD	ProtocolIE-ID ::= 269
id-USCH-InformationListIEs-RL-SetupRspTDD	ProtocolIE-ID ::= 270
id-USCH-Information	ProtocolIE-ID ::= 271
id-USCH-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 272
id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD	ProtocolIE-ID ::= 273
id-DL-Physical-Channel-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 274
id-UL-Physical-Channel-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 275
id-ClosedLoopModel-SupportIndicator	ProtocolIE-ID ::= 276
id-ClosedLoopMode2-SupportIndicator	ProtocolIE-ID ::= 277
id-STTD-SupportIndicator	ProtocolIE-ID ::= 279
id-CFNReportingIndicator	ProtocolIE-ID ::= 14
id-CNOriginatedPage-PagingRqst	ProtocolIE-ID ::= 23
id-InnerLoopDLPCStatus	ProtocolIE-ID ::= 24
id-PropagationDelay	ProtocolIE-ID ::= 25
id-RxTimingDeviationForTA	ProtocolIE-ID ::= 36
id-timeSlot-ISCPList-DL-PC-Rqst-TDD	ProtocolIE-ID ::= 37
<u>id-CommonMeasurementObjectType-CM-Rprt</u>	<u>ProtocolIE-ID ::= 281</u>
<u>id-CommonMeasurementObjectType-CM-Rqst</u>	<u>ProtocolIE-ID ::= 282</u>
<u>id-CommonMeasurementObjectType-CM-Rsp</u>	<u>ProtocolIE-ID ::= 283</u>
<u>id-CommonMeasurementType</u>	<u>ProtocolIE-ID ::= 284</u>
<u>id-SFN</u>	<u>ProtocolIE-ID ::= 285</u>
<u>id-SFNReportingIndicator</u>	<u>ProtocolIE-ID ::= 286</u>

END

9.3.7 Container Definitions

```
-- *****
--
-- Container definitions
--
-- *****
```

```
RNSAP-Containers {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-Containers (5) }
```

```
DEFINITIONS AUTOMATIC TAGS ::=
```

```
BEGIN
```

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

```
IMPORTS
```

```
    maxPrivateIEs,
    maxProtocolExtensions,
    maxProtocolIEs,
    Criticality,
    Presence,
    PrivateIE-ID,
    ProtocolExtensionID,
    ProtocolIE-ID
```

```
FROM RNSAP-CommonDataTypes;
```

```
-- *****
--
-- Class Definition for Protocol IEs
--
-- *****
```

```
RNSAP-PROTOCOL-IES ::= CLASS {
    &id          ProtocolIE-ID          UNIQUE,
    &criticality Criticality,
    &Value,
    &presence     Presence
}
```

```
WITH SYNTAX {
    ID          &id
    CRITICALITY &criticality
    TYPE        &Value
    PRESENCE    &presence
}
```

```
-- *****
--
-- Class Definition for Protocol IEs
--
-- *****
```

```
RNSAP-PROTOCOL-IES-PAIR ::= CLASS {
    &id          ProtocolIE-ID          UNIQUE,
```

```
&firstCriticality      Criticality,
&FirstValue,
&secondCriticality     Criticality,
&SecondValue,
&presence              Presence
}
WITH SYNTAX {
  ID                    &id
  FIRST CRITICALITY    &firstCriticality
  FIRST TYPE           &FirstValue
  SECOND CRITICALITY   &secondCriticality
  SECOND TYPE         &SecondValue
  PRESENCE             &presence
}

-- *****
--
-- Class Definition for Protocol Extensions
--
-- *****

RNSAP-PROTOCOL-EXTENSION ::= CLASS {
  &id                    ProtocolExtensionID          UNIQUE,
  &criticality           Criticality,
  &Extension,
  &presence              Presence
}
WITH SYNTAX {
  ID                    &id
  CRITICALITY           &criticality
  EXTENSION             &Extension
  PRESENCE              &presence
}

-- *****
--
-- Class Definition for Private IEs
--
-- *****

RNSAP-PRIVATE-IES ::= CLASS {
  &id                    PrivateIE-ID,
  &criticality           Criticality,
  &Value,
  &presence              Presence
}
WITH SYNTAX {
  ID                    &id
  CRITICALITY           &criticality
  TYPE                 &Value
  PRESENCE             &presence
}
```

```

--
*****
--
-- Container for Protocol IEs
--
-- *****

ProtocolIE-Container {RNSAP-PROTOCOL-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
        ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Single-Container {RNSAP-PROTOCOL-IES : IEsSetParam} ::=
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {RNSAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
    id                RNSAP-PROTOCOL-IES.&id                ({IEsSetParam}),
    criticality       RNSAP-PROTOCOL-IES.&criticality       ({IEsSetParam}@id}),
    value            RNSAP-PROTOCOL-IES.&Value            ({IEsSetParam}@id)}
}

-- *****
--
-- Container for Protocol IE Pairs
--
-- *****

ProtocolIE-ContainerPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
    SEQUENCE (SIZE (0..maxProtocolIEs)) OF
        ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
    id                RNSAP-PROTOCOL-IES-PAIR.&id                ({IEsSetParam}),
    firstCriticality  RNSAP-PROTOCOL-IES-PAIR.&firstCriticality  ({IEsSetParam}@id}),
    firstValue       RNSAP-PROTOCOL-IES-PAIR.&FirstValue       ({IEsSetParam}@id}),
    secondCriticality RNSAP-PROTOCOL-IES-PAIR.&secondCriticality ({IEsSetParam}@id}),
    secondValue      RNSAP-PROTOCOL-IES-PAIR.&SecondValue      ({IEsSetParam}@id)}
}

-- *****
--
-- Container Lists for Protocol IE Containers
--
-- *****

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (lowerBound..upperBound)) OF
        ProtocolIE-Container {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
    SEQUENCE (SIZE (lowerBound..upperBound)) OF
        ProtocolIE-ContainerPair {{IEsSetParam}}

-- *****

```

```
--  
-- Container for Protocol Extensions  
--  
-- *****  
  
ProtocolExtensionContainer {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=  
    SEQUENCE (SIZE (1..maxProtocolExtensions)) OF  
    ProtocolExtensionField {{ExtensionSetParam}}  
  
ProtocolExtensionField {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {  
    id                RNSAP-PROTOCOL-EXTENSION.&id                ({ExtensionSetParam}),  
    criticality       RNSAP-PROTOCOL-EXTENSION.&criticality       ({ExtensionSetParam}@id}),  
    extensionValue    RNSAP-PROTOCOL-EXTENSION.&Extension        ({ExtensionSetParam}@id)  
}
```

CHANGE REQUEST

⌘ **25.423 CR 339** ⌘ rev **1** ⌘ Current version: **3.4.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Introduction of Rate Control on DCHs		
Source:	⌘ R-WG3		
Work item code:	⌘ RANimp-RRMopt	Date:	⌘ February, 2001
Category:	⌘ B	Release:	⌘ REL-4
	<p>Use <u>one</u> of the following categories:</p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>

Reason for change:	⌘ The work item RRM Optimisations include an issue on Congestion Handling of DCH. This CR is the resulting CR on RNSAP related to this issue.
Summary of change:	<p>⌘ R1:</p> <ul style="list-style-type: none"> - Section 7: Congestion function is removed from RNSAP RL Supervision function - Radio Link Congestion procedure is removed from section 7, table 1: Radio Link Management and Radio Link Supervision functions - Editorial change: “d” is removed from “indicated” in the Radio Link Congestion procedure text. <p>R0: This CR</p> <ol style="list-style-type: none"> a) includes one new procedure (Radio Link Congestion) into the DCH procedures module and b) adds DCH Rate Control parameters (Guaranteed Rate and Allowed Rate) into the RL Setup, RL Addition, Synchronised RL Reconfiguration Preparation, and Unsynchronised RL Reconfiguration procedures. c) since the CR adds the <i>DCH Information Response</i> IE in the “combining branch of the choice on the Diversity Indication in the response messages of the RL Setup and RL Addition procedures the handling of the Reference RL ID is clarified (to ensure backward compatibility).
Consequences if not approved:	<p>⌘ If this CR is not approved Congestion Handling (Rate Control) of DCHs will not be supported over Iur in Release 4.</p> <p>Backward compatibility: This CR is backward compatible with the previous version of RNSAP.</p>

Clauses affected: ⌘ 7, 8.1, 8.3.1, 8.3.2, 8.3.4, 8.3.7, 8.3.19 (new), 9.1.4, 9.1.5.1, 9.1.7, 9.1.8.1, 9.1.41

		(new), 9.2.1.2A (new), 9.2.1.16A, 9.2.1.2A (new), 9.2.2.4A, 9.2.2.13C, 9.2.3.2A, 9.2.3.8B, 9.3.2, 9.3.3, 9.3.4, and 9.3.6.	
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications	⌘
		<input type="checkbox"/> Test specifications	
		<input type="checkbox"/> O&M Specifications	
Other comments:	⌘	Please note that at CR implementation, each removed indentation ">" shall also be accompanied by a reduction of the number of indentation steps on the ruler. In the end there shall be one step on the ruler per indentation ">".	

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

7 Functions of RNSAP

The RNSAP protocol has the following functions:

- Radio Link Management. This function allows the SRNC to manage radio links using dedicated resources in a DRNS;
- Physical Channel Reconfiguration. This function allows the DRNC to reallocate the physical channel resources for a Radio Link;
- Radio Link Supervision. This function allows the DRNC to report ~~congestion~~, failures and restorations of a Radio Link;
- Compressed Mode Control [FDD]. This function allows the SRNC to control the usage of compressed mode within a DRNS;
- Measurements on Dedicated Resources. This function allows the SRNC to initiate measurements on dedicated resources in the DRNS. The function also allows the DRNC to report the result of the measurements;
- DL Power Drifting Correction [FDD]. This function allows the SRNC to adjust the DL power level of one or more Radio Links in order to avoid DL power drifting between the Radio Links;
- DCH Rate Control. This function allows the DRNC to limit the rate of each DCH configured for the Radio Link(s) of a UE in order to avoid congestion situations in a cell;
- CCCH Signalling Transfer. This function allows the SRNC and DRNC to pass information between the UE and the SRNC on a CCCH controlled by the DRNS;
- Paging. This function allows the SRNC to page a UE in a URA or a cell in the DRNS;
- Common Transport Channel Resources Management. This function allows the SRNC to utilise Common Transport Channel Resources within the DRNS (excluding DSCH resources for FDD);
- Relocation Execution. This function allows the SRNC to finalise a Relocation previously prepared via other interfaces;
- Reporting of General Error Situations. This function allows reporting of general error situations, for which function specific error messages have not been defined.
- DL Power Timeslot Correction [TDD]. This function enables the DRNS to apply an individual offset to the transmission power in each timeslot according to the downlink interference level at the UE.

The mapping between the above functions and RNSAP elementary procedures is shown in the table 1.

Table 1: Mapping between functions and RNSAP elementary procedures

Function	Elementary Procedure(s)
Radio Link Management	a) Radio Link Setup b) Radio Link Addition c) Radio Link Deletion d) Unsynchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Synchronised Radio Link Reconfiguration Cancellation h) Radio Link Pre-emption i) Radio Link Congestion
Physical Channel Reconfiguration	Physical Channel Reconfiguration
Radio Link Supervision	a) Radio Link Failure b) Radio Link Restoration c) Radio Link Congestion
Compressed Mode Control [FDD]	a) Radio Link Setup b) Radio Link Addition c) Compressed Mode Command d) Unsynchronised Radio Link Reconfiguration e) Synchronised Radio Link Reconfiguration Preparation f) Synchronised Radio Link Reconfiguration Commit g) Synchronised Radio Link Reconfiguration Cancellation
Measurements on Dedicated Resources	a) Measurement Initiation b) Measurement Reporting c) Measurement Termination d) Measurement Failure
DL Power Drifting Correction [FDD]	Downlink Power Control
<u>DCH Rate Control</u>	a) <u>Radio Link Setup</u> b) <u>Radio Link Addition</u> c) <u>Unsynchronised Radio Link Reconfiguration</u> d) <u>Synchronised Radio Link Reconfiguration Preparation</u> e) <u>DCH Rate Control</u> Radio Link Congestion
CCCH Signalling Transfer	a) Uplink Signalling Transfer b) Downlink Signalling Transfer
Paging	Paging
Common Transport Channel Resources Management	a) Common Transport Channel Resources Initiation b) Common Transport Channel Resources Release
Relocation Execution	Relocation Commit
Reporting of General Error Situations	Error Indication
DL Power Timeslot Correction [TDD]	Downlink Power Timeslot Control

8.1 Elementary Procedures

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

Table 2: Class 1

Elementary Procedure	Initiating Message	Successful Outcome	Unsuccessful Outcome	
		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	
Common Transport Channel Resources Initialisation	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.

Table 3: Class 2

Elementary Procedure	Initiating Message
Uplink Signalling Transfer	UPLINK SIGNALLING TRANSFER INDICATION
Downlink Signalling Transfer	DOWNLINK SIGNALLING TRANSFER REQUEST
Relocation Commit	RELOCATION COMMIT
Paging	PAGING REQUEST
Synchronised Radio Link Reconfiguration Commit	RADIO LINK RECONFIGURATION COMMIT
Synchronised Radio Link Reconfiguration Cancellation	RADIO LINK RECONFIGURATION 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 Command [FDD]	COMPRESSED MODE COMMAND
Common Transport Channel Resources Release	COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST
Error Indication	ERROR INDICATION
Downlink Power Timeslot Control [TDD]	DL POWER TIMESLOT CONTROL REQUEST
Radio Link Pre-emption	RADIO LINK PREEMPTION REQUIRED INDICATION
DCH Rate Control Radio Link Congestion	DCH RATE CONTROL RADIO LINK CONGESTION INDICATION

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

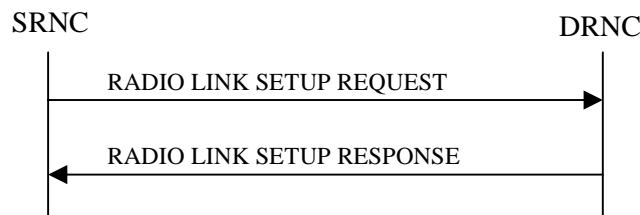


Figure 5: Radio Link Setup procedure: Successful Operation

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

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 $n \cdot "01" + "1"$ 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 $CFN \bmod 4 = 0$. 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 the time corresponding to the value of the *Allowed Queuing Time* IE before starting to execute the request.

[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 constraints 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 Time Slot ISCP Info* 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] subclause 5.2.1 for the inner loop DL power control.]

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

[FDD – 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 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).]

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

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

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

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

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

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.

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

- If the *Guaranteed Rate Information IE* includes the *Guaranteed UL Rate IE*, the DRNS may decide to request the SRNC to limit the user rate to any rate between the maximum rate and the guaranteed rate of the uplink of the DCH at any point in time. If the *DCH Specific Info IE* in the *DCH Information IE* does not include the *Guaranteed UL Rate IE* the DRNS shall regard the maximum rate as the guaranteed rate in the uplink of this DCH, and shall not request the SRNC to limit the user rate of this DCH.
- If the *Guaranteed Rate Information IE* includes the *Guaranteed DL Rate IE*, the DRNS may decide to request the SRNC to limit the user rate to any rate between the maximum rate and the guaranteed rate of the downlink of the DCH at any point in time. If the *DCH Specific Info IE* in the *DCH Information IE* does not include the *Guaranteed DL Rate IE* the DRNS shall regard the maximum rate as the guaranteed rate in the downlink of this DCH, and shall not request the SRNC to limit the user rate of this DCH.

[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.]

[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 subclause 8.3.9.]

[TDD – The DRNS shall use the list of RB Identities in the *RB Info* IE in the *USCH information* IE to map each *RB Identity* IE to the corresponding USCH.]

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.

If the *DSCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNC shall 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 *DSCH Scheduling Priority* IE and *MAC-c/sh SDU Length* 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* IE that the RL is combined with another RL for all RLs but the first 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 not be included for all-but-one-the first 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 and USCH of the RL.]

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

If the DRNS need to limit the user rate in the uplink of a DCH ~~below the maximum rate (but not below the guaranteed rate)~~ already when starting to utilise a new Radio Link, the DRNC shall include the *Allowed UL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK SETUP RESPONSE message for this Radio Link.

If the DRNS need to limit the user rate in the downlink of a DCH ~~below the maximum rate (but not below the guaranteed rate)~~ already when starting to utilise a new Radio Link, the DRNC shall include the *Allowed DL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK SETUP RESPONSE message for this Radio Link.

[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] and the node identification of the CN nodes connected to the RNC controlling the neighbouring cell if the UMTS 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 UMTS neighbouring cell.

If a UMTS 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 UMTS 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 the *Neighbouring FDD Cell Information IE*].

If there are GSM neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include the *Neighbouring GSM Cell Information IE* in the RADIO LINK SETUP RESPONSE message for each of the GSM neighbouring cells. If available the DRNC shall include the *GSM Output Power IE* in the *Neighbouring GSM Cell Information IE*.

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

[FDD - If the *D-RNTI IE* was included in the RADIO LINK SETUP REQUEST message the DRNC shall include the *Primary Scrambling Code IE*, the *UL UARFCN IE*, the *DL UARFCN IE*, and the *Primary CPICH Power 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 Scrambling Code Information IE* in the RADIO LINK SETUP RESPONSE message indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

[FDD –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].

For each Radio Link the DRNC shall include the *URA ID IE* of the cell, the *Multiple URAs 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 in the *URA Information IE* in the RADIO LINK SETUP RESPONSE message.

8.3.1.3 Unsuccessful Operation

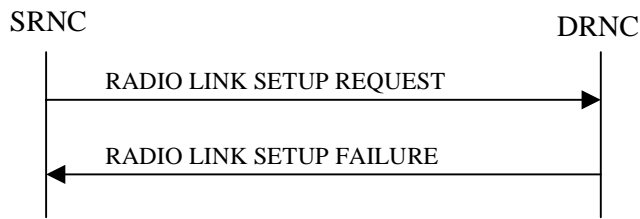


Figure 6: Radio Link Setup procedure: Unsuccessful Operation

In unsuccessful case (i.e. one or more RLs can not be 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.

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 Channel Type not Supported;
- DL Shared Channel Type not Supported;
- [TDD - UL Shared Channel Type not Supported];
- [FDD - UL Spreading Factor not Supported];
- [FDD - DL Spreading Factor not Supported];
- CM not Supported.

Transport Layer Causes:

- Transport Resource Unavailable

Miscellaneous Causes:

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

8.3.1.4 Abnormal Conditions

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

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

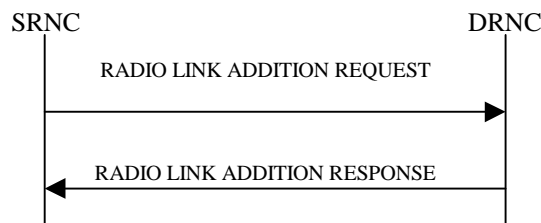


Figure 7: Radio Link Addition procedure: Successful Operation

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

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

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

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 CPICH 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 CPICH 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 Time Slot ISCP Info* 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 Time Slot ISCP Info* 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* IE 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.

[FDD - In the case of combining one or more RLs being established by this procedure, the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the *Diversity Indication* IE that the RL is combined with another RL for all RLs but the first RL. In this case the Reference RL ID shall be included to indicate one of the other RLs being established by this procedure that the new RL is combined with. The Reference *RL ID* IE shall not be included for the first of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.]

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* IE 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, [TDD – and DSCH, 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.

If the DRNS need to limit the user rate in the uplink of a DCH ~~below the maximum rate (but not below the guaranteed rate)~~ already when starting to utilise a new Radio Link, the DRNC shall include the *Allowed UL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK ADDITION RESPONSE message for this Radio Link.

If the DRNS need to limit the user rate in the downlink of a DCH ~~below the maximum rate (but not below the guaranteed rate)~~ already when starting to utilise a new Radio Link, the DRNC shall include the *Allowed DL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK ADDITION RESPONSE message for this Radio Link.

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

[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 UMTS neighbouring 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 UMTS neighbouring cell if the UMTS 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, Cell Individual Offset 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 Mode1 Support Indicator IE, and Closed Loop Mode2 Support Indicator IE*] of the UMTS neighbouring cell.

If there are GSM neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include the *Neighbouring GSM Cell Information IE* in the RADIO LINK ADDITION RESPONSE message for each of the GSM neighbouring cells. If available the DRNC shall include the *GSM Output Power IE* in the *Neighbouring GSM Cell Information IE*.

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 Scrambling Code Information IE* in the RADIO LINK ADDITION RESPONSE message to indicate the Scrambling code change method that it selects for each channelisation code]

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 ADDITION 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 for each of the previously existing and newly established RL Set(s) use the maximum value of the parameters *N_OUTSYNC_IND* and *T_RLFAILURE*, and the minimum value of the parameters *N_INSYNC_IND*, that are configured in the cells supporting the radio links of the RL Set].

For each Radio Link the DRNC shall include the *URA ID IE* of the cell, the *Multiple URAs 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 in the *URA Information IE* in the RADIO LINK ADDITION RESPONSE message.

8.3.2.3 Unsuccessful Operation

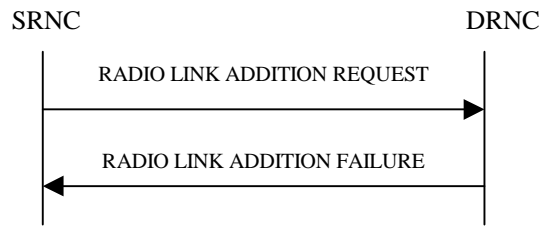


Figure 8: Radio Link Addition procedure: Unsuccessful Operation

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* 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 to be established in one cell that has the same UARCFN as 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".]

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 Elapsed;
- Number of DL Codes not Supported.

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

- Control Processing Overload;

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

8.3.2.4 Abnormal Conditions

-

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

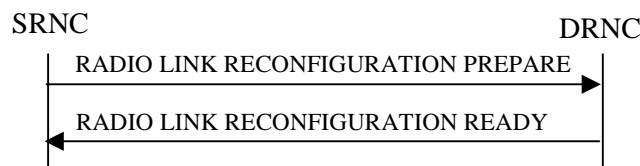


Figure 10: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation

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

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

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

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

DCH Modification:

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

- If the *DCHs to Modify* IE includes 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 *DCHs to Modify* IE 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 *DCHs to Modify* IE 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.
- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCH Specific Info* IE includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

- If the *DCH Specific Info* IE includes the *Transport Format Set* IE for the UL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.
- If the *DCH Specific Info* IE includes the *Transport Format Set* IE for the DL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- [FDD - If, in the *DCH Specific Info* IE, the *DRAC Control* IE is present and set to "requested" for at least one DCH and if the DRNS supports the DRAC, the DRNS 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 DRNS does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]
- [TDD - If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the UL, the DRNS shall map the DCH onto the referenced UL CCTrCH.]
- [TDD - If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the DL, the DRNS shall map the DCH onto the referenced DL CCTrCH.]

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

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

DCH Addition:

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

- The DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.
- If the *DCHs to Add* IE includes 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].]
- [FDD - For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" shall be used for the QE in the UL data frames, ref. [4]. [FDD - If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [4]. If all DCHs have *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 *DCH Specific Info* IE for at least one DCH and if the DRNS supports the DRAC, the DRNS 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 DRNS does not support DRAC, it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

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

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

DCH Deletion:

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

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

Physical Channel Modification:

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

- [FDD - If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]
- [FDD - If the *UL DPCH Information* IE includes the *Min UL Channelisation Code Length* IE, the DRNS shall apply the new Min UL Channelisation Code Length in the new configuration.]
- [FDD - If the *UL DPCH Information* IE includes the *TFCS* IE, the DRNS shall use the *TFCS* IE for the UL when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of the new configuration.]
- [FDD - If the *UL DPCH Information* IE includes the *UL DPCCH Slot Format* IE, the DRNS shall apply the new Uplink DPCCH Slot Format to the new configuration.]
- [FDD – If the *UL DPCH Information* IE includes the *UL SIR Target* IE, the DRNS shall set the UL inner loop power control to the UL SIR target when the new configuration is being used.]
- [FDD – If the *UL DPCH Information* IE includes the *Puncture Limit* IE, the DRNS shall apply the value in the uplink of the new configuration .]
- [FDD - If the *UL DPCH Information* IE includes the *Diversity Mode* IE, the DRNS shall apply diversity according to the given value.]

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

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

- [FDD - If the *DL DPCH Information IE* includes *Number of DL Channelisation Codes IE*, the DRNS shall allocate given number of Downlink Channelisation Codes per Radio Link and apply the new Downlink Channelisation Code(s) to the new configuration. Each Downlink Channelisation Code allocated for the new configuration shall be included as a FDD DL Channelisation Code Number IE in the RADIO LINK RECONFIGURATION READY message when sent to the SRNC. If some Transmission Gap Pattern sequences using 'SF/2' method are already initialised in the DRNS, DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information IE* in the RADIO LINK RECONFIGURATION READY message in case the DRNS selects to change the Scrambling code change method for one or more DL Channelisation Code.]
- [FDD – When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When p number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to “*PhCH number 1*”, the second to “*PhCH number 2*”, and so on until the p th to “*PhCH number p*”.]
- [FDD - If the *DL DPCH Information IE* includes the *TFCS IE*, the DRNS shall use the *TFCS IE* for the DL when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of the new configuration.]
- [FDD – If the *DL DPCH Information IE* includes the *DL DPCH Slot Format IE*, the DRNS shall apply the new slot format used in DPCH in DL.]
- [FDD – If the *DL DPCH Information IE* includes the *TFCI Signalling Mode IE*, the DRNS shall apply the new signalling mode of the TFCI.]
- [FDD – If the *DL DPCH Information IE* includes the *Multiplexing Position IE*, the DRNS shall apply the new parameter to define whether fixed or flexible positions of transport channels shall be used in the physical channel.]
- [FDD – If the *DL DPCH Information IE* includes the *Limited Power Increase IE* and the IE is set to 'Used', the DRNS shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD – If the *DL DPCH Information IE* includes the *Limited Power Increase IE* and the IE is set to 'Not Used', the DRNS shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]
- [FDD: If the RADIO LINK RECONFIGURATION 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 DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information IE* to the RADIO LINK RECONFIGURATION READY message indicating for each Channelisation Code whether the alternative scrambling code shall be used or not].

[TDD - UL/DL CCTrCH Modification]

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

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

- [TDD – The DRNC shall include in the RADIO LINK RECONFIGURATION READY message DPCH information to be modified and the IEs modified if any of *Repetition Period IE*, *Repetition Length IE*, *TDD DPCH Offset IE* or timeslot information was modified. The DRNC shall include timeslot information and the IEs

modified if any of *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 CCTrCH to Add IEs* or *DL CCTrCH to Add IEs*, the DRNS shall include this CCTrCH in the new configuration.]

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

[TDD – UL/DL CCTrCH Deletion]

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

SSDT Activation/Deactivation:

- [FDD - If the *RL Information IE* includes the *SSDT Indication IE* set to "SSDT Active in the UE", the DRNS shall activate SSDT, if supported, using the *SSDT Cell Identity IE* in *RL Information IE*, and the *SSDT Cell Identity Length IE* in *UL DPCH Information IE*, in the new configuration.]
- [FDD - If the *RL Information IE* includes the *SSDT Indication IE* set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

DSCH Addition/Modification/Deletion:

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

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

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

- [FDD: If the *DSCH to Modify IE* includes any *DSCH Info IEs*, then the DRNS shall treat them each as follows:]
- [FDD: If the *DSCH Info IE* includes any of the *Allocation/Retention Priority IE*, *Scheduling Priority Indicator IE* or *TrCH Source Statistics Descriptor IE*, the DNRS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]
- [FDD: If the *DSCH Info IE* includes any of the *Transport Format Set IE* or *BLER IE*, the DRNS shall apply the parameters to the new configuration.]
- [FDD: If the *DSCH to Modify IE* includes the *PDSCH RL ID IE*, then the DRNS shall use it as the new DSCH RL identifier.]
- [FDD: If the *DSCH to Modify IE* includes the *Transport Format Combination Set IE*, then the DRNS shall use it as the new Transport Format Combination Set associated with the DSCH.]
- [TDD: If the *DSCHs to Modify IE* includes the *CCTrCH Id IE*, then the DRNS shall map the DSCH onto the referenced DL CCTrCH.]
- [TDD: If the *DSCHs to Modify IE* includes any of the *Allocation/Retention Priority IE*, *Scheduling Priority Indicator IE* or *TrCH Source Statistics Descriptor IE*, the DNRS shall use them to update the set of DSCH Priority classes each of which is associated with a set of supported MAC-c/sh SDU lengths.]
- [TDD: If the *DSCHs to Modify IE* includes any of the *Transport Format Set IE* or *BLER IE*, the DRNS shall apply the parameters to the new configuration.]

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

[TDD] USCH Addition/Modification/Deletion

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

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

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

- If the USCH to Modify IE includes any of the *Allocation/Retention Priority* IE, *Scheduling Priority Indicator* IE or *TrCH Source Statistics Descriptor* IE, the DRNS shall use them to update the set of USCH Priority classes.
- If the USCH to Modify IE includes any of the *CCTrCH Id* IE, *Transport Format Set* IE, *BLER* IE or *RB Info* IE, the DRNS shall apply the parameters to the new configuration.

If the 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.

General

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

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

Any allowed rate for the uplink of a DCH provided for the old configuration will not be valid for the new configuration. If the DRNS need to limit the user rate in the uplink of a DCH in the new configuration below the maximum rate (but not below the guaranteed rate) for a Radio Link, the DRNC shall include the Allowed UL Rate IE of the Allowed Rate Information IE in the DCH Information Response IE for this DCH in the RADIO LINK RECONFIGURATION READY message for this Radio Link.

Any allowed rate for the downlink of a DCH provided for the old configuration will not be valid for the new configuration. If the DRNS need to limit the user rate in the downlink of a DCH in the new configuration below the maximum rate (but not below the guaranteed rate) for a Radio Link, the DRNC shall include the Allowed DL Rate IE of the Allowed Rate Information IE in the DCH Information Response IE for this DCH in the RADIO LINK RECONFIGURATION READY message for this Radio Link.

If the requested modifications are allowed by the DRNS, and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s) it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message. When this procedure has been completed successfully there 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 RESPONSE message.

8.3.4.3 Unsuccessful Operation

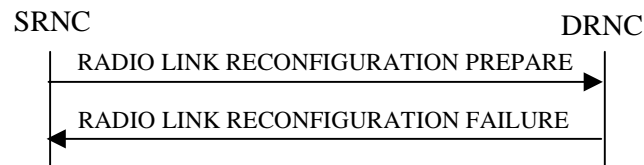


Figure 11: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation

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 the DRNC shall respond with a RADIO LINK RECONFIGURATION FAILURE message.

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;
- Dedicated Transport Channel Type not Supported;
- DL Shared Channel Type not Supported;
- [TDD - UL Shared Channel Type not Supported];
- [FDD - UL Spreading Factor not Supported];
- [FDD - DL Spreading Factor not Supported];
- CM not Supported.

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.

8.3.7 Unsynchronised Radio Link Reconfiguration

8.3.7.1 General

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

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

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

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

8.3.7.2 Successful Operation

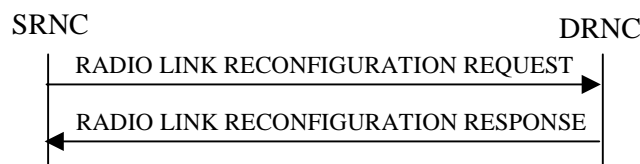


Figure 14: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation

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

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

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

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

DCH Modification:

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

- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs, then the DRNS shall treat the DCHs as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs to Modify* IE includes the *UL FP Mode* IE for a DCH or a 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 *DCHs to Modify* IE 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 *DCHs to Modify* IE 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.
- If the *DCH Specific Info* IE includes on the *Transport Format Set* IE for the UL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

- If the *DCH Specific Info* IE includes the *Transport Format Set* IE for the DL of a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- If the *DCH Specific Info* IE includes the *Frame Handling Priority* IE, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.
- [FDD - If the *DRAC Control* IE is present and set to "requested" in *DCH Specific Info* IE for at least one DCH, and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION RESPONSE message the *Secondary CCPCH Info* IE to be received on FACH, for each Radio Link. If the DRNS does not support DRAC, DRNC shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.]
- [TDD - If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the UL, the DRNS shall map the DCH onto the referenced UL CCTrCH.]
- [TDD - If the *DCH Specific Info* IE includes the *CCTrCH ID* IE for the DL, the DRNS shall map the DCH onto the referenced DL CCTrCH.]
- If the *DCH Specific Info* IE includes the *Guaranteed Rate Information* IE, the DRNS shall treat the included IEs according to the following:
 - If the *Guaranteed Rate Information* IE includes the *Guaranteed UL Rate* IE, the DRNS shall apply the new *Guaranteed Rate* in the uplink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate to any rate between the maximum rate and the guaranteed rate in the uplink of the DCH at any point in time after activating the new configuration.
 - If the *Guaranteed Rate Information* IE includes the *Guaranteed DL Rate* IE, the DRNS shall apply the new *Guaranteed Rate* in the downlink of this DCH in the new configuration. The DRNS may decide to request the SRNC to limit the user rate to any rate between the maximum rate and the guaranteed rate in the downlink of the DCH at any point in time after activating the new configuration.

DCH Addition:

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

- The DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.
- If the *DCHs to Add* IE includes multiple *DCH Specific Info* IEs then the DRNS shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The DRNS shall include these DCHs in the new configuration only if 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-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The DRNS shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [FDD - If the *DRAC Control* IE is set to "requested" in *DCH Specific Info* IE for at least one DCH, and if the DRNS supports the DRAC, the DRNS 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 DRNS does not support DRAC, the DRNS shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.

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

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

DCH Deletion:

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

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

Physical Channel Modification:

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

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

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

- [FDD - If the *DL DPCH Information* IE includes the *TFCS* IE for the DL, the DRNS shall apply the new TFCS in the Downlink of the new configuration.]
- [FDD - If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE for the DL, the DRNS shall apply the new TFCI Signalling Mode in the Downlink of the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Used', the DRNS shall, if supported, use Limited Power Increase according to ref. [10] subclause 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Not Used', the DRNS shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]

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

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, and if the *Downlink compressed mode method* in one or more Transmission Gap Pattern Sequence within the *Transmission Gap Pattern Sequence Information* IE is set to 'SF/2', the DRNC shall include the *DL Code Information* IE in the RADIO LINK RECONFIGURATION RESPONSE message, without changing any of the DL Channelisation Codes or LD Scrambling Codes, indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

[TDD - UL/DL CCTrCH Modification]

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

[TDD – UL/DL CCTrCH Deletion]

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

General:

The DRNS shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE. In case of a set of coordinated DCHs requiring a new transport bearer on Iur, the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE shall be included only for one of the DCH in the set of coordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS, the DRNC shall return the *Transport Layer Address* IE and the *Binding ID* IE in the *DCH Information Response* IE in the RADIO LINK RECONFIGURATION RESPONSE message only for one of the combined Radio Links.

Any allowed rate for the uplink of a DCH provided for the old configuration will not be valid for the new configuration. If the DRNS need to limit the user rate in the uplink of a DCH in the new configuration below the maximum rate (but not below the guaranteed rate) for a Radio Link, the DRNC shall include the *Allowed UL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK RECONFIGURATION RESPONSE message for this Radio Link.

Any allowed rate for the downlink of a DCH provided for the old configuration will not be valid for the new configuration. If the DRNS need to limit the user rate in the downlink of a DCH in the new configuration below the maximum rate (but not below the guaranteed rate) for a Radio Link, the DRNC shall include the *Allowed DL Rate* IE of the *Allowed Rate Information* IE in the *DCH Information Response* IE for this DCH in the RADIO LINK RECONFIGURATION RESPONSE message for this Radio Link.

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

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

If the DL TX power upper or lower limit has been re-configured, the DRNC shall return this in the *Maximum DL TX Power* IE and *Minimum DL TX Power* IE respectively in the RADIO LINK RECONFIGURATION RESPONSE message.

8.3.7.3 Unsuccessful Operation

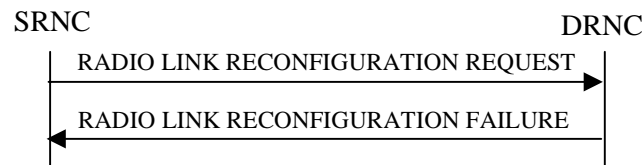


Figure 15: Unsyncronised Radio Link Reconfiguration procedure, Unsuccessful Operation

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 Unsyncronised Radio Link Reconfiguration procedure as failed, and the DRNC 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 Unsyncronised Radio Link Reconfiguration procedure as having failed.

If the requested Unsyncronised 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.

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 Unsyncronised Radio Link Reconfiguration procedure as having failed, and the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

8.3.19 ~~DCH Rate Control~~ Radio Link Congestion

8.3.19.1 General

This procedure is started by the DRNS when ~~RL congestion is detected~~ and the rate of one or more DCHs need to be limited, ~~below the maximum rate (but not below the guaranteed rate)~~. This procedure is also used by the DRNC to ~~indicated~~ to the SRNC any change of the congestion situation.

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

The ~~DCH Rate Control~~Radio Link Congestion procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in subclause 3.1.

8.3.19.2 Successful Operation



Figure 26C: Radio Link Congestion procedure, Successful Operation

When DRNC detects that the rate of one or more DCHs need to be limited below the maximum rate ~~(but not below the guaranteed rate)~~, it shall send the ~~DCH RATE CONTROL COMMAND RADIO LINK CONGESTION INDICATION~~ message to the SRNC. The DRNC shall indicate all the Radio Links where ~~the rate of a DCH need to have rate below the maximum rate~~ be reduced. When receiving the ~~DCH RATE CONTROL COMMAND RADIO LINK CONGESTION INDICATION~~ message the SRNC should reduce the rate in accordance with the indicated allowed rate(s) for a DCH.

The DRNC shall indicate any change of the congestion situation by sending the ~~RADIO LINK CONGESTION INDICATION~~ message in which the new allowed rate of the DCHs are indicated by the *Allowed Rate Information IE*.

8.3.19.3 Abnormal Conditions

=

9.1.4 RADIO LINK SETUP RESPONSE

9.1.4.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
D-RNTI	O		9.2.1.24		YES	ignore
CN PS Domain Identifier	O		9.2.1.12		YES	ignore
CN CS Domain Identifier	O		9.2.1.11		YES	ignore
RL Information Response		1..<maxno ofRLs>			EACH	ignore
>RL ID	M		9.2.1.49		–	
>RL Set ID	M		9.2.2.35		–	
>URA Information	M		9.2.1.70B		–	
>SAI	M		9.2.1.52		–	
>Cell GAI	O		9.2.1.5A		–	
>UTRAN Access Point Position	O		9.2.1.70A		–	
>Received total wide band power	M		9.2.2.35A		–	
>Secondary CCPCH Info	O		9.2.2.37B		–	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		–	
>Diversity Indication	C-NotFirstRL		9.2.2.7		–	
>CHOICE <i>Diversity Indication</i>	M				–	
>>Combining					–	
>>>RL ID	M		9.2.1.49	Reference RL ID for the combining	–	
>>>DCH Information Response	<u>O</u>		<u>9.2.1.16A</u>		<u>YES</u>	<u>ignore</u>
>>Non Combining or First RL					–	
>>>DCH Information Response	M		9.2.1.16A		–	
>SSDT Support Indicator	M		9.2.2.43		–	
>Maximum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>Closed Loop Timing Adjustment Mode	O		9.2.2.3A		–	
>Maximum Allowed UL Tx Power	M		9.2.1.35		–	
>Maximum DL TX Power	M		DL Power 9.2.2.10		–	
>Minimum DL TX Power	M		DL Power 9.2.2.10		–	
>Primary Scrambling Code	O		9.2.1.45		–	
>UL UARFCN	O		UARFCN 9.2.1.66	Corresponds to Nu in ref. [6]	–	
>DL UARFCN	O		UARFCN 9.2.1.66	Corresponds to Nd in ref. [6]	–	
>Primary CPICH Power	O		9.2.1.44		–	
>DSCH Information Response	O		DSCH FDD		YES	ignore

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
			Information Response 9.2.2.13B			
>Neighbouring UMTS Cell Information	O		9.2.1.41A		–	
>Neighbouring GSM Cell Information	O		9.2.1.41C		YES	ignore
Uplink SIR Target	O		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	O		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

Range bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.

9.1.5 RADIO LINK SETUP FAILURE

9.1.5.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
D-RNTI	O		9.2.1.24		YES	ignore
CN PS Domain Identifier	O		9.2.1.12		YES	ignore
CN CS Domain Identifier	O		9.2.1.11		YES	ignore
CHOICE <i>Cause Level</i>	M				YES	ignore
> <i>General</i>					–	
>> <i>Cause</i>	M		9.2.1.5		–	
> <i>RL Specific</i>					–	
>> Unsuccessful RL Information Response		1...<max number of RLs>			EACH	ignore
>>>RL ID	M		9.2.1.49		–	
>>>Cause	M		9.2.1.5		–	
>> Successful RL Information Response		0..<max number of RLs-1>			EACH	ignore
>>>RL ID	M		9.2.1.49		–	
>>>RL Set ID	M		9.2.2.35		–	
>>>URA Information	M		9.2.1.70B		–	
>>>SAI	M		9.2.1.52		–	
>>>Cell GAI	O		9.2.1.5A		–	
>>>UTRAN Access Point Position	O		9.2.1.70A		–	
>>>Received total wide band power	M		9.2.2.35A		–	
>>>Secondary CCPCH Info	O		9.2.2.37B		–	
>>>DL Code Information	M		FDD DL Code Information 9.2.2.14A		YES	ignore
>>>Diversity Indication	M		9.2.2.7		–	
>>>CHOICE <i>Diversity Indication</i>	M				–	
>>>> <i>Combining</i>					–	
>>>>>RL ID	M		9.2.1.49	Reference RL ID for the combining	–	
>>>>> DCH Information Response	<u>O</u>		<u>9.2.1.16A</u>		<u>YES</u>	<u>ignore</u>
>>>>> <i>Non Combining or First RL</i>					–	
>>>>>DCH Information Response	M		9.2.1.16A		–	
>>>SSDT Support Indicator	M		9.2.2.43		–	
>>>Maximum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>>>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>>>Closed Loop Timing Adjustment Mode	O		9.2.2.3A		–	
>>>Maximum Allowed UL Tx Power	M		9.2.1.35		–	
>>>Maximum DL TX Power	M		DL Power 9.2.2.10		–	
>>>Minimum DL TX Power	M		DL Power 9.2.2.10		–	
>>>DSCH Information	O		DSCH		YES	ignore

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Response			FDD Information Response 9.2.2.13B			
>>>Neighbouring UMTS Cell Information	O		9.2.1.41A		–	
>>>Neighbouring GSM Cell Information	O		9.2.1.41C		YES	ignore
Uplink SIR Target	O		Uplink SIR 9.2.1.69		YES	ignore
Criticality Diagnostics	O		9.2.1.13		YES	ignore

Range bound	Explanation
MaxnoofRLs	Maximum number of RLs for one UE.

9.1.7 RADIO LINK ADDITION RESPONSE

9.1.7.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
RL Information Response		<i>1..<maxnoof RLS-1></i>			EACH	ignore
>RL ID	M		9.2.1.49		–	
>RL Set ID	M		9.2.2.35		–	
>URA Information	M		9.2.1.70B		–	
>SAI	M		9.2.1.52		–	
>Cell GAI	O		9.2.1.5A		–	
>UTRAN Access Point Position	O		9.2.1.70A		–	
>Received total wide band power	M		9.2.2.35A		–	
>Secondary CCPCH Info	O		9.2.2.37B		–	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		YES	ignore
>Diversity Indication	M		9.2.2.7		–	
>CHOICE <i>Diversity Indication</i>	M				–	
>> <i>Combining</i>					–	
>>>RL ID	M		9.2.1.49	Reference RL ID	–	
>>> DCH Information Response	O		9.2.1.16A		YES	ignore
>> <i>Non Combining</i>					–	
>>>DCH Information Response	M		9.2.1.16A		–	
>SSDT Support Indicator	M		9.2.2.43		–	
>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>Maximum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>Closed Loop Timing Adjustment Mode	O		9.2.2.3A		–	
>Maximum Allowed UL Tx Power	M		9.2.1.35		–	
>Maximum DL TX Power	M		DL Power 9.2.2.10		–	
>Minimum DL TX Power	M		DL Power 9.2.2.10		–	
>Neighbouring UMTS Cell Information	O		9.2.1.41A		–	
>Neighbouring GSM Cell Information	O		9.2.1.41C		YES	ignore
Criticality Diagnostics	O		9.2.1.13		YES	ignore

Range bound	Explanation
MaxnoofRLs	Maximum number of radio links for one UE.

9.1.7.2 TDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
RL Information Response		1			YES	ignore
>RL ID	M		9.2.1.49		–	
>URA Information	M		9.2.1.70B		–	
>SAI	M		9.2.1.52		–	
>Cell GAI	O		9.2.1.5A		–	
>UTRAN Access Point Position	O		9.2.1.70A		–	
>UL Time Slot ISCP Info	M		9.2.3.13D		–	
>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>Maximum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>Maximum Allowed UL Tx Power	M		9.2.1.35		–	
>Maximum DL TX Power	M		DL Power 9.2.2.10		–	
>Minimum DL TX Power	M		DL Power 9.2.2.10		–	
>Timing Advance Applied	M		9.2.3.12A		–	
>Alpha Value	M		9.2.3.a		–	
>UL PhysCH SF Variation	M		9.2.3.13B		–	
>UL CCTrCH Information		0..<maxnoof CCTrCHs>		For DCH	GLOBAL	ignore
>>CCTrCH ID	M		9.2.3.2		–	
>>UL DPCH Information		0..1			YES	ignore
>>>Repetition Period	M		9.2.3.7		–	
>>>Repetition Length	M		9.2.3.6		–	
>>>TDD DPCH Offset	M		9.2.3.8A		–	
>>>UL Timeslot Information	M		9.2.3.13C		–	
>DL CCTrCH Information		0..<maxnoof CCTrCHs>		For DCH	GLOBAL	ignore
>>CCTrCH ID	M		9.2.3.2		–	
>>DL DPCH Information		0..1			YES	ignore
>>>Repetition Period	M		9.2.3.7		–	
>>>Repetition Length	M		9.2.3.6		–	
>>>TDD DPCH Offset	M		9.2.3.8A		–	
>>>DL Timeslot Information	M		9.2.3.2C		–	
>DCH Information		0..1			–	
>>Diversity Indication	M		9.2.2.7		–	
>>CHOICE Diversity Indication	M				–	
>>>Combining					–	
>>>>RL ID	M		9.2.1.49	Reference RL	–	
>>>>DCH Information Response	<u>O</u>		<u>9.2.1.16A</u>		<u>YES</u>	<u>ignore</u>
>>>>Non Combining					–	
>>>>DCH Information Response	M		9.2.1.16A		–	
>DSCH Information Response		0 .. <Maxnoof DSCHs>			GLOBAL	ignore
>>DSCH ID	M		9.2.1.26A		–	

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
>>Transport Format Management	M		9.2.3.13		–	
>>DSCH Flow Control Information	M		9.2.1.26B		–	
>>CHOICE <i>Diversity Indication</i>	O				–	
>>>Non Combining					–	
>>>>Binding ID	O		9.2.1.3		–	
>>>>Transport Layer Address	O		9.2.1.62		–	
>USCH Information Response		0 .. <Maxnoof USCHs>			GLOBAL	ignore
>>USCH ID	M		9.2.3.14		–	
>>Transport Format Management	M		9.2.3.13		–	
>>CHOICE <i>Diversity Indication</i>	O				–	
>>>Non Combining					–	
>>>>BindingID	O		9.2.1.3		–	
>>>>Transport Layer Address	O		9.2.1.62		–	
>Neighbouring UMTS Cell Information	O		9.2.1.41A		–	
>Neighbouring GSM Cell Information	O		9.2.1.41C		YES	ignore
Criticality Diagnostics	O		9.2.1.13		YES	ignore

Range Bound	Explanation
MaxnoofDSCHs	Maximum number of DSCHs for one UE.
MaxnoofUSCHs	Maximum number of USCHs for one UE.
MaxnoofCCTrCHs	Maximum number of CCTrCHs for one UE.

9.1.8 RADIO LINK ADDITION FAILURE

9.1.8.1 FDD Message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	reject
Transaction ID	M		9.2.1.59		–	
CHOICE <i>Cause Level</i>	M				YES	ignore
> <i>General</i>					–	
>> <i>Cause</i>	M		9.2.1.5		–	
> <i>RL Specific</i>					–	
>> Unsuccessful RL Information Response		1..<maxnoof RLS-1>			EACH	ignore
>>>RL ID	M		9.2.1.49		–	
>>>Cause	M		9.2.1.5		–	
>> Successful RL Information Response		0..<maxnoof RLS-2>			EACH	ignore
>>>RL ID	M		9.2.1.49		–	
>>>RL Set ID	M		9.2.2.35		–	
>>>URA Information	M		9.2.1.70B		–	
>>>SAI	M		9.2.1.52		–	
>>>Cell GAI	O		9.2.1.5A		–	
>>>UTRAN Access Point Position	O		9.2.1.70A		–	
>>>Received total wide band power	M		9.2.2.35A		–	
>>>Secondary CCPCH Info	O		9.2.2.37B		–	
>>>DL Code Information	M		FDD DL Code Information 9.2.2.14A		YES	ignore
>>>Diversity Indication	M		9.2.2.7		–	
>>>CHOICE <i>Diversity Indication</i>	M				–	
>>>> <i>Combining</i>					–	
>>>>>RL ID	M		9.2.1.49	Reference RL ID	–	
>>>>> DCH Information Response	<u>O</u>		<u>9.2.1.16A</u>		<u>YES</u>	<u>ignore</u>
>>>>> <i>Non Combining</i>					–	
>>>>>DCH Information Response	M		9.2.1.16A		–	
>>>SSDT Support Indicator	M		9.2.2.43		–	
>>>Minimum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>>>Maximum Uplink SIR	M		Uplink SIR 9.2.1.69		–	
>>>Closed Loop Timing Adjustment Mode	O		9.2.2.3A		–	
>>>Maximum Allowed UL Tx Power	M		9.2.1.35		–	
>>>Maximum DL TX Power	M		DL Power 9.2.2.10		–	
>>>Minimum DL TX Power	M		DL Power 9.2.2.10		–	
>>>Neighbouring UMTS Cell Information	O		9.2.1.41A		–	
>>>Neighbouring GSM	O		9.2.1.41C		YES	ignore

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Cell Information						
Criticality Diagnostics	O		9.2.1.13		YES	ignore

Range bound	Explanation
MaxnoofRLs	Maximum number of radio links for one UE.

9.1.41 DCH RATE CONTROL COMMAND RADIO LINK CONGESTION INDICATION

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>	<u>Criticality</u>	<u>Assigned Criticality</u>
<u>Message Type</u>	<u>M</u>		<u>9.2.1.40</u>		<u>YES</u>	<u>ignore</u>
<u>Transaction ID</u>	<u>M</u>		<u>9.2.1.59</u>		<u>=</u>	
<u>RL Information</u>		<u>1..<maxno ofRLs></u>			<u>EACH</u>	<u>ignore</u>
<u>>RL ID</u>	<u>M</u>		<u>9.2.1.49</u>		<u>=</u>	
<u>>DCH Rate Information</u>		<u>1..<maxno ofDCHs></u>			<u>EACH</u>	<u>ignore</u>
<u>>>DCH ID</u>	<u>M</u>		<u>9.2.1.16</u>		<u>=</u>	
<u>>>Allowed Rate Information</u>	<u>M</u>		<u>9.2.1.x</u>		<u>=</u>	

<u>Range bound</u>	<u>Explanation</u>
<u>MaxnoofRLs</u>	<u>Maximum number of Radio Links for one UE</u>
<u>MaxnoofDCHs</u>	<u>Maximum number of DCHs for one UE.</u>

9.2.1.2A Allowed Rate Information

The *Allowed Rate Information* IE indicates the TFI corresponding to the highest allowed bit rate for the uplink and/or the downlink of a DCH. The SRNC is allowed to use any rate being lower than or equal to the rate corresponding to the indicated TFI.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>Allowed UL Rate</u>	<u>Q</u>		<u>INTEGER(0..maxTFcount)</u>	
<u>Allowed DL Rate</u>	<u>Q</u>		<u>INTEGER(0..maxTFcount)</u>	

9.2.1.16A DCH Information Response

The *DCH Information* IE provides information for DCHs that have been established or modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
DCH Information Response		<i>1..<maxno ofDCHs></i>			–	
>DCH ID	M		9.2.1.16		–	
>Binding ID	O		9.2.1.3		–	
>Transport Layer Address	O		9.2.1.62		–	
>Allowed Rate Information	O		9.2.1.x		YES	ignore

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for one UE.

9.2.1.2A Guaranteed Rate Information

The *Guaranteed Rate Information* IE indicates the TFI corresponding to the guaranteed bit rate for the uplink and/or the downlink of a DCH.

<u>IE/Group Name</u>	<u>Presence</u>	<u>Range</u>	<u>IE type and reference</u>	<u>Semantics description</u>
<u>Guaranteed UL Rate</u>	<u>O</u>		<u>INTEGER(0..maxTFcount)</u>	
<u>Guaranteed DL Rate</u>	<u>O</u>		<u>INTEGER(0..maxTFcount)</u>	

9.2.2.4A DCH FDD Information

The *DCH FDD Information* IE provides information for DCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
DCH FDD Information		<i>1..<maxno ofDCHs></i>			–	
>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		<i>1..<maxno ofDCHs></i>			–	
>>DCH ID	M		9.2.1.16		–	
>>TrCh Source Statistics Descriptor	M		9.2.1.65		–	
>>Transport Format Set	M		9.2.1.64	For the UL.	–	
>>Transport Format Set	M		9.2.1.64	For the DL.	–	
>>BLER	M		9.2.1.4	For the UL.	–	
>>BLER	M		9.2.1.4	For the DL.	–	
>>Allocation/Retention Priority	M		9.2.1.1		–	
>>Frame Handling Priority	M		9.2.1.29		–	
>>QE-Selector	M		9.2.1.46A		–	
>>DRAC control	M		9.2.2.13		–	
>> <u>Guaranteed Rate Information</u>	<u>Q</u>		<u>9.2.1.x</u>		<u>YES</u>	<u>ignore</u>

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for one UE.

9.2.2.13C FDD DCHs to Modify

The *FDD DCHs to Modify* IE provides information for DCHs to be modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
FDD DCHs to Modify		<i>1..<maxno ofDCHs></i>			–	
>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		<i>1..<maxno ofDCHs></i>			–	
>>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 Priority	O		9.2.1.1		–	
>>Frame Handling Priority	O		9.2.1.29		–	
>>DRAC Control	O		9.2.2.13		–	
>> <u>Guaranteed Rate Information</u>	<u>O</u>		<u>9.2.1.x</u>		<u>YES</u>	<u>ignore</u>

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for one UE.

9.2.3.2A DCH TDD Information

The *DCH TDD Information* IE provides information for DCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
DCH Information		1..<maxno ofDCHs>			–	
>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..<maxno ofDCHs>			–	
>>DCH ID	M		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	M		9.2.1.65		–	
>>Transport Format Set	M		9.2.1.64	For the UL.	–	
>>Transport Format Set	M		9.2.1.64	For the DL.	–	
>>BLER	M		9.2.1.4	For the UL.	–	
>>BLER	M		9.2.1.4	For the DL.	–	
>>Allocation/Retention Priority	M		9.2.1.1		–	
>>Frame Handling Priority	M		9.2.1.29		–	
>>QE-Selector	C-CoordCH		9.2.1.46A		–	
>>Guaranteed Rate Information	<u>Q</u>		9.2.1.x		YES	ignore

Condition	Explanation
CoordCH	This IE is present only this DCH is part of a set of coordinated DCHs (number of instances of the <i>DCH Specific Info</i> IE is greater than 1).

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for one UE.

9.2.3.8B TDD DCHs to Modify

The *TDD DCHs to Modify* IE provides information for DCHs to be modified.

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
TDD DCHs to Modify		<i>1..<maxno ofDCHs></i>			–	
>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		<i>1..<maxno ofDCHs></i>			–	
>>DCH ID	M		9.2.1.16		–	
>>CCTrCH ID	O		9.2.3.2	UL CCTrCH in which the DCH is 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 Priority	O		9.2.1.1		–	
>>Frame Handling Priority	O		9.2.1.29		–	
<u>>>Guaranteed Rate Information</u>	<u>O</u>		<u>Guaranteed Rate 9.2.1.x</u>		<u>YES</u>	<u>ignore</u>

Range bound	Explanation
MaxnoofDCHs	Maximum number of DCHs for one UE.

9.3.2 Elementary Procedure Definitions

```
-- *****
--
-- Elementary Procedure definitions
--
-- *****

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    Criticality,
    ProcedureID,
    TransactionID
FROM RNSAP-CommonDataTypes

    CommonTransportChannelResourcesFailure,
    CommonTransportChannelResourcesRequest,
    CommonTransportChannelResourcesReleaseRequest,
    CommonTransportChannelResourcesResponseFDD,
    CommonTransportChannelResourcesResponseTDD,
    CompressedModeCommand,
    DedicatedMeasurementFailureIndication,
    DedicatedMeasurementInitiationFailure,
    DedicatedMeasurementInitiationRequest,
    DedicatedMeasurementInitiationResponse,
    DedicatedMeasurementReport,
    DedicatedMeasurementTerminationRequest,
    DCHRateControlCommand,
    DL-PowerControlRequest,
    DL-PowerTimeslotControlRequest,
    DownlinkSignallingTransferRequest,
    ErrorIndication,
    PagingRequest,
    PhysicalChannelReconfigurationCommand,
    PhysicalChannelReconfigurationFailure,
    PhysicalChannelReconfigurationRequestFDD,
    PhysicalChannelReconfigurationRequestTDD,
```

PrivateMessage,
RadioLinkAdditionFailureFDD,
RadioLinkAdditionFailureTDD,
RadioLinkAdditionRequestFDD,
RadioLinkAdditionRequestTDD,
RadioLinkAdditionResponseFDD,
RadioLinkAdditionResponseTDD,
RadioLinkCongestionIndication,
RadioLinkDeletionRequest,
RadioLinkDeletionResponse,
RadioLinkFailureIndication,
RadioLinkPreemptionRequiredIndication,
RadioLinkReconfigurationCancel,
RadioLinkReconfigurationCommit,
RadioLinkReconfigurationFailure,
RadioLinkReconfigurationPrepareFDD,
RadioLinkReconfigurationPrepareTDD,
RadioLinkReconfigurationReadyFDD,
RadioLinkReconfigurationReadyTDD,
RadioLinkReconfigurationRequestFDD,
RadioLinkReconfigurationRequestTDD,
RadioLinkReconfigurationResponseFDD,
RadioLinkReconfigurationResponseTDD,
RadioLinkRestoreIndication,
RadioLinkSetupFailureFDD,
RadioLinkSetupFailureTDD,
RadioLinkSetupRequestFDD,
RadioLinkSetupRequestTDD,
RadioLinkSetupResponseFDD,
RadioLinkSetupResponseTDD,
RelocationCommit,
UplinkSignallingTransferIndicationFDD,
UplinkSignallingTransferIndicationTDD

FROM RNSAP-PDU-Contents

id-commonTransportChannelResourcesInitialisation,
id-commonTransportChannelResourcesRelease,
id-compressedModeCommand,
id-dCHRateControl,
id-downlinkPowerControl,
id-downlinkSignallingTransfer,
id-downlinkPowerTimeslotControl,
id-errorIndication,
id-measurementFailure,
id-measurementInitiation,
id-measurementReporting,
id-measurementTermination,
id-paging,
id-physicalChannelReconfiguration,
id-privateMessage,
id-radioLinkAddition,

```

id-radioLinkCongestion,
id-radioLinkDeletion,
id-radioLinkFailure,
id-radioLinkPreemption,
id-radioLinkRestoration,
id-radioLinkSetup,
id-relocationCommit,
id-synchronisedRadioLinkReconfigurationCancellation,
id-synchronisedRadioLinkReconfigurationCommit,
id-synchronisedRadioLinkReconfigurationPreparation,
id-unsynchronisedRadioLinkReconfiguration,
id-uplinkSignallingTransfer
FROM RNSAP-Constants;

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

RNSAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage
    &SuccessfulOutcome          OPTIONAL,
    &UnsuccessfulOutcome       OPTIONAL,
    &Outcome                   OPTIONAL,
    &procedureID               ProcedureID    UNIQUE,
    &criticality               Criticality    DEFAULT ignore
}
WITH SYNTAX {
    INITIATING MESSAGE      &InitiatingMessage
    [SUCCESSFUL OUTCOME    &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME  &UnsuccessfulOutcome]
    [OUTCOME                &Outcome]
    PROCEDURE ID           &procedureID
    [CRITICALITY           &criticality]
}

-- *****
--
-- Interface PDU Definition
--
-- *****

RNSAP-PDU ::= CHOICE {
    initiatingMessage      InitiatingMessage,
    succesfulOutcome       SuccessfulOutcome,
    unsuccessfulOutcome    UnsuccessfulOutcome,
    outcome                Outcome,
    ...
}

```



```

InitiatingMessage ::= SEQUENCE {
  procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ( {RNSAP-ELEMENTARY-PROCEDURES} ),
  criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
  transactionID TransactionID,
  value       RNSAP-ELEMENTARY-PROCEDURE.&InitiatingMessage ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

SuccessfulOutcome ::= SEQUENCE {
  procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ( {RNSAP-ELEMENTARY-PROCEDURES} ),
  criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
  transactionID TransactionID,
  value       RNSAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

UnsuccessfulOutcome ::= SEQUENCE {
  procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ( {RNSAP-ELEMENTARY-PROCEDURES} ),
  criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
  transactionID TransactionID,
  value       RNSAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

Outcome ::= SEQUENCE {
  procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ( {RNSAP-ELEMENTARY-PROCEDURES} ),
  criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
  transactionID TransactionID,
  value       RNSAP-ELEMENTARY-PROCEDURE.&Outcome          ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

-- *****
--
-- Interface Elementary Procedure List
--
-- *****

RNSAP-ELEMENTARY-PROCEDURES RNSAP-ELEMENTARY-PROCEDURE ::= {
  RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 |
  RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 |
  RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 ,
  ...
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURE ::= {
  radioLinkSetupFDD |
  radioLinkSetupTDD |
  radioLinkAdditionFDD |
  radioLinkAdditionTDD |
  radioLinkDeletion |
  synchronisedRadioLinkReconfigurationPreparationFDD |
  synchronisedRadioLinkReconfigurationPreparationTDD |
  unSynchronisedRadioLinkReconfigurationFDD |
  unSynchronisedRadioLinkReconfigurationTDD
}

```

```

    physicalChannelReconfigurationFDD
    physicalChannelReconfigurationTDD
    measurementInitiation
    commonTransportChannelResourcesInitialisationFDD
    commonTransportChannelResourcesInitialisationTDD
    ...
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= {
    uplinkSignallingTransferFDD
    uplinkSignallingTransferTDD
    downlinkSignallingTransfer
    relocationCommit
    paging
    synchronisedRadioLinkReconfigurationCommit
    synchronisedRadioLinkReconfigurationCancellation
    radioLinkFailure
    radioLinkPreemption
    radioLinkRestoration
    measurementReporting
    measurementTermination
    measurementFailure
    downlinkPowerControlFDD
    downlinkPowerTimeslotControl
    compressedModeCommandFDD
    commonTransportChannelResourcesRelease
    errorIndication
    privateMessage
    ...
    dCHRateControl
    radioLinkCongestion
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 RNSAP-ELEMENTARY-PROCEDURE ::= {
    ...
}

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

radioLinkSetupFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkSetupRequestFDD
    SUCCESSFUL OUTCOME RadioLinkSetupResponseFDD
    UNSUCCESSFUL OUTCOME RadioLinkSetupFailureFDD
    PROCEDURE ID { procedureCode id-radioLinkSetup, ddMode fdd }
    CRITICALITY reject
}

```

```
radioLinkSetupTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkSetupRequestTDD
  SUCCESSFUL OUTCOME  RadioLinkSetupResponseTDD
  UNSUCCESSFUL OUTCOME  RadioLinkSetupFailureTDD
  PROCEDURE ID        { procedureCode id-radioLinkSetup, ddMode tdd }
  CRITICALITY         reject
}

radioLinkAdditionFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkAdditionRequestFDD
  SUCCESSFUL OUTCOME  RadioLinkAdditionResponseFDD
  UNSUCCESSFUL OUTCOME  RadioLinkAdditionFailureFDD
  PROCEDURE ID        { procedureCode id-radioLinkAddition , ddMode fdd }
  CRITICALITY         reject
}

radioLinkAdditionTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkAdditionRequestTDD
  SUCCESSFUL OUTCOME  RadioLinkAdditionResponseTDD
  UNSUCCESSFUL OUTCOME  RadioLinkAdditionFailureTDD
  PROCEDURE ID        { procedureCode id-radioLinkAddition , ddMode tdd }
  CRITICALITY         reject
}

radioLinkDeletion RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkDeletionRequest
  SUCCESSFUL OUTCOME  RadioLinkDeletionResponse
  PROCEDURE ID        { procedureCode id-radioLinkDeletion, ddMode common }
  CRITICALITY         reject
}

synchronisedRadioLinkReconfigurationPreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationPrepareFDD
  SUCCESSFUL OUTCOME  RadioLinkReconfigurationReadyFDD
  UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
  PROCEDURE ID        { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode fdd }
  CRITICALITY         reject
}

synchronisedRadioLinkReconfigurationPreparationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationPrepareTDD
  SUCCESSFUL OUTCOME  RadioLinkReconfigurationReadyTDD
  UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
  PROCEDURE ID        { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode tdd }
  CRITICALITY         reject
}

unSynchronisedRadioLinkReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationRequestFDD
  SUCCESSFUL OUTCOME  RadioLinkReconfigurationResponseFDD
  UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
}
```

```
PROCEDURE ID      { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
CRITICALITY      reject
}

unSynchronisedRadioLinkReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationRequestTDD
  SUCCESSFUL OUTCOME  RadioLinkReconfigurationResponseTDD
  UNSUCCESSFUL OUTCOME  RadioLinkReconfigurationFailure
  PROCEDURE ID        { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
  CRITICALITY         reject
}

physicalChannelReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  PhysicalChannelReconfigurationRequestFDD
  SUCCESSFUL OUTCOME  PhysicalChannelReconfigurationCommand
  UNSUCCESSFUL OUTCOME  PhysicalChannelReconfigurationFailure
  PROCEDURE ID        { procedureCode id-physicalChannelReconfiguration, ddMode fdd }
  CRITICALITY         reject
}

physicalChannelReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  PhysicalChannelReconfigurationRequestTDD
  SUCCESSFUL OUTCOME  PhysicalChannelReconfigurationCommand
  UNSUCCESSFUL OUTCOME  PhysicalChannelReconfigurationFailure
  PROCEDURE ID        { procedureCode id-physicalChannelReconfiguration, ddMode tdd }
  CRITICALITY         reject
}

measurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DedicatedMeasurementInitiationRequest
  SUCCESSFUL OUTCOME  DedicatedMeasurementInitiationResponse
  UNSUCCESSFUL OUTCOME  DedicatedMeasurementInitiationFailure
  PROCEDURE ID        { procedureCode id-measurementInitiation, ddMode common }
  CRITICALITY         reject
}

commonTransportChannelResourcesInitialisationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME  CommonTransportChannelResourcesResponseFDD
  UNSUCCESSFUL OUTCOME  CommonTransportChannelResourcesFailure
  PROCEDURE ID        { procedureCode id-commonTransportChannelResourcesInitialisation, ddMode fdd }
  CRITICALITY         reject
}

commonTransportChannelResourcesInitialisationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME  CommonTransportChannelResourcesResponseTDD
  UNSUCCESSFUL OUTCOME  CommonTransportChannelResourcesFailure
  PROCEDURE ID        { procedureCode id-commonTransportChannelResourcesInitialisation, ddMode tdd }
  CRITICALITY         reject
}
```

```
uplinkSignallingTransferFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE UplinkSignallingTransferIndicationFDD
  PROCEDURE ID       { procedureCode id-uplinkSignallingTransfer, ddMode fdd }
  CRITICALITY       ignore
}

uplinkSignallingTransferTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE UplinkSignallingTransferIndicationTDD
  PROCEDURE ID       { procedureCode id-uplinkSignallingTransfer, ddMode tdd }
  CRITICALITY       ignore
}

downlinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DownlinkSignallingTransferRequest
  PROCEDURE ID       { procedureCode id-downlinkSignallingTransfer, ddMode common }
  CRITICALITY       ignore
}

relocationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RelocationCommit
  PROCEDURE ID       { procedureCode id-relocationCommit, ddMode common }
  CRITICALITY       ignore
}

paging RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE PagingRequest
  PROCEDURE ID       { procedureCode id-paging, ddMode common }
  CRITICALITY       ignore
}

synchronisedRadioLinkReconfigurationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationCommit
  PROCEDURE ID       { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
  CRITICALITY       ignore
}

synchronisedRadioLinkReconfigurationCancellation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationCancel
  PROCEDURE ID       { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
  CRITICALITY       ignore
}

radioLinkFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkFailureIndication
  PROCEDURE ID       { procedureCode id-radioLinkFailure, ddMode common }
  CRITICALITY       ignore
}

radioLinkPreemption RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkPreemptionRequiredIndication
}
```

```
PROCEDURE ID      { procedureCode id-radioLinkPreemption, ddMode common }
CRITICALITY      ignore
}

radioLinkRestoration RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkRestoreIndication
  PROCEDURE ID      { procedureCode id-radioLinkRestoration, ddMode common }
  CRITICALITY      ignore
}

measurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementReport
  PROCEDURE ID      { procedureCode id-measurementReporting, ddMode common }
  CRITICALITY      ignore
}

measurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementTerminationRequest
  PROCEDURE ID      { procedureCode id-measurementTermination, ddMode common }
  CRITICALITY      ignore
}

measurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementFailureIndication
  PROCEDURE ID      { procedureCode id-measurementFailure, ddMode common }
  CRITICALITY      ignore
}

dCHRateControl RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DCHRateControlCommand
  PROCEDURE ID      { procedureCode id-dCHRateControl, ddMode common }
  CRITICALITY      reject
}

radioLinkCongestion RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkCongestionIndication
  PROCEDURE ID      { procedureCode id-radioLinkCongestion, ddMode common }
  CRITICALITY      reject
}

downlinkPowerControlFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DL-PowerControlRequest
  PROCEDURE ID      { procedureCode id-downlinkPowerControl, ddMode fdd }
  CRITICALITY      ignore
}

downlinkPowerTimeslotControl RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DL-PowerTimeslotControlRequest
  PROCEDURE ID      { procedureCode id-downlinkPowerTimeslotControl, ddMode tdd }
  CRITICALITY      ignore
}
```

```
compressedModeCommandFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CompressedModeCommand
  PROCEDURE ID        { procedureCode id-compressedModeCommand, ddMode fdd }
  CRITICALITY         ignore
}

commonTransportChannelResourcesRelease RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CommonTransportChannelResourcesReleaseRequest
  PROCEDURE ID        { procedureCode id-commonTransportChannelResourcesRelease, ddMode common }
  CRITICALITY         ignore
}

errorIndication RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  ErrorIndication
  PROCEDURE ID        { procedureCode id-errorIndication, ddMode common }
  CRITICALITY         ignore
}

privateMessage RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  PrivateMessage
  PROCEDURE ID        { procedureCode id-privateMessage, ddMode common }
  CRITICALITY         ignore
}

END
```

9.3.3 PDU Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
  Active-Pattern-Sequence-Information,
  AllocationRetentionPriority,
  AllowedQueuingTime,
  Allowed-Rate-Information,
  AlphaValue,
  BLER,
  Block-STTD-Indicator,
  BindingID,
  C-ID,
  C-RNTI,
  CCTrCH-ID,
  CFN,
  ClosedLoopModel1-SupportIndicator,
  ClosedLoopMode2-SupportIndicator,
  ClosedloopTimingadjustmentmode,
  CN-CS-DomainIdentifier,
  CN-PS-DomainIdentifier,
  CNDomainType,
  Cause,
  CellParameterID,
  ChipOffset,
  CriticalityDiagnostics,
  D-RNTI,
  D-RNTI-ReleaseIndication,
  DCH-FDD-Information,
  DCH-ID,
  DCH-InformationResponse,
```


DCH-TDD-Information,
DL-DPCH-SlotFormat,
DL-TimeslotISCP,
DL-Power,
DL-ScramblingCode,
DL-Timeslot-Information,
DL-TimeSlot-ISCP-Info,
DPCH-ID,
DRACControl,
DRXCycleLengthCoefficient,
DedicatedMeasurementType,
DedicatedMeasurementValue,
DedicatedMeasurementValueInformation,
DiversityControlField,
DiversityMode,
DSCH-FDD-Information,
DSCH-FDD-InformationResponse,
DSCH-FlowControlInformation,
DSCH-FlowControlItem,
DSCH-TDD-Information,
DSCH-ID,
SchedulingPriorityIndicator,
FACH-FlowControlInformation,
FDD-DCHs-to-Modify,
FDD-DL-ChannelisationCodeNumber,
FDD-DL-CodeInformation,
FDD-S-CCPCH-Offset,
FDD-TPC-DownlinkStepSize,
FirstRLS-Indicator,
FNReportingIndicator,
FrameHandlingPriority,
FrameOffset,
GA-AccessPointPosition,
GA-Cell,
IMSI,
InnerLoopDLPCStatus,
L3-Information,
LimitedPowerIncrease,
MaximumAllowedULTxPower,
MaxNrDLPhysicalchannels,
MaxNrOfUL-DPCHs,
MaxNrTimeslots,
MaxNrULPhysicalchannels,
MeasurementFilterCoefficient,
MeasurementID,
MidambleShiftAndBurstType,
MinimumSpreadingFactor,
MinUL-ChannelisationCodeLength,
MultiplexingPosition,
Neighbouring-GSM-CellInformation,
Neighbouring-UMTS-CellInformation,

NrOfDLchannelisationcodes,
PagingCause,
PagingRecordType,
PDSCHCodeMapping,
PayloadCRC-PresenceIndicator,
PowerAdjustmentType,
PowerOffset,
PrimaryCCPCH-RSCP,
PrimaryCPICH-EcNo,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
PunctureLimit,
QE-Selector,
RANAP-RelocationInformation,
RB-Info,
RL-ID,
RL-Set-ID,
RNC-ID,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
Received-total-wide-band-power,
RxTimingDeviationForTA,
S-FieldLength,
S-RNTI,
SCH-TimeSlot,
SAI,
SN,
Secondary-CCPCH-Info,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
STTD-Indicator,
STTD-SupportIndicator,
AdjustmentPeriod,
ScaledAdjustmentRatio,
MaxAdjustmentStep,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-DCHs-to-Modify,
TDD-DL-Code-Information,
TDD-DPCHOffset,
TDD-PhysicalChannelOffset,
TDD-TPC-DownlinkStepSize,
TDD-UL-Code-Information,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,

```
TimeSlot,  
TimingAdvanceApplied,  
ToAWE,  
ToAWS,  
TransmitDiversityIndicator,  
TransportBearerID,  
TransportBearerRequestIndicator,  
TFCS,  
Transmission-Gap-Pattern-Sequence-Information,  
Transmission-Gap-Pattern-Sequence-ScramblingCode-Information,  
TransportFormatManagement,  
TransportFormatSet,  
TransportLayerAddress,  
TrCH-SrcStatisticsDescr,  
UARFCN,  
UC-ID,  
UL-DPCCH-SlotFormat,  
UL-SIR,  
UL-FP-Mode,  
UL-PhysCH-SF-Variation,  
UL-ScramblingCode,  
UL-TimeSlot-Information,  
UL-TimeSlot-ISCP-Info,  
URA-ID,  
URA-Information,  
USCH-ID,  
USCH-Information  
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,  
maxNoOfUSCHs,  
maxNrOfCCTrCHs,  
maxNrOfDCHs,  
maxNrOfTS,  
maxNrOfDPCHs,  
maxNrOfRLs,  
maxNrOfRLSets,  
maxNrOfRLs-1,
```

maxNrOfRLs-2,
maxNrOfULTs,
maxNrOfDLTs,

id-Active-Pattern-Sequence-Information,
id-AdjustmentRatio,
id-AllowedQueuingTime,
id-BindingID,
id-C-ID,
id-C-RNTI,
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,
id-CauseLevel-RL-SetupFailureFDD,
id-CauseLevel-RL-SetupFailureTDD,
id-ClosedLoopModel-SupportIndicator,
id-ClosedLoopMode2-SupportIndicator,
id-CNOriginatedPage-PagingRqst,
id-CriticalityDiagnostics,
id-D-RNTI,
id-D-RNTI-ReleaseIndication,
id-DCHs-to-Add-FDD,
id-DCHs-to-Add-TDD,
id-DCH-DeleteList-RL-ReconfPrepFDD,
id-DCH-DeleteList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfRqstFDD,
id-DCH-DeleteList-RL-ReconfRqstTDD,
id-DCH-FDD-Information,
id-DCH-TDD-Information,
id-FDD-DCHs-to-Modify,
id-TDD-DCHs-to-Modify,
id-DCH-InformationResponse,
~~id-DCH-Rate-InformationItem-DCHRateCtrlComRL-CongestInd,~~
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-PhyChReconfRqstTDD,
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-ReconfRqstTDD,
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD,
id-FDD-DL-CodeInformation,
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-DSCHs-to-Add-FDD,
id-DSCHs-to-Add-TDD,
id-DSCH-DeleteList-RL-ReconfPrepTDD,
id-DSCH-Delete-RL-ReconfPrepFDD,
id-DSCH-FDD-Information,
id-DSCH-InformationListIE-RL-AdditionRspTDD,
id-DSCH-InformationListIEs-RL-SetupRspTDD,
id-DSCH-TDD-Information,
id-DSCH-FDD-InformationResponse,
id-DSCH-ModifyList-RL-ReconfPrepTDD,
id-DSCH-Modify-RL-ReconfPrepFDD,
id-DSCHsToBeAddedOrModified-FDD,
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD,
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD,
id-GA-AccessPointPosition,
id-GA-Cell,
id-IMSI,
id-InnerLoopDLPCStatus,
id-L3-Information,
id-AdjustmentPeriod,
id-MaxAdjustmentStep,
id-MeasurementFilterCoefficient,
id-MeasurementID,
id-Neighbouring-GSM-CellInformation,
id-PagingArea-PagingRqst,
id-FACH-FlowControlInformation,
id-PowerAdjustmentType,
id-ProcedureScope-DL-PC-Rqst,

id-PropagationDelay,
 id-RANAP-RelocationInformation,
 id-RL-Information-PhyChReconfRqstFDD,
 id-RL-Information-PhyChReconfRqstTDD,
 id-RL-Information-RL-AdditionRqstFDD,
 id-RL-Information-RL-AdditionRqstTDD,
 id-RL-Information-RL-DeletionRqst,
 id-RL-Information-RL-FailureInd,
 id-RL-Information-RL-ReconfPrepFDD,
 id-RL-Information-RL-RestoreInd,
 id-RL-Information-RL-SetupRqstFDD,
 id-RL-Information-RL-SetupRqstTDD,
~~id-RL-InformationItem-DCHRateCtrlComRL-CongestInd,~~
 id-RL-InformationItem-DM-Rprt,
 id-RL-InformationItem-DM-Rqst,
 id-RL-InformationItem-DM-Rsp,
 id-RL-InformationItem-RL-PreemptRequiredInd,
 id-RL-InformationItem-RL-SetupRqstFDD,
~~id-RL-InformationList-DCHRateCtrlComRL-CongestInd,~~
 id-RL-InformationList-RL-AdditionRqstFDD,
 id-RL-InformationList-RL-DeletionRqst,
 id-RL-InformationList-RL-PreemptRequiredInd,
 id-RL-InformationList-RL-ReconfPrepFDD,
 id-RL-InformationResponse-RL-AdditionRspTDD,
 id-RL-InformationResponse-RL-ReconfReadyTDD,
 id-RL-InformationResponse-RL-ReconfRspTDD,
 id-RL-InformationResponse-RL-SetupRspTDD,
 id-RL-InformationResponseItem-RL-AdditionRspFDD,
 id-RL-InformationResponseItem-RL-ReconfReadyFDD,
 id-RL-InformationResponseItem-RL-ReconfRspFDD,
 id-RL-InformationResponseItem-RL-SetupRspFDD,
 id-RL-InformationResponseList-RL-AdditionRspFDD,
 id-RL-InformationResponseList-RL-ReconfReadyFDD,
 id-RL-InformationResponseList-RL-ReconfRspFDD,
 id-RL-InformationResponseList-RL-SetupRspFDD,
 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-ReportCharacteristics,
 id-Reporting-Object-RL-FailureInd,
 id-Reporting-Object-RL-RestoreInd,
 id-RxTimingDeviationForTA,
 id-S-RNTI,
 id-SAI,
 id-SRNC-ID,
 id-STTD-SupportIndicator,
 id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
 id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,

```
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
id-timeSlot-ISCPList-DL-PC-Rqst-TDD,
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-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,
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-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-Information,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
id-USCHs-to-Add,
id-USCH-DeleteList-RL-ReconfPrepTDD,
id-USCH-InformationListIE-RL-AdditionRspTDD,
id-USCH-InformationListIEs-RL-SetupRspTDD,
id-USCH-Information,
id-USCH-ModifyList-RL-ReconfPrepTDD,
id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD
FROM RNSAP-Constants;
```

```
-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****
```

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

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SRNC-ID            CRITICALITY reject TYPE RNC-ID                PRESENCE mandatory } |
    { ID id-S-RNTI             CRITICALITY reject TYPE S-RNTI              PRESENCE mandatory } |
    { ID id-D-RNTI             CRITICALITY reject TYPE D-RNTI              PRESENCE optional  } |
    { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime PRESENCE optional  } |
    { ID id-UL-DPCH-Information-RL-SetupRqstFDD CRITICALITY reject TYPE UL-DPCH-Information-RL-SetupRqstFDD PRESENCE mandatory } |
    { ID id-DL-DPCH-Information-RL-SetupRqstFDD CRITICALITY reject TYPE DL-DPCH-Information-RL-SetupRqstFDD PRESENCE mandatory } |
    { ID id-DCH-FDD-Information CRITICALITY reject TYPE DCH-FDD-Information PRESENCE mandatory } |
    { ID id-DSCH-FDD-Information CRITICALITY reject TYPE DSCH-FDD-Information PRESENCE optional  } |
    { ID id-RL-Information-RL-SetupRqstFDD      CRITICALITY notify TYPE RL-InformationList-RL-SetupRqstFDD PRESENCE mandatory } |
    { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE optional } |
    { ID id-Active-Pattern-Sequence-Information CRITICALITY reject TYPE Active-Pattern-Sequence-Information PRESENCE optional },
    ...
}

UL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs            MaxNrOfUL-DPCHs OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit           PunctureLimit,
    ul-TFCS                     TFCS,
    ul-DPCCH-SlotFormat        UL-DPCCH-SlotFormat,
    ul-SIRTarget                UL-SIR OPTIONAL,
    diversityMode               DiversityMode,
    sSDT-CellIdLength           SSDT-CellIdLength OPTIONAL,
    s-FieldLength               S-FieldLength OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
    tFCS                        TFCS,
    dl-DPCH-SlotFormat          DL-DPCH-SlotFormat,
```



```

nrOfDLchannelisationcodes      NrOfDLchannelisationcodes,
tFCI-SignallingMode            TFCI-SignallingMode,
tFCI-Presence                  TFCI-Presence           OPTIONAL
-- This IE is present if Slot Format is from 12 to 16 --,
multiplexingPosition           MultiplexingPosition,
powerOffsetInformation          PowerOffsetInformation-RL-SetupRqstFDD,
fdd-dl-TPC-DownlinkStepSize    FDD-TPC-DownlinkStepSize,
limitedPowerIncrease            LimitedPowerIncrease,
innerLoopDLPCStatus            InnerLoopDLPCStatus,
iE-Extensions                  ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
    po1-ForTFCI-Bits            PowerOffset,
    po2-ForTPC-Bits             PowerOffset,
    po3-ForPilotBits           PowerOffset,
    iE-Extensions               ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RL-InformationList-RL-SetupRqstFDD          ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIEs-RL-SetupRqstFDD} }

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

RL-InformationItem-RL-SetupRqstFDD ::= SEQUENCE {
    rL-ID                        RL-ID,
    c-ID                         C-ID,
    firstRLS-indicator           FirstRLS-Indicator,
    frameOffset                  FrameOffset,
    chipOffset                   ChipOffset,
    propagationDelay             PropagationDelay           OPTIONAL,
    diversityControlField        DiversityControlField       OPTIONAL
    -- This IE is present only if the RL is not the first one in the RL-InformationList-RL-SetupRqstFDD --,
    dl-InitialTX-Power           DL-Power                   OPTIONAL,
    primaryCPICH-EcNo            PrimaryCPICH-EcNo          OPTIONAL,
    -- Either Initial DL TX Power IE or Primary CPICH Ec/No IE shall be present.
    sSDT-CellID                  SSDT-CellID               OPTIONAL,
    transmitDiversityIndicator    TransmitDiversityIndicator   OPTIONAL,
    -- This IE is present unless Diversity Mode IE in UL DPCH Information group is "none"

```

```

    iE-Extensions          ProtocolExtensionContainer { {RL-InformationItem-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

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

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

```

```

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

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

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

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

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

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

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

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

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

```

```

}

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

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

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

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

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

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

RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

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

RadioLinkSetupResponseFDD-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 } |
{ 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 } |
{ ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics          PRESENCE optional },
...
}

RL-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {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-Information      URA-Information,
  sAI                  SAI,
  gA-Cell              GA-Cell OPTIONAL,
  gA-AccessPointPosition  GA-AccessPointPosition OPTIONAL,
  received-total-wide-band-power  Received-total-wide-band-power,
  secondary-CCPCH-Info  Secondary-CCPCH-Info OPTIONAL,
  dl-CodeInformation   FDD-DL-CodeInformation,
  diversityIndication  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,
  closedloopoptimingadjustmentmode  Closedloopoptimingadjustmentmode OPTIONAL,
  maximumAllowedULTxPower  MaximumAllowedULTxPower,
  maximumDLTxPower        DL-Power,
  minimumDLTxPower        DL-Power,
  primaryScramblingCode   PrimaryScramblingCode OPTIONAL,
  uL-UARFCN               UARFCN OPTIONAL,
  dL-UARFCN               UARFCN OPTIONAL,
  primaryCPICH-Power      PrimaryCPICH-Power OPTIONAL,
  dSCHInformationResponse  DSCH-InformationResponse-RL-SetupRspFDD OPTIONAL,
  neighbouring-UMTS-CellInformation  Neighbouring-UMTS-CellInformation OPTIONAL,
  neighbouring-GSM-CellInformation  Neighbouring-GSM-CellInformation-RL-SetupRspFDD OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DiversityIndication-RL-SetupRspFDD ::= CHOICE {

```

```

    combining                Combining-RL-SetupRspFDD,
    nonCombiningOrFirstRL    NonCombiningOrFirstRL-RL-SetupRspFDD
}

Combining-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    iE-Extensions            ProtocolExtensionContainer { { CombiningItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    ...
}

CombiningItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
    { ID id-DCH-InformationResponse          CRITICALITY ignore EXTENSION DCH-InformationResponse          PRESENCE optional }
}

NonCombiningOrFirstRL-RL-SetupRspFDD ::= SEQUENCE {
    dCH-InformationResponse  DCH-InformationResponse,
    iE-Extensions            ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    ...
}

NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-InformationResponse-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseIE-RL-SetupRspFDD }}

DSCH-InformationResponseIE-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCH-FDD-InformationResponse  CRITICALITY ignore  TYPE  DSCH-FDD-InformationResponse PRESENCE mandatory }
}

Neighbouring-GSM-CellInformation-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationItem-RL-SetupRspFDD }}

Neighbouring-GSM-CellInformationItem-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-GSM-CellInformation  CRITICALITY ignore  TYPE  Neighbouring-GSM-CellInformation PRESENCE mandatory }
}

RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

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

```

```

}

RadioLinkSetupResponseTDD-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 } |
  { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-RL-SetupRspTDD PRESENCE mandatory } |
  { ID id-UL-SIRTarget           CRITICALITY ignore TYPE UL-SIR                PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  uRA-Information      URA-Information,
  sAI                  SAI,
  gA-Cell              GA-Cell OPTIONAL,
  gA-AccessPointPosition GA-AccessPointPosition OPTIONAL,
  ul-TimeSlot-ISCP-Info UL-TimeSlot-ISCP-Info,
  maxUL-SIR            UL-SIR,
  minUL-SIR            UL-SIR,
  maximumAllowedULTxPower MaximumAllowedULTxPower,
  maximumDLTxPower    DL-Power,
  minimumDLTxPower    DL-Power,
  timingAdvanceApplied TimingAdvanceApplied,
  alphaValue           AlphaValue,
  ul-PhysCH-SF-Variation UL-PhysCH-SF-Variation,
  ul-CCTrCHInformation UL-CCTrCHInformationList-RL-SetupRspTDD OPTIONAL,
  dl-CCTrCHInformation DL-CCTrCHInformationList-RL-SetupRspTDD OPTIONAL,
  dCH-InformationResponse DCH-InformationResponseList-RL-SetupRspTDD OPTIONAL,
  dsch-InformationResponse DSCH-InformationResponse-RL-SetupRspTDD OPTIONAL,
  usch-InformationResponse USCH-InformationResponse-RL-SetupRspTDD OPTIONAL,
  neighbouring-UMTS-CellInformation Neighbouring-UMTS-CellInformation OPTIONAL,
  neighbouring-GSM-CellInformation Neighbouring-GSM-CellInformation-RL-SetupRspTDD OPTIONAL,
  iE-Extensions         ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-SetupRspTDD}}

UL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD CRITICALITY ignore TYPE UL-CCTrCHInformationListIE-RL-SetupRspTDD PRESENCE mandatory }
}

UL-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {

```

```

    cCTrCH-ID          CCTrCH-ID,
    ul-DPCH-InformationList-RL-SetupRspTDD  OPTIONAL,
    iE-Extensions     ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {UL-DPCH-InformationListIEs-RL-SetupRspTDD} }

UL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-RL-SetupRspTDD      CRITICALITY ignore  TYPE UL-DPCH-InformationItem-RL-SetupRspTDD  PRESENCE mandatory }
}

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

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {DL-CCTrCHInformationListIEs-RL-SetupRspTDD} }

DL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD  CRITICALITY ignore  TYPE DL-CCTrCHInformationListIE-RL-SetupRspTDD  PRESENCE mandatory }
}

DL-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-SetupRspTDD

DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    dl-DPCH-InformationList-RL-SetupRspTDD  OPTIONAL,
    iE-Extensions     ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationList-RL-SetupRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-InformationListIEs-RL-SetupRspTDD} }

```



```

DL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationItem-RL-SetupRspTDD      CRITICALITY ignore  TYPE DL-DPCH-InformationItem-RL-SetupRspTDD  PRESENCE mandatory}
}

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
  repetitionPeriod      RepetitionPeriod,
  repetitionLength      RepetitionLength,
  tDD-DPCHOffset        TDD-DPCHOffset,
  dL-Timeslot-Information DL-Timeslot-Information,
  iE-Extensions         ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DCH-InformationResponseListIEs-RL-SetupRspTDD}}

DCH-InformationResponseListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse  CRITICALITY ignore  TYPE DCH-InformationResponse  PRESENCE mandatory }
}

DSCH-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{DSCH-InformationList-RL-SetupRspTDD}}

DSCH-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationListIEs-RL-SetupRspTDD      CRITICALITY ignore  TYPE DSCH-InformationListIEs-RL-SetupRspTDD  PRESENCE mandatory }
}

DSCH-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCHInformationItem-RL-SetupRspTDD

DSCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
  dsch-ID              DSCH-ID,
  dSCH-FlowControlInformation DSCH-FlowControlInformation,
  bindingID            BindingID  OPTIONAL,
  transportLayerAddress TransportLayerAddress  OPTIONAL,
  transportFormatManagement TransportFormatManagement,
  iE-Extensions        ProtocolExtensionContainer { {DSCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

DSCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

USCH-InformationResponse-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{USCH-InformationList-RL-SetupRspTDD}}

USCH-InformationList-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-USCH-InformationListIEs-RL-SetupRspTDD      CRITICALITY ignore  TYPE USCH-InformationListIEs-RL-SetupRspTDD  PRESENCE mandatory }
}

```

```

USCH-InformationListIEs-RL-SetupRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCHInformationItem-RL-SetupRspTDD

USCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    usch-ID                USCH-ID,
    bindingID              BindingID OPTIONAL,
    transportLayerAddress  TransportLayerAddress OPTIONAL,
    transportFormatManagement TransportFormatManagement,
    iE-Extensions          ProtocolExtensionContainer { {USCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

USCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Neighbouring-GSM-CellInformation-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationItem-RL-SetupRspTDD }}

Neighbouring-GSM-CellInformationItem-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-GSM-CellInformation CRITICALITY ignore TYPE Neighbouring-GSM-CellInformation PRESENCE mandatory }
}

RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

RadioLinkSetupFailureFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{RadioLinkSetupFailureFDD-IEs}},
    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 } |
    { ID id-CauseLevel-RL-SetupFailureFDD CRITICALITY ignore TYPE CauseLevel-RL-SetupFailureFDD PRESENCE mandatory } |
    { 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,
    rLSpecificCause             RLSpecificCauseList-RL-SetupFailureFDD,
    ...
}

```

```

}

GeneralCauseList-RL-SetupFailureFDD ::= SEQUENCE {
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    ...
}

GeneralCauseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-SetupFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-SetupFailureFDD    UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
    successful-RL-InformationRespList-RL-SetupFailureFDD        SuccessfulRL-InformationResponseList-RL-SetupFailureFDD OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {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,
    iE-Extensions        ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {SuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }

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-Information      URA-Information,
SAI                  SAI,
gA-Cell              GA-Cell    OPTIONAL,
gA-AccessPointPosition  GA-AccessPointPosition  OPTIONAL,
received-total-wide-band-power  Received-total-wide-band-power,
secondary-CCPCH-Info  Secondary-CCPCH-Info  OPTIONAL,
dl-CodeInformation   FDD-DL-CodeInformation,
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-UMTS-CellInformation  Neighbouring-UMTS-CellInformation  OPTIONAL,
neighbouring-GSM-CellInformation  Neighbouring-GSM-CellInformation-RL-SetupFailureFDD  OPTIONAL,
iE-Extensions          ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DiversityIndication-RL-SetupFailureFDD ::= CHOICE {
    combining                Combining-RL-SetupFailureFDD,
    nonCombiningOrFirstRL    NonCombiningOrFirstRL-RL-SetupFailureFDD
}

Combining-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    iE-Extensions            ProtocolExtensionContainer { { CombiningItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

CombiningItem-RL-SetupFailureFDD-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
...
{ ID id-DCH-InformationResponse          CRITICALITY ignore  EXTENSION DCH-InformationResponse          PRESENCE optional }
}

NonCombiningOrFirstRL-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-InformationResponse  DCH-InformationResponse,
    iE-Extensions            ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

NonCombiningOrFirstRLItem-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-FDD-InformationResponse CRITICALITY ignore TYPE DSCH-FDD-InformationResponse PRESENCE mandatory }
}

Neighbouring-GSM-CellInformation-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationItem-RL-SetupFailureFDD }}

Neighbouring-GSM-CellInformationItem-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-Neighbouring-GSM-CellInformation CRITICALITY ignore TYPE Neighbouring-GSM-CellInformation PRESENCE mandatory }
}

RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

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

RadioLinkSetupFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CauseLevel-RL-SetupFailureTDD CRITICALITY ignore TYPE CauseLevel-RL-SetupFailureTDD PRESENCE mandatory }|
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

CauseLevel-RL-SetupFailureTDD ::= CHOICE {
  generalCause GeneralCauseList-RL-SetupFailureTDD,
  rLSpecificCause RLSpecificCauseList-RL-SetupFailureTDD,
  ...
}

GeneralCauseList-RL-SetupFailureTDD ::= SEQUENCE {
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureTDD-ExtIEs } } OPTIONAL,
  ...
}

```

```

GeneralCauseItem-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-SetupFailureTDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD
    iE-Extensions
    ...
    ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
}

RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD} }

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
      SetupFailureTDD PRESENCE mandatory }
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD ::= SEQUENCE {
    rL-ID RL-ID,
    cause Cause,
    iE-Extensions
    ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST FDD
--
-- *****

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

RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-SIRTarget CRITICALITY reject TYPE UL-SIR PRESENCE mandatory } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD CRITICALITY notify TYPE RL-InformationList-RL-AdditionRqstFDD PRESENCE mandatory } |

```

```

    { ID id-Active-Pattern-Sequence-Information CRITICALITY reject TYPE Active-Pattern-Sequence-Information PRESENCE optional },
    ...
}

RL-InformationList-RL-AdditionRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {RL-Information-RL-
AdditionRqstFDD-IEs} }

RL-Information-RL-AdditionRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstFDD CRITICALITY notify TYPE RL-Information-RL-AdditionRqstFDD PRESENCE mandatory }
}

RL-Information-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID RL-ID,
    c-ID C-ID,
    frameOffset FrameOffset,
    chipOffset ChipOffset,
    diversityControlField DiversityControlField,
    primaryCPICH-EcNo PrimaryCPICH-EcNo OPTIONAL,
    sSDT-CellID SSDT-CellID OPTIONAL,
    transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-AdditionRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID RL-ID,

```

```

c-ID                C-ID,
frameOffset         FrameOffset,
diversityControlField DiversityControlField,
primaryCCPCH-RSCP   PrimaryCCPCH-RSCP   OPTIONAL,
dL-TimeSlot-ISCP-Info DL-TimeSlot-ISCP-Info   OPTIONAL,
iE-Extensions       ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
...
}

RL-Information-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkAdditionRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

RadioLinkAdditionResponseFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container        {{RadioLinkAdditionResponseFDD-IEs}},
    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 ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {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-Information      URA-Information,
    sAI                  SAI,
    gA-Cell              GA-Cell    OPTIONAL,
    gA-AccessPointPosition GA-AccessPointPosition  OPTIONAL,

```



```

received-total-wide-band-power Received-total-wide-band-power,
secondary-CCPCH-Info           Secondary-CCPCH-Info           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
-- 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-UMTS-CellInformation Neighbouring-UMTS-CellInformation OPTIONAL,
neighbouring-GSM-CellInformation Neighbouring-GSM-CellInformation-RL-AdditionRspFDD OPTIONAL,
iE-Extensions                    ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DL-CodeInformationList-RL-AdditionRspFDD ::= ProtocolIE-Single-Container { { DL-CodeInformationListIEs-RL-AdditionRspFDD } }

DL-CodeInformationListIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
{ ID id-FDD-DL-CodeInformation CRITICALITY ignore TYPE FDD-DL-CodeInformation PRESENCE mandatory }
}

DiversityIndication-RL-AdditionRspFDD ::= CHOICE {
combining Combining-RL-AdditionRspFDD,
nonCombining NonCombining-RL-AdditionRspFDD
}

Combining-RL-AdditionRspFDD ::= SEQUENCE {
rL-ID RL-ID,
iE-Extensions ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
...
}

CombiningItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
{ ID id-DCH-InformationResponse CRITICALITY ignore EXTENSION DCH-InformationResponse PRESENCE optional }
}

NonCombining-RL-AdditionRspFDD ::= SEQUENCE {
dCH-InformationResponse DCH-InformationResponse,
iE-Extensions ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
...
}

```

```

NonCombiningItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Neighbouring-GSM-CellInformation-RL-AdditionRspFDD ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationItem-RL-AdditionRspFDD }}

Neighbouring-GSM-CellInformationItem-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-GSM-CellInformation    CRITICALITY ignore TYPE    Neighbouring-GSM-CellInformation PRESENCE mandatory }
}

RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

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

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponse-RL-AdditionRspTDD
      CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics
      CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    uRA-Information             URA-Information,
    sAI                        SAI,
    gA-Cell                    GA-Cell    OPTIONAL,
    gA-AccessPointPosition     GA-AccessPointPosition    OPTIONAL,
    ul-TimeSlot-ISCP-Info      UL-TimeSlot-ISCP-Info,
    minUL-SIR                  UL-SIR,
    maxUL-SIR                  UL-SIR,
    maximumAllowedULTxPower    MaximumAllowedULTxPower,
    maximumDLTxPower          DL-Power,
    minimumDLTxPower          DL-Power,
    timingAdvanceApplied       TimingAdvanceApplied,
    alphaValue                 AlphaValue,
    ul-PhysCH-SF-Variation     UL-PhysCH-SF-Variation,
    ul-CCTrCHInformationList-RL-AdditionRspTDD    OPTIONAL,
    dl-CCTrCHInformationList-RL-AdditionRspTDD    OPTIONAL,
    dCH-Information            DCH-Information-RL-AdditionRspTDD    OPTIONAL,
}

```

```

dSCH-InformationResponse      DSCH-InformationResponse-RL-AdditionRspTDD      OPTIONAL,
uSCH-InformationResponse      USCH-InformationResponse-RL-AdditionRspTDD      OPTIONAL,
neighbouring-UMTS-CellInformation  Neighbouring-UMTS-CellInformation      OPTIONAL,
neighbouring-GSM-CellInformation  Neighbouring-GSM-CellInformation-RL-AdditionRspTDD  OPTIONAL,
IE-Extensions                  ProtocolExtensionContainer { {RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

UL-CCTrCHInformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-AdditionRspTDD}}

UL-CCTrCHInformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD      CRITICALITY ignore  TYPE UL-CCTrCHInformationListIE-RL-AdditionRspTDD      PRESENCE mandatory
  }
}

UL-CCTrCHInformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-AdditionRspTDD

UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  cCTrCH-ID                  CCTrCH-ID,
  ul-DPCH-Information        UL-DPCH-InformationList-RL-AdditionRspTDD      OPTIONAL,
  IE-Extensions              ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

UL-DPCH-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { {UL-DPCH-InformationListIEs-RL-AdditionRspTDD} }

UL-DPCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationItem-RL-AdditionRspTDD      CRITICALITY ignore  TYPE UL-DPCH-InformationItem-RL-AdditionRspTDD      PRESENCE mandatory
  }
}

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

UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

DL-CCTrCHInformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{DL-CCTrCHInformationListIEs-RL-AdditionRspTDD}}

DL-CCTrCHInformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD   CRITICALITY ignore   TYPE DL-CCTrCHInformationListIE-RL-AdditionRspTDD   PRESENCE mandatory
}
}

DL-CCTrCHInformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-AdditionRspTDD

DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  cCTrCH-ID                CCTrCH-ID,
  dl-DPCH-Information      DL-DPCH-InformationList-RL-AdditionRspTDD   OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-DPCH-InformationList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container { {DL-DPCH-InformationListIEs-RL-AdditionRspTDD} }

DL-DPCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationItem-RL-AdditionRspTDD       CRITICALITY ignore   TYPE DL-DPCH-InformationItem-RL-AdditionRspTDD   PRESENCE mandatory }
}

DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod,
  repetitionLength          RepetitionLength,
  tDD-DPCHOffset            TDD-DPCHOffset,
  dL-Timeslot-Information   DL-Timeslot-Information,
  iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-Information-RL-AdditionRspTDD ::= SEQUENCE {
  diversityIndication        DiversityIndication-RL-AdditionRspTDD,
  -- 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.
  iE-Extensions            ProtocolExtensionContainer { { DCH-Information-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-Information-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

DiversityIndication-RL-AdditionRspTDD ::= CHOICE {
    combining          Combining-RL-AdditionRspTDD,
    nonCombining       NonCombining-RL-AdditionRspTDD
}

Combining-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID              RL-ID,
    iE-Extensions      ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    ...
}

CombiningItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
    { ID id-DCH-InformationResponse          CRITICALITY ignore EXTENSION DCH-InformationResponse PRESENCE optional }
}

NonCombining-RL-AdditionRspTDD ::= SEQUENCE {
    dCH-InformationResponse      DCH-InformationResponse,
    iE-Extensions                ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    ...
}

NonCombiningItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-InformationResponse-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{DSCH-InformationListIEs-RL-AdditionRspTDD}}

DSCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationListIE-RL-AdditionRspTDD          CRITICALITY ignore TYPE DSCH-InformationListIE-RL-AdditionRspTDD PRESENCE mandatory }
}

DSCH-InformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE(0..maxNoOfDSCHs)) OF DSCHInformationItem-RL-AdditionRspTDD

DSCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dsch-ID              DSCH-ID,
    transportFormatManagement      TransportFormatManagement,
    dSCH-FlowControlInformation      DSCH-FlowControlInformation,
    diversityIndication      DiversityIndication-RL-AdditionRspTDD2 OPTIONAL,
    -- diversityIndication present, if CHOICE = nonCombining
    iE-Extensions            ProtocolExtensionContainer { {DSCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DSCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-AdditionRspTDD2 ::= SEQUENCE {
    bindingID              BindingID OPTIONAL,
    transportLayerAddress      TransportLayerAddress OPTIONAL,
}

```

```

    iE-Extensions          ProtocolExtensionContainer { {DiversityIndication-RL-AdditionRspTDD2-ExtIEs} } OPTIONAL,
    ...
}
DiversityIndication-RL-AdditionRspTDD2-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCH-InformationResponse-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{USCH-InformationListIEs-RL-AdditionRspTDD}}

USCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-USCH-InformationListIE-RL-AdditionRspTDD    CRITICALITY ignore    TYPE USCH-InformationListIE-RL-AdditionRspTDD    PRESENCE mandatory }
}

USCH-InformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE(0..maxNoOfUSCHs)) OF USCHInformationItem-RL-AdditionRspTDD

USCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    transportFormatManagement TransportFormatManagement,
    diversityIndication    DiversityIndication-RL-AdditionRspTDD2 OPTIONAL,
    -- diversityIndication present, if CHOICE = nonCombining
    iE-Extensions          ProtocolExtensionContainer { {USCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

USCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Neighbouring-GSM-CellInformation-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationItem-RL-AdditionRspTDD }}

Neighbouring-GSM-CellInformationItem-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-GSM-CellInformation    CRITICALITY ignore    TYPE Neighbouring-GSM-CellInformation    PRESENCE mandatory }
}

RadioLinkAdditionResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

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

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {

```

```

{ ID id-CauseLevel-RL-AdditionFailureFDD          CRITICALITY ignore          TYPE CauseLevel-RL-AdditionFailureFDD
  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 ::= SEQUENCE {
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RLSpecificCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
  unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD          UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
  successful-RL-InformationRespList-RL-AdditionFailureFDD          SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD OPTIONAL,
  iE-Extensions                ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs  RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs-1)) OF ProtocolIE-Single-Container { {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,
  iE-Extensions        ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs-2)) OF ProtocolIE-Single-Container { {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-Information      URA-Information,
  sAI                  SAI,
  gA-Cell              GA-Cell      OPTIONAL,
  gA-AccessPointPosition GA-AccessPointPosition  OPTIONAL,
  received-total-wide-band-power Received-total-wide-band-power,
  secondary-CCPCH-Info Secondary-CCPCH-Info  OPTIONAL,
  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-UMTS-CellInformation Neighbouring-UMTS-CellInformation  OPTIONAL,
  neighbouring-GSM-CellInformation Neighbouring-GSM-CellInformation-RL-AdditionFailureFDD  OPTIONAL,
  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-FDD-DL-CodeInformation  CRITICALITY ignore TYPE FDD-DL-CodeInformation  PRESENCE mandatory }
}

DiversityIndication-RL-AdditionFailureFDD ::= CHOICE {
  combining          Combining-RL-AdditionFailureFDD,
  nonCombining       NonCombining-RL-AdditionFailureFDD
}

Combining-RL-AdditionFailureFDD ::= SEQUENCE {

```



```

    rL-ID                RL-ID,
    iE-Extensions        ProtocolExtensionContainer { { CombiningItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

CombiningItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
    { ID id-DCH-InformationResponse          CRITICALITY ignore EXTENSION DCH-InformationResponse          PRESENCE optional }
}

NonCombining-RL-AdditionFailureFDD ::= SEQUENCE {
    dCH-InformationResponse    DCH-InformationResponse,
    iE-Extensions              ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NonCombiningItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Neighbouring-GSM-CellInformation-RL-AdditionFailureFDD ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-CellInformationItem-RL-AdditionFailureFDD }}

Neighbouring-GSM-CellInformationItem-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-GSM-CellInformation    CRITICALITY ignore TYPE Neighbouring-GSM-CellInformation PRESENCE mandatory }
}

RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *****

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

RadioLinkAdditionFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CauseLevel-RL-AdditionFailureTDD    CRITICALITY ignore TYPE CauseLevel-RL-AdditionFailureTDD PRESENCE mandatory }|
    { ID id-CriticalityDiagnostics              CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}

CauseLevel-RL-AdditionFailureTDD ::= CHOICE {
    generalCause                GeneralCauseList-RL-AdditionFailureTDD,
    rLspecificCause             RLspecificCauseList-RL-AdditionFailureTDD,
}

```

```

}
...
}
GeneralCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
    cause          Cause,
    iE-Extensions  ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs } } OPTIONAL,
    ...
}

GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD  Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD,
    iE-Extensions  ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs } }
    OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD} }

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD RNSAP-PROTOCOL-IES ::= {
    { ID      id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD      CRITICALITY ignore      TYPE      UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD      PRESENCE mandatory}
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD ::= SEQUENCE {
    rL-ID          RL-ID,
    cause          Cause,
    iE-Extensions  ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK DELETION REQUEST
--

```

```

-- *****
RadioLinkDeletionRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkDeletionRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkDeletionRequest-Extensions}}
    ...
}

RadioLinkDeletionRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationList-RL-DeletionRqst  CRITICALITY notify  TYPE RL-InformationList-RL-DeletionRqst  PRESENCE mandatory },
    ...
}

RL-InformationList-RL-DeletionRqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-RL-DeletionRqst-IEs} }

RL-Information-RL-DeletionRqst-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-DeletionRqst      CRITICALITY notify  TYPE RL-Information-RL-DeletionRqst  PRESENCE mandatory }
}

RL-Information-RL-DeletionRqst ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-DeletionRqst-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-DeletionRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkDeletionRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

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

RadioLinkDeletionResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CriticalityDiagnostics              CRITICALITY ignore  TYPE CriticalityDiagnostics  PRESENCE optional },
    ...
}

RadioLinkDeletionResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

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

RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          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-FDD-DCHs-to-Modify          CRITICALITY reject  TYPE FDD-DCHs-to-Modify          PRESENCE optional } |
    { ID id-DCHs-to-Add-FDD            CRITICALITY reject  TYPE DCH-FDD-Information          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-DSCHs-to-Add-FDD            CRITICALITY reject  TYPE DSCH-FDD-Information          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-SIR                      OPTIONAL,
    minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength  OPTIONAL,
    maxNrOfUL-DPDCHs                MaxNrOfUL-DPDCHs          OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 --,
    ul-PunctureLimit                PunctureLimit              OPTIONAL,
    tFCS                            TFCS                      OPTIONAL,
    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,
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,
iE-Extensions        ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-Information-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,
iE-Extensions        ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
...
}

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,
...
}

DSCH-Modify-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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-Delete-RL-ReconfPrepFDD ::= SEQUENCE {
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,
iE-Extensions            ProtocolExtensionContainer { {DSCH-DeleteInformationItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
...
}
DSCH-DeleteInformationItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
RL-InformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-RL-ReconfPrepFDD-IEs}
}
RL-Information-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-RL-Information-RL-ReconfPrepFDD    CRITICALITY reject  TYPE RL-Information-RL-ReconfPrepFDD    PRESENCE mandatory  }
}
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"
iE-Extensions            ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
...
}
RL-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

RadioLinkReconfigurationPrepareFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

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

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

UL-CCTrCH-AddInformation-RL-ReconfPrepTDD ::= SEQUENCE {
    cCtTrCH-ID                CCTrCH-ID,
    tFCS                      TFCS,
    tFCI-Coding               TFCI-Coding,
}

```

```

    punctureLimit          PunctureLimit,
    iE-Extensions          ProtocolExtensionContainer { {UL-CCTrCH-AddInformation-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

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

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

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

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

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

```



```

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

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

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

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

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

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

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

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

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

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

```

```

}

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

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

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

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

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

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

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

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

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

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

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

DSCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID          DSCH-ID,
    dl-ccTrCHID      CCTrCH-ID          OPTIONAL,
    trChSourceStatisticsDescriptor  TrCH-SrcStatisticsDescr  OPTIONAL,
    transportFormatSet  TransportFormatSet          OPTIONAL,
}

```

```

allocationRetentionPriority      AllocationRetentionPriority      OPTIONAL,
schedulingPriorityIndicator      SchedulingPriorityIndicator      OPTIONAL,
bLER                             BLER                             OPTIONAL,
transportBearerRequestIndicator  TransportBearerRequestIndicator,
iE-Extensions                    ProtocolExtensionContainer { {DSCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

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

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

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

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

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

USCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    uSCH-ID                      USCH-ID,
    ul-ccTrCHID                  CCTrCH-ID                      OPTIONAL,
    trChSourceStatisticsDescriptor TrCH-SrcStatisticsDescr OPTIONAL,
    transportFormatSet           TransportFormatSet             OPTIONAL,
    allocationRetentionPriority    AllocationRetentionPriority    OPTIONAL,
    schedulingPriorityIndicator    SchedulingPriorityIndicator    OPTIONAL,
    bLER                          BLER                          OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    rb-Info                      RB-Info                      OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {USCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

```

```

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

RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY FDD
--
-- *****

RadioLinkReconfigurationReadyFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container      {{RadioLinkReconfigurationReadyFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{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-InformationResponseList-RL-ReconfReadyFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationResponse-RL-ReconfReadyFDD-IEs} }

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-SIR           UL-SIR          OPTIONAL,
    maximumDLTxPower     DL-Power       OPTIONAL,
    minimumDLTxPower     DL-Power       OPTIONAL,
    secondary-CCPCH-Info Secondary-CCPCH-Info OPTIONAL,
    dl-CodeInformationList DL-CodeInformationList-RL-ReconfReadyFDD OPTIONAL,
    dCHInformationResponse DCH-InformationResponseList-RL-ReconfReadyFDD OPTIONAL,
    dSCHsToBeAddedOrModified DSCHsToBeAddedOrModified-RL-ReconfReadyFDD OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-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-FDD-DL-CodeInformation    CRITICALITY ignore TYPE FDD-DL-CodeInformation    PRESENCE mandatory }
}

DCH-InformationResponseList-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfReadyFDD} }

DCH-InformationResponseListIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse    CRITICALITY ignore TYPE DCH-InformationResponse    PRESENCE mandatory }
}

DSCHsToBeAddedOrModified-RL-ReconfReadyFDD ::= ProtocolIE-Single-Container { {DSCHsToBeAddedOrModifiedIEs-RL-ReconfReadyFDD} }

DSCHsToBeAddedOrModifiedIEs-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DSCHsToBeAddedOrModified-FDD    CRITICALITY ignore TYPE DSCH-FDD-InformationResponse    PRESENCE mandatory }
}

RadioLinkReconfigurationReadyFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY TDD
--
-- *****

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

RadioLinkReconfigurationReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponse-RL-ReconfReadyTDD    CRITICALITY ignore TYPE RL-InformationResponse-RL-ReconfReadyTDD    PRESENCE optional } |
  { ID id-CriticalityDiagnostics    CRITICALITY ignore TYPE CriticalityDiagnostics    PRESENCE optional },
  ...
}

RL-InformationResponse-RL-ReconfReadyTDD ::= 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,
  ul-CCTrCH-Information    UL-CCTrCH-InformationList-RL-ReconfReadyTDD    OPTIONAL,

```

```

dl-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
dCHInformationResponseList-RL-ReconfReadyTDD OPTIONAL,
dSCHsToBeAddedOrModified-RL-ReconfReadyTDD OPTIONAL,
uSCHsToBeAddedOrModified-RL-ReconfReadyTDD OPTIONAL,
iE-Extensions
...
}

RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

UL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD}}

UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD CRITICALITY ignore TYPE UL-CCTrCHInformationListIE-RL-ReconfReadyTDD PRESENCE mandatory
}
}

UL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-ReconfReadyTDD

UL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
cCTrCH-ID CCTrCH-ID,
ul-DPCH-AddInformation UL-DPCH-InformationAddList-RL-ReconfReadyTDD OPTIONAL,
ul-DPCH-ModifyInformation UL-DPCH-InformationModifyList-RL-ReconfReadyTDD OPTIONAL,
ul-DPCH-DeleteInformation UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

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

UL-DPCH-InformationAddList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD}}

UL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD CRITICALITY ignore TYPE UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD PRESENCE
mandatory }
}

UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD ::= SEQUENCE {
repetitionPeriod RepetitionPeriod,
repetitionLength RepetitionLength,
tDD-DPCHOffset TDD-DPCHOffset,
rxTimingDeviationForTA RxTimingDeviationForTA OPTIONAL,
uL-Timeslot-Information UL-Timeslot-Information,
iE-Extensions ProtocolExtensionContainer { {UL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
...
}

```

```

UL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModifyList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD}}

UL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD    CRITICALITY ignore    TYPE UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD    PRESENCE
    mandatory }
}

UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod          OPTIONAL,
    repetitionLength          RepetitionLength          OPTIONAL,
    tDD-DPCHOffset            TDD-DPCHOffset            OPTIONAL,
    uL-Timeslot-InformationModifyList-RL-ReconfReadyTDD    UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD    OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { {UL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD

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

UL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-UL-Code-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD

TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                  DPCH-ID,
    tDD-ChannelisationCode   TDD-ChannelisationCode    OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { {TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

TDD-UL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD}}

UL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD  PRESENCE
  mandatory }
}

UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF UL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD

UL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD ::= SEQUENCE {
  dPCH-ID                DPCH-ID,
  iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationList-RL-ReconfReadyTDD          ::= ProtocolIE-Single-Container {{DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD}}

DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE DL-CCTrCHInformationListIE-RL-ReconfReadyTDD  PRESENCE mandatory
  }
}

DL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-ReconfReadyTDD

DL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
  cCCTrCH-ID                CCTrCH-ID,
  dl-DPCH-AddInformation      DL-DPCH-InformationAddList-RL-ReconfReadyTDD          OPTIONAL,
  dl-DPCH-ModifyInformation    DL-DPCH-InformationModifyList-RL-ReconfReadyTDD      OPTIONAL,
  dl-DPCH-DeleteInformation    DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD      OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

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

DL-DPCH-InformationAddList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD}}

DL-DPCH-InformationAddListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD  PRESENCE
  mandatory }
}

DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD ::= SEQUENCE {
  repetitionPeriod          RepetitionPeriod,

```



```

    repetitionLength      RepetitionLength,
    tDD-DPCHOffset        TDD-DPCHOffset,
    dL-Timeslot-Information DL-Timeslot-Information,
    iE-Extensions         ProtocolExtensionContainer { {DL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationAddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModifyList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD}}

DL-DPCH-InformationModifyListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD CRITICALITY ignore TYPE DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD PRESENCE
mandatory }
}

DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD ::= SEQUENCE {
    repetitionPeriod      RepetitionPeriod      OPTIONAL,
    repetitionLength      RepetitionLength      OPTIONAL,
    tDD-DPCHOffset        TDD-DPCHOffset        OPTIONAL,
    dL-Timeslot-InformationModifyList-RL-ReconfReadyTDD DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {DL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfTS)) OF DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD

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

DL-Timeslot-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DL-Code-InformationModifyList-RL-ReconfReadyTDD ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD

TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID              DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode      OPTIONAL,

```

```

    iE-Extensions          ProtocolExtensionContainer { {TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

TDD-DL-Code-InformationModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD}}

DL-DPCH-InformationDeleteListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD    CRITICALITY ignore    TYPE DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD    PRESENCE
mandatory }
}

DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD

DL-DPCH-InformationDeleteItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    iE-Extensions          ProtocolExtensionContainer { {DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationDeleteList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-ReconfReadyTDD          ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfReadyTDD} }

DCH-InformationResponseListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse    CRITICALITY ignore    TYPE DCH-InformationResponse    PRESENCE mandatory }
}

DSCHToBeAddedOrModified-RL-ReconfReadyTDD          ::= ProtocolIE-Single-Container { {DSCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD} }

DSCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD    CRITICALITY ignore    TYPE DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD    PRESENCE mandatory
}
}

DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNoOfDSCHs)) OF DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD

DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dsch-ID                DSCH-ID,
    transportFormatManagement    TransportFormatManagement,
    dSCH-FlowControlInformation    DSCH-FlowControlInformation,
    bindingID                BindingID    OPTIONAL,
    transportLayerAddress    TransportLayerAddress    OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

DSCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

USCHToBeAddedOrModified-RL-ReconfReadyTDD ::= ProtocolIE-Container { {USCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD}
}USCHToBeAddedOrModifiedIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD CRITICALITY ignore TYPE USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD PRESENCE mandatory
    }
}

USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (0..maxNoOfUSCHs)) OF USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD

USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD ::= SEQUENCE {
    uSCH-ID USCH-ID,
    transportFormatManagement TransportFormatManagement,
    bindingID BindingID OPTIONAL,
    transportLayerAddress TransportLayerAddress OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

USCHToBeAddedOrModifiedItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationReadyTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

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

RadioLinkReconfigurationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CFN CRITICALITY ignore TYPE CFN PRESENCE mandatory }|
    { ID id-Active-Pattern-Sequence-Information CRITICALITY ignore TYPE Active-Pattern-Sequence-Information PRESENCE optional },
    ...
}

RadioLinkReconfigurationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

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

RadioLinkReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CauseLevel-RL-ReconfFailure      CRITICALITY ignore  TYPE CauseLevel-RL-ReconfFailure  PRESENCE mandatory  } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics    PRESENCE optional  },
    ...
}

CauseLevel-RL-ReconfFailure ::= CHOICE {
    generalCause      GeneralCauseList-RL-ReconfFailure,
    rLSpecificCause   RLSpecificCauseList-RL-ReconfFailure,
    ...
}

GeneralCauseList-RL-ReconfFailure ::= SEQUENCE {
    cause              Cause,
    iE-Extensions     ProtocolExtensionContainer { { GeneralCauseItem-RL-ReconfFailure-ExtIEs} }    OPTIONAL,
    ...
}

GeneralCauseItem-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-ReconfFailure ::= SEQUENCE {
    rL-ReconfigurationFailureList-RL-ReconfFailure      RL-ReconfigurationFailureList-RL-ReconfFailure      OPTIONAL,
    iE-Extensions                                     ProtocolExtensionContainer { { RLSpecificCauseItem-RL-ReconfFailure-ExtIEs} }    OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-ReconfigurationFailureList-RL-ReconfFailure ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-ReconfigurationFailure-RL-ReconfFailure-IEs} }

RL-ReconfigurationFailure-RL-ReconfFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-ReconfigurationFailure-RL-ReconfFail CRITICALITY ignore  TYPE RL-ReconfigurationFailure-RL-ReconfFail  PRESENCE mandatory  }
}

```

```

RL-ReconfigurationFailure-RL-ReconfFail ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { {RL-ReconfigurationFailure-RL-ReconfFailure-ExtIEs} } OPTIONAL,
    ...
}

RL-ReconfigurationFailure-RL-ReconfFailure-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

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

RadioLinkReconfigurationCancel-IEs RNSAP-PROTOCOL-IES ::= {
    ...
}

RadioLinkReconfigurationCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

RadioLinkReconfigurationRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationRequestFDD-Extensions}}          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-FDD-DCHs-to-Modify          CRITICALITY reject TYPE FDD-DCHs-to-Modify          PRESENCE optional } |
{ ID id-DCHs-to-Add-FDD          CRITICALITY reject TYPE DCH-FDD-Information          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,
    iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-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-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}},
    protocolExtensions  ProtocolExtensionContainer {{RadioLinkReconfigurationRequestTDD-Extensions}}
    OPTIONAL,
    ...
}

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

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

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

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

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

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

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

UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {

```

```

    cCtRCH-ID          CcTtRcH-ID,
    iE-Extensions      ProtocolExtensionContainer { {UL-CcTtRcH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

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

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

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

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

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

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

```



```

}
...
}
DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
RadioLinkReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE FDD
--
-- *****

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

RadioLinkReconfigurationResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseList-RL-ReconfRspFDD      CRITICALITY ignore  TYPE RL-InformationResponseList-RL-ReconfRspFDD      PRESENCE optional
    } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-ReconfRspFDD ::= SEQUENCE (SIZE (0..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationResponse-RL-ReconfRspFDD-IEs} }

RL-InformationResponse-RL-ReconfRspFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfRspFDD      CRITICALITY ignore  TYPE RL-InformationResponseItem-RL-ReconfRspFDD      PRESENCE mandatory
    }
}

RL-InformationResponseItem-RL-ReconfRspFDD ::= 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 OPTIONAL,
    dCHsInformationResponseList DCH-InformationResponseList-RL-ReconfRspFDD OPTIONAL,
    dL-CodeInformationList-RL-ReconfResp DL-CodeInformationList-RL-ReconfRspFDD OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfRspFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

RL-InformationResponseItem-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-ReconfRspFDD ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfRspFDD} }

DCH-InformationResponseListIEs-RL-ReconfRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse    CRITICALITY ignore  TYPE DCH-InformationResponse    PRESENCE mandatory }
}

DL-CodeInformationList-RL-ReconfRspFDD ::= ProtocolIE-Single-Container { { DL-CodeInformationListIEs-RL-ReconfRspFDD } }

DL-CodeInformationListIEs-RL-ReconfRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-FDD-DL-CodeInformation    CRITICALITY ignore  TYPE FDD-DL-CodeInformation    PRESENCE optional }
}

RadioLinkReconfigurationResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE TDD
--
-- *****

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

RadioLinkReconfigurationResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponse-RL-ReconfRspTDD    CRITICALITY ignore  TYPE RL-InformationResponse-RL-ReconfRspTDD    PRESENCE optional } |
    { ID id-CriticalityDiagnostics                    CRITICALITY ignore  TYPE CriticalityDiagnostics                    PRESENCE optional },
    ...
}

RL-InformationResponse-RL-ReconfRspTDD ::= 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,
    dChsInformationResponseList    DCH-InformationResponseList-RL-ReconfRspTDD OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { {RL-InformationResponse-RL-ReconfRspTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-ReconfRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

DCH-InformationResponseList-RL-ReconfRspTDD ::= ProtocolIE-Single-Container { {DCH-InformationResponseListIEs-RL-ReconfRspTDD} }

DCH-InformationResponseListIEs-RL-ReconfRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE optional }
}

RadioLinkReconfigurationResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

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

RadioLinkFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Reporting-Object-RL-FailureInd CRITICALITY ignore TYPE Reporting-Object-RL-FailureInd PRESENCE mandatory },
  ...
}

Reporting-Object-RL-FailureInd ::= CHOICE {
  rL RL-RL-FailureInd,
  rL-Set RL-Set-RL-FailureInd,
  ...
}

RL-RL-FailureInd ::= SEQUENCE {
  rL-InformationList-RL-FailureInd RL-InformationList-RL-FailureInd,
  iE-Extensions ProtocolExtensionContainer { { RLItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

RLItem-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-RL-FailureInd-IEs} }

RL-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-FailureInd CRITICALITY ignore TYPE RL-Information-RL-FailureInd PRESENCE mandatory }
}

```

```

RL-Information-RL-FailureInd ::= SEQUENCE {
    rL-ID          RL-ID,
    cause          Cause,
    iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-RL-FailureInd ::= SEQUENCE {
    rL-Set-InformationList-RL-FailureInd RL-Set-InformationList-RL-FailureInd,
    iE-Extensions ProtocolExtensionContainer { { RL-SetItem-RL-FailureInd-ExtIEs} } OPTIONAL,
    ...
}

RL-SetItem-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-RL-
FailureInd-IEs} }

RL-Set-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IEs ::= {
    { ID id-RL-Set-Information-RL-FailureInd CRITICALITY ignore TYPE RL-Set-Information-RL-FailureInd PRESENCE mandatory }
}

RL-Set-Information-RL-FailureInd ::= SEQUENCE {
    rL-Set-ID          RL-Set-ID,
    cause          Cause,
    iE-Extensions ProtocolExtensionContainer { {RL-Set-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-Information-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK PREEMPTION REQUIRED INDICATION
--
-- *****

RadioLinkPreemptionRequiredIndication ::= SEQUENCE {
    protocolIEs ProtocolIE-Container {{RadioLinkPreemptionRequiredIndication-IEs}},

```

```

    protocolExtensions          ProtocolExtensionContainer {{RadioLinkPreemptionRequiredIndication-Extensions}}
    ...
}

RadioLinkPreemptionRequiredIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationList-RL-PreemptRequiredInd    CRITICALITY ignore    TYPE RL-InformationList-RL-PreemptRequiredInd    PRESENCE optional },
    ...
}

RL-InformationList-RL-PreemptRequiredInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIEs-RL-PreemptRequiredInd} }

RL-InformationItemIEs-RL-PreemptRequiredInd RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-PreemptRequiredInd    CRITICALITY ignore    TYPE RL-InformationItem-RL-PreemptRequiredInd    PRESENCE mandatory
    }
}

RL-InformationItem-RL-PreemptRequiredInd ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-PreemptRequiredInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkPreemptionRequiredIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RESTORE INDICATION
--
-- *****

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

RadioLinkRestoreIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Reporting-Object-RL-RestoreInd    CRITICALITY ignore    TYPE Reporting-Object-RL-RestoreInd    PRESENCE mandatory },
    ...
}

Reporting-Object-RL-RestoreInd ::= CHOICE {
    rL                RL-RL-RestoreInd,
    rL-Set            RL-Set-RL-RestoreInd,
}

```

```

}
...
}
RL-RL-RestoreInd ::= SEQUENCE {
    rL-InformationList-RL-RestoreInd      RL-InformationList-RL-RestoreInd,
    iE-Extensions                          ProtocolExtensionContainer { { RLItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}

RLItem-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-RestoreInd          ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-RL-RestoreInd-IEs} }

RL-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-RestoreInd      CRITICALITY ignore  TYPE RL-Information-RL-RestoreInd      PRESENCE mandatory  }
}

RL-Information-RL-RestoreInd ::= SEQUENCE {
    rL-ID                                RL-ID,
    iE-Extensions                          ProtocolExtensionContainer { {RL-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-RL-RestoreInd ::= SEQUENCE {
    rL-Set-InformationList-RL-RestoreInd    RL-Set-InformationList-RL-RestoreInd,
    iE-Extensions                          ProtocolExtensionContainer { { RL-SetItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}

RL-SetItem-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-RL-RestoreInd          ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-RL-RestoreInd-IEs} }

RL-Set-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-Information-RL-RestoreInd    CRITICALITY ignore  TYPE RL-Set-Information-RL-RestoreInd    PRESENCE mandatory  }
}

RL-Set-Information-RL-RestoreInd ::= SEQUENCE {
    rL-Set-ID                                RL-Set-ID,
    iE-Extensions                          ProtocolExtensionContainer { {RL-Set-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,
    ...
}

```

```

RL-Set-Information-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkRestoreIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DOWNLINK POWER CONTROL REQUEST
--
-- *****

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

DL-PowerControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-PowerAdjustmentType          CRITICALITY ignore  TYPE PowerAdjustmentType          PRESENCE mandatory} |
    { ID id-DLReferencePower              CRITICALITY ignore  TYPE DL-Power                                PRESENCE conditional} |
    -- This IE is present only 'Adjustment Type' equals to 'Common'
    { ID id-InnerLoopDLPCStatus           CRITICALITY ignore  TYPE InnerLoopDLPCStatus                    PRESENCE optional } |
    { ID id-DLReferencePowerList-DL-PC-Rqst CRITICALITY ignore  TYPE DL-ReferencePowerInformationList-DL-PC-Rqst PRESENCE conditional} |
    -- This IE is present only 'Adjustment Type' equals to 'Individual'
    { ID id-MaxAdjustmentStep             CRITICALITY ignore  TYPE MaxAdjustmentStep                      PRESENCE conditional} |
    -- This IE is present only 'Adjustment Type " equals to 'Common' or 'Individual'
    { ID id-AdjustmentPeriod              CRITICALITY ignore  TYPE AdjustmentPeriod                       PRESENCE conditional}|
    -- This IE is present only 'Adjustment Type " equals to 'Common' or 'Individual'
    { ID id-AdjustmentRatio               CRITICALITY ignore  TYPE ScaledAdjustmentRatio                  PRESENCE conditional},
    -- This IE is present only 'Adjustment Type " equals to 'Common' or 'Individual'
    ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {DL-ReferencePowerInformation-DL-PC-Rqst-IEs} }

DL-ReferencePowerInformation-DL-PC-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformation-DL-PC-Rqst CRITICALITY ignore  TYPE DL-ReferencePowerInformation-DL-PC-Rqst  PRESENCE mandatory }
}

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

```

```

DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-PowerControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DOWNLINK POWER TIMESLOT CONTROL REQUEST TDD
--
-- *****

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

DL-PowerTimeslotControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-timeSlot-ISCPList-DL-PC-Rqst-TDD    CRITICALITY ignore    TYPE TimeSlot-ISCPList-DL-PC-Rqst-TDD    PRESENCE mandatory},
    ...
}

TimeSlot-ISCPList-DL-PC-Rqst-TDD ::= SEQUENCE (SIZE (0..maxNrOfDLTs)) OF Timeslot-ISCPItem-DL-PC-Rqst-TDD

Timeslot-ISCPItem-DL-PC-Rqst-TDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    timeSlot                   TimeSlot,
    dl-TimeslotISCP            DL-TimeslotISCP,
    iE-Extensions              ProtocolExtensionContainer { { Timeslot-ISCPItem-DL-PC-Rqst-TDD-ExtIEs} } OPTIONAL,
    ...
}

Timeslot-ISCPItem-DL-PC-Rqst-TDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-PowerTimeslotControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST FDD
--
-- *****

PhysicalChannelReconfigurationRequestFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{PhysicalChannelReconfigurationRequestFDD-IEs}},

```



```

    protocolExtensions          ProtocolExtensionContainer {{PhysicalChannelReconfigurationRequestFDD-Extensions}}
    ...
}

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

RL-Information-PhyChReconfRqstFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    dl-CodeInformation    DL-CodeInformationList-PhyChReconfRqstFDD,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CodeInformationList-PhyChReconfRqstFDD ::= ProtocolIE-Single-Container { {DL-CodeInformationListIEs-PhyChReconfRqstFDD} }

DL-CodeInformationListIEs-PhyChReconfRqstFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-FDD-DL-CodeInformation    CRITICALITY notify    TYPE FDD-DL-CodeInformation    PRESENCE mandatory    }
}

PhysicalChannelReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****

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

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

RL-Information-PhyChReconfRqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    ul-CCTrCH-Information    UL-CCTrCH-InformationList-PhyChReconfRqstTDD    OPTIONAL,
    dl-CCTrCH-Information    DL-CCTrCH-InformationList-PhyChReconfRqstTDD    OPTIONAL,
}

```

```

    iE-Extensions          ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Single-Container { {UL-CCTrCH-InformationListIEs-PhyChReconfRqstTDD} }

UL-CCTrCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD          CRITICALITY reject TYPE UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD          PRESENCE
mandatory }
}

UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-PhyChReconfRqstTDD

UL-CCTrCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    ul-DPCH-Information      UL-DPCH-InformationList-PhyChReconfRqstTDD,
    iE-Extensions           ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

UL-DPCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Single-Container {{UL-DPCH-InformationListIEs-PhyChReconfRqstTDD}}

UL-DPCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-PhyChReconfRqstTDD          CRITICALITY notify TYPE UL-DPCH-InformationItem-PhyChReconfRqstTDD          PRESENCE mandatory }
}

UL-DPCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    repetitionPeriod        RepetitionPeriod          OPTIONAL,
    repetitionLength        RepetitionLength          OPTIONAL,
    tDD-DPCHOffset          TDD-DPCHOffset            OPTIONAL,
    uL-Timeslot-InformationList-PhyChReconfRqstTDD          UL-Timeslot-InformationList-PhyChReconfRqstTDD          OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { {UL-DPCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

UL-Timeslot-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    timeSlot                TimeSlot,

```

```

midambleShiftAndBurstType          MidambleShiftAndBurstType          OPTIONAL,
tFCI-Presence                       TFCI-Presence                 OPTIONAL,
uL-Code-Information                 TDD-UL-Code-Information      OPTIONAL,
iE-Extensions                       ProtocolExtensionContainer { {UL-Timeslot-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

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

DL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Single-Container { {DL-CCTrCH-InformationListIEs-PhyChReconfRqstTDD} }

DL-CCTrCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD CRITICALITY reject TYPE DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD PRESENCE
mandatory }
}

DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-PhyChReconfRqstTDD

DL-CCTrCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  dl-DPCH-Information DL-DPCH-InformationList-PhyChReconfRqstTDD,
  iE-Extensions     ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

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

DL-DPCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Single-Container {{DL-DPCH-InformationListIEs-PhyChReconfRqstTDD}}

DL-DPCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-DPCH-InformationItem-PhyChReconfRqstTDD CRITICALITY notify TYPE DL-DPCH-InformationItem-PhyChReconfRqstTDD PRESENCE mandatory }
}

DL-DPCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
  repetitionPeriod      RepetitionPeriod          OPTIONAL,
  repetitionLength      RepetitionLength          OPTIONAL,
  tDD-DPCHOffset        TDD-DPCHOffset          OPTIONAL,
  dl-Timeslot-InformationList-PhyChReconfRqstTDD DL-Timeslot-InformationList-PhyChReconfRqstTDD OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { {DL-DPCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

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

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

```

```

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

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

PhysicalChannelReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION COMMAND
--
-- *****

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

PhysicalChannelReconfigurationCommand-IEs RNSAP-PROTOCOL-IEs ::= {
    { ID id-CFN                CRITICALITY ignore TYPE CFN                PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics    CRITICALITY ignore TYPE CriticalityDiagnostics    PRESENCE optional },
    ...
}

PhysicalChannelReconfigurationCommand-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION FAILURE
--
-- *****

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

```

```

PhysicalChannelReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics  CRITICALITY ignore TYPE CriticalityDiagnostics  PRESENCE optional },
  ...
}

PhysicalChannelReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DCH-RATE-CONTROL-COMMANDRADIO LINK CONGESTION INDICATION
--
-- *****

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

DCHRateControlCommandRadioLinkCongestionIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-DCHRateCtrlComRL-CongestInd  CRITICALITY ignore TYPE RL-InformationList-DCHRateCtrlComRL-CongestInd  PRESENCE
mandatory },
  ...
}

RL-InformationList-DCHRateCtrlComRL-CongestInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIEs-
DCHRateCtrlComRL-CongestInd} }

RL-InformationItemIEs-RL-CongestIndDCHRateCtrlCom RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-RL-CongestIndDCHRateCtrlCom  CRITICALITY ignore TYPE RL-InformationItem-RL-CongestIndDCHRateCtrlCom  PRESENCE
mandatory },
}

RL-InformationItem-RL-CongestIndDCHRateCtrlCom ::= SEQUENCE {
  rL-ID          RL-ID,
  dCH-Rate-Information  DCH-Rate-Information-RL-CongestIndDCHRateCtrlCom,
  iE-Extensions  ProtocolExtensionContainer { {RL-Information-RL-CongestIndDCHRateCtrlCom-ExtIEs} } OPTIONAL,
  ...
}

DCH-Rate-Information-RL-CongestIndDCHRateCtrlCom ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF ProtocolIE-Single-Container { {DCH-Rate-InformationItemIEs-
RL-CongestIndDCHRateCtrlCom} }

DCH-Rate-InformationItemIEs-RL-CongestIndDCHRateCtrlCom RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-Rate-InformationItem-RL-CongestIndDCHRateCtrlCom  CRITICALITY ignore TYPE DCH-Rate-InformationItem-RL-CongestIndDCHRateCtrlCom
PRESENCE mandatory },
}

```

```

}
DCH-Rate-InformationItem-RL-CongestIndDCHRateCtrlCom ::= SEQUENCE {
    dCH-ID          DCH-ID,
    allowed-Rate-Information  Allowed-Rate-Information OPTIONAL,
    iE-Extensions  ProtocolExtensionContainer { {DCH-Rate-InformationItem-RL-CongestIndDCHRateCtrlCom-ExtIEs} } OPTIONAL,
    ...
}
DCH-Rate-InformationItem-RL-CongestIndDCHRateCtrlCom-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-Information-RL-CongestIndDCHRateCtrlCom-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RadioLinkCongestionIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- UPLINK SIGNALLING TRANSFER INDICATION FDD
--
-- *****

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

UplinkSignallingTransferIndicationFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UC-ID          CRITICALITY ignore TYPE UC-ID          PRESENCE mandatory } |
    { ID id-SAI            CRITICALITY ignore TYPE SAI            PRESENCE mandatory } |
    { ID id-GA-Cell        CRITICALITY ignore TYPE GA-Cell        PRESENCE optional } |
    { ID id-C-RNTI         CRITICALITY ignore TYPE C-RNTI         PRESENCE mandatory } |
    { ID id-S-RNTI         CRITICALITY ignore TYPE S-RNTI         PRESENCE mandatory } |
    { ID id-D-RNTI         CRITICALITY ignore TYPE D-RNTI         PRESENCE optional } |
    { ID id-PropagationDelay CRITICALITY ignore TYPE PropagationDelay PRESENCE mandatory } |
    { ID id-STTD-SupportIndicator CRITICALITY ignore TYPE STTD-SupportIndicator PRESENCE mandatory } |
    { ID id-ClosedLoopModel1-SupportIndicator CRITICALITY ignore TYPE ClosedLoopModel1-SupportIndicator PRESENCE mandatory } |
    { ID id-ClosedLoopMode2-SupportIndicator CRITICALITY ignore TYPE ClosedLoopMode2-SupportIndicator PRESENCE mandatory } |
    { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE mandatory } |
    { 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-URA-Information CRITICALITY ignore TYPE URA-Information PRESENCE mandatory },
    ...
}

```

```

UplinkSignallingTransferIndicationFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- UPLINK SIGNALLING TRANSFER INDICATION TDD
--
-- *****

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

UplinkSignallingTransferIndicationTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UC-ID          CRITICALITY ignore TYPE UC-ID          PRESENCE mandatory } |
  { ID id-SAI            CRITICALITY ignore TYPE SAI            PRESENCE mandatory } |
  { ID id-GA-Cell       CRITICALITY ignore TYPE GA-Cell        PRESENCE optional } |
  { ID id-C-RNTI        CRITICALITY ignore TYPE C-RNTI         PRESENCE mandatory } |
  { ID id-S-RNTI        CRITICALITY ignore TYPE S-RNTI         PRESENCE mandatory } |
  { ID id-D-RNTI        CRITICALITY ignore TYPE D-RNTI         PRESENCE optional } |
  { ID id-RxTimingDeviationForTA CRITICALITY ignore TYPE RxTimingDeviationForTA PRESENCE mandatory } |
  { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE mandatory } |
  { 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-URA-Information CRITICALITY ignore TYPE URA-Information PRESENCE mandatory },
  ...
}

UplinkSignallingTransferIndicationTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DOWNLINK SIGNALLING TRANSFER REQUEST
--
-- *****

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

DownlinkSignallingTransferRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-C-ID          CRITICALITY ignore TYPE C-ID          PRESENCE mandatory } |
  { ID id-D-RNTI        CRITICALITY ignore TYPE D-RNTI         PRESENCE mandatory } |
  { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE mandatory } |

```

```

    { ID id-D-RNTI-ReleaseIndication      CRITICALITY ignore  TYPE D-RNTI-ReleaseIndication  PRESENCE mandatory  },
    ...
}

DownlinkSignallingTransferRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RELOCATION COMMIT
--
-- *****

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

RelocationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore  TYPE D-RNTI          PRESENCE optional  } |
    { ID id-RANAP-RelocationInformation  CRITICALITY ignore  TYPE RANAP-RelocationInformation  PRESENCE optional },
    ...
}

RelocationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PAGING REQUEST
--
-- *****

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

PagingRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-PagingArea-PagingRqst      CRITICALITY ignore  TYPE 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  } |
    { ID id-CNOriginatedPage-PagingRqst CRITICALITY ignore  TYPE CNOriginatedPage-PagingRqst PRESENCE optional   },
    ...
}

```



```

PagingArea-PagingRqst ::= CHOICE {
    uRA                URA-PagingRqst,
    cell              Cell-PagingRqst,
    ...
}

URA-PagingRqst ::= SEQUENCE {
    uRA-ID            URA-ID,
    iE-Extensions    ProtocolExtensionContainer { { URAItem-PagingRqst-ExtIEs } } OPTIONAL,
    ...
}

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

Cell-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,
    iE-Extensions    ProtocolExtensionContainer { { CNOriginatedPage-PagingRqst-ExtIEs } } OPTIONAL,
    ...
}

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

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

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****

DedicatedMeasurementInitiationRequest ::= SEQUENCE {
    protocolIEs      ProtocolIE-Container    {{DedicatedMeasurementInitiationRequest-IEs}},

```

```

    protocolExtensions          ProtocolExtensionContainer {{DedicatedMeasurementInitiationRequest-Extensions}}
    ...
}

DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY reject TYPE MeasurementID          PRESENCE mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY reject TYPE DedicatedMeasurementObjectType-DM-Rqst 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          CRITICALITY reject TYPE DedicatedMeasurementType          PRESENCE mandatory } |
  { 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,
  allRLS      All-RL-Set-DM-Rqst,
  ...
}

RL-DM-Rqst ::= 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-InformationList-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-DM-Rqst-IEs} }

RL-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rqst          CRITICALITY reject TYPE RL-InformationItem-DM-Rqst          PRESENCE mandatory }
}

RL-InformationItem-DM-Rqst ::= 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 ::= SEQUENCE {
    rL-Set-InformationList-DM-Rqst  RL-Set-InformationList-DM-Rqst,
    iE-Extensions                    ProtocolExtensionContainer { { RL-SetItem-DM-Rqst-ExtIEs } } OPTIONAL,
    ...
}

RL-SetItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {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,
    iE-Extensions                            ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

All-RL-DM-Rqst ::= NULL

All-RL-Set-DM-Rqst ::= NULL

DedicatedMeasurementInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

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

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 } |
}

```

```

    { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics  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 ::= 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 ::= SEQUENCE {
    rL-Set-InformationList-DM-Rsp  RL-Set-InformationList-DM-Rsp,
    iE-Extensions                  ProtocolExtensionContainer { { RL-SetItem-DM-Rsp-ExtIEs } } OPTIONAL,
    ...
}

RL-SetItem-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rsp          ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {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,
    cFN                  CFN                    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationItem-DM-Rsp-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

RL-Set-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-DM-Rsp-IEs}
}

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}},
  protocolExtensions         ProtocolExtensionContainer {{DedicatedMeasurementInitiationFailure-Extensions}}
  ...
}

DedicatedMeasurementInitiationFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore  TYPE 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 {
    protocolIEs                ProtocolIE-Container    {{DedicatedMeasurementReport-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{DedicatedMeasurementReport-Extensions}}
    ...
}

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 },
    ...
}

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
    rLs                RL-DM-Rprt,
    rLS                RL-Set-DM-Rprt,
    allRL              RL-DM-Rprt,
    allRLS             RL-Set-DM-Rprt,
    ...
}

RL-DM-Rprt ::= SEQUENCE {
    rL-InformationList-DM-Rprt    RL-InformationList-DM-Rprt,
    iE-Extensions                ProtocolExtensionContainer { { RLItem-DM-Rprt-ExtIEs } } OPTIONAL,
    ...
}

RLItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-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-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-Information-DM-Rprt-IEs} }

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,
    dedicatedMeasurementValueInformation    DedicatedMeasurementValueInformation,
}

```

```

    iE-Extensions          ProtocolExtensionContainer { {RL-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rprt          ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container { {RL-Set-Information-DM-Rprt-
IEs} }

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,
    dedicatedMeasurementValueInformation    DedicatedMeasurementValueInformation,
    iE-Extensions          ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
    ...
}

RL-Set-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
--
-- *****

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

DedicatedMeasurementTerminationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore  TYPE MeasurementID          PRESENCE mandatory  },
    ...
}

DedicatedMeasurementTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

-- *****
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
-- *****

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

DedicatedMeasurementFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-Cause                  CRITICALITY ignore TYPE Cause                  PRESENCE mandatory },
    ...
}

DedicatedMeasurementFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST
--
-- *****

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

CommonTransportChannelResourcesReleaseRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI              CRITICALITY ignore TYPE D-RNTI              PRESENCE mandatory },
    ...
}

CommonTransportChannelResourcesReleaseRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES REQUEST
--
-- *****

CommonTransportChannelResourcesRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonTransportChannelResourcesRequest-IEs}},

```



```

    protocolExtensions          ProtocolExtensionContainer {{CommonTransportChannelResourcesRequest-Extensions}}
    ...
}

CommonTransportChannelResourcesRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI                CRITICALITY reject  TYPE D-RNTI                PRESENCE mandatory } |
  { ID id-C-ID                  CRITICALITY reject  TYPE C-ID                  PRESENCE optional   } |
  { ID id-TransportBearerRequestIndicator  CRITICALITY reject  TYPE TransportBearerRequestIndicator  PRESENCE mandatory } |
  { ID id-TransportBearerID        CRITICALITY reject  TYPE TransportBearerID                PRESENCE mandatory },
  ...
}

CommonTransportChannelResourcesRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE FDD
--
-- *****

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

CommonTransportChannelResourcesResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI                CRITICALITY ignore  TYPE S-RNTI                PRESENCE mandatory } |
  { ID id-C-RNTI                CRITICALITY ignore  TYPE C-RNTI                PRESENCE optional   } |
  { ID id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD  CRITICALITY ignore  TYPE FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD  PRESENCE
mandatory } |
  { ID id-TransportLayerAddress  CRITICALITY ignore  TYPE TransportLayerAddress  PRESENCE optional   } |
  { ID id-BindingID              CRITICALITY ignore  TYPE BindingID              PRESENCE optional   } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore  TYPE CriticalityDiagnostics PRESENCE optional   },
  ...
}

FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD ::= SEQUENCE {
  fACH-FlowControlInformation  FACH-FlowControlInformation-CTCH-ResourceRspFDD,
  iE-Extensions                ProtocolExtensionContainer { {FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD-ExtIEs} } OPTIONAL,
  ...
}

FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

FACH-FlowControlInformation-CTCH-ResourceRspFDD ::= ProtocolIE-Single-Container {{ FACH-FlowControlInformationIEs-CTCH-ResourceRspFDD }}

```

```

FACH-FlowControlInformationIES-CTCH-ResourceRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-FACH-FlowControlInformation CRITICALITY ignore TYPE FACH-FlowControlInformation PRESENCE mandatory }
}

CommonTransportChannelResourcesResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE TDD
--
-- *****

CommonTransportChannelResourcesResponseTDD ::= SEQUENCE {
  protocolIES ProtocolIE-Container {{CommonTransportChannelResourcesResponseTDD-IEs}},
  protocolExtensions ProtocolExtensionContainer {{CommonTransportChannelResourcesResponseTDD-Extensions}} OPTIONAL,
  ...
}

CommonTransportChannelResourcesResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI CRITICALITY ignore TYPE S-RNTI PRESENCE mandatory } |
  { ID id-C-RNTI CRITICALITY ignore TYPE C-RNTI PRESENCE optional } |
  { ID id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD CRITICALITY ignore TYPE FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD PRESENCE
mandatory } |
  { ID id-TransportLayerAddress CRITICALITY ignore TYPE TransportLayerAddress PRESENCE optional } |
  { ID id-BindingID CRITICALITY ignore TYPE BindingID PRESENCE optional } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD ::= SEQUENCE {
  fACH-FlowControlInformation FACH-FlowControlInformation-CTCH-ResourceRspTDD,
  iE-Extensions ProtocolExtensionContainer { {FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
  ...
}

FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

FACH-FlowControlInformation-CTCH-ResourceRspTDD ::= ProtocolIE-Single-Container {{ FACH-FlowControlInformationIES-CTCH-ResourceRspTDD }}

FACH-FlowControlInformationIES-CTCH-ResourceRspTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-FACH-FlowControlInformation CRITICALITY ignore TYPE FACH-FlowControlInformation PRESENCE mandatory }
}

CommonTransportChannelResourcesResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES FAILURE
--
-- *****

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

CommonTransportChannelResourcesFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

CommonTransportChannelResourcesFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMPRESSED MODE COMMAND
--
-- *****

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

CompressedModeCommand-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Active-Pattern-Sequence-Information CRITICALITY ignore TYPE Active-Pattern-Sequence-Information PRESENCE mandatory },
    ...
}

CompressedModeCommand-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- ERROR INDICATION
--
-- *****

ErrorIndication ::= SEQUENCE {

```

```

    protocolIEs          ProtocolIE-Container    {{ErrorIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{ErrorIndication-Extensions}}
    ...
}

ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE conditional
    -- At least either of Cause IE or Criticality IE shall be present -- } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE conditional
    -- At least either of Cause IE or Criticality IE shall be present -- },
    ...
}

ErrorIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
    privateIEs      PrivateIE-Container  {{PrivateMessage-IEs}},
    ...
}

PrivateMessage-IEs RNSAP-PRIVATE-IES ::= {
    ...
}

END

```

9.3.4 Information Element Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxCodeNumComp-1,
    maxFACHCountPlus1,
    maxIBSEG,
    maxNoOfDSCHs,
    maxNoOfUSCHs,
    maxNoTFCIGroups,
    maxNoCodeGroups,
    maxNrOfDCHs,
    maxNrOfDL-Codes,
    maxNrOfDLTs,
    maxNrOfDPCHs,
    maxNrOfErrors,
    maxNrOfFDDNeighboursPerRNC,
    maxNrOfMACcshSDU-Length,
    maxNrOfNeighbouringRNCs,
    maxNrOfTDDNeighboursPerRNC,
    maxNrOfTS,
    maxNrOfULTs,
    maxNrOfGSMNeighboursPerRNC,
    maxRateMatching,
    maxNrOfPoints,
    maxNoOfRB,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxCTFC,
    maxRNCinURA-1,
    maxTFCI1Combs,
    maxTFCI2Combs,
    maxTFCI2Combs-1,
    maxTGPS,
    maxTTI-Count,
```

| id-Allowed-Rate-Information,

```

id-Guaranteed-Rate-Information,
id-Neighbouring-UMTS-CellInformationItem
FROM RNSAP-Constants

Criticality,
ProcedureID,
ProtocolIE-ID,
TransactionID,
TriggeringMessage
FROM RNSAP-CommonDataTypes

ProtocolIE-Single-Container{},
ProtocolExtensionContainer{},
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

Active-Pattern-Sequence-Information ::= SEQUENCE {
    cmConfigurationChangeCFN      CFN,
    transmission-Gap-Pattern-Sequence-Status  Transmission-Gap-Pattern-Sequence-Status-List  OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { {Active-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Active-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

AdjustmentPeriod      ::= INTEGER(1..256)
-- Unit Frame

AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel      PriorityLevel,
    pre-emptionCapability      Pre-emptionCapability,
    pre-emptionVulnerability      Pre-emptionVulnerability,
    iE-Extensions      ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    ...
}

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

Allowed-Rate-Information ::= SEQUENCE {
allowed-UL-Rate      Allowed-Rate OPTIONAL,
allowed-DL-Rate      Allowed-Rate OPTIONAL,
iE-Extensions      ProtocolExtensionContainer { {Allowed-Rate-Information-ExtIEs} } OPTIONAL,
    ...
}

```

```
Allowed-Rate-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}
```

```
Allowed-Rate ::= INTEGER (1..maxNrOfTFs)
```

```
AllowedQueuingTime ::= INTEGER (1..60)  
-- seconds
```

```
AlphaValue ::= INTEGER (0..8)  
-- Actual value = Alpha / 8
```

```
-- B
```

```
BCC ::= BIT STRING (SIZE (3))
```

```
BCCH-ARFCN ::= INTEGER (0..1023)
```

```
BetaCD ::= INTEGER (0..15)
```

```
BindingID ::= OCTET STRING (SIZE (1..4,...))
```

```
BLER ::= INTEGER (-63..0)  
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER
```

```
Block-STTD-Indicator ::= ENUMERATED {  
    active,  
    inactive  
}
```

```
BSIC ::= SEQUENCE {  
    nCC NCC,  
    bCC BCC  
}
```

```
-- C
```

```
Cause ::= CHOICE {  
    radioNetwork CauseRadioNetwork,  
    transport CauseTransport,  
    protocol CauseProtocol,  
    misc CauseMisc,  
    ...  
}
```

```
CauseMisc ::= ENUMERATED {  
    control-processing-overload,  
    hardware-failure,  
    om-intervention,  
    not-enough-user-plane-processing-resources,  
}
```

```
    unspecified,  
    ...  
}  
  
CauseProtocol ::= ENUMERATED {  
    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-temporarily-not-available,  
    unspecified,  
    invalid-CM-settings,  
    reconfiguration-CFN-not-elapsed,  
    number-of-DL-codes-not-supported,  
    dedicated-transport-channel-type-not-supported,  
    dl-shared-channel-type-not-supported,  
    ul-shared-channel-type-not-supported,  
    common-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-allocated,  
    ...  
}  
  
CauseTransport ::= ENUMERATED {  
    transport-resource-unavailable,  
    unspecified,  
    ...  
}
```



```
C-ID ::= INTEGER (0..65535)

CCTrCH-ID ::= INTEGER (0..15)

CellIndividualOffset ::= INTEGER (-20..20)

CellParameterID ::= INTEGER (0..127,...)

CFN ::= INTEGER (0..255)

CGI ::= SEQUENCE {
    LAI SEQUENCE {
        pLMN-ID PLMN-ID,
        lAC LAC,
        iE-Extensions ProtocolExtensionContainer { {LAI-ExtIEs} } OPTIONAL,
        ...
    },
    cI CI,
    iE-Extensions ProtocolExtensionContainer { {CGI-ExtIEs} } OPTIONAL
}

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

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

ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding,
    ...
}

ChipOffset ::= INTEGER (0..38399)

CI ::= OCTET STRING (SIZE (2))

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,
    procedureCriticality Criticality          OPTIONAL,
    transactionID        TransactionID        OPTIONAL,
    iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

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

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
SEQUENCE {
    iECriticality          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,
    iE-Extensions   ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs} } OPTIONAL
}

CN-CS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CN-PS-DomainIdentifier ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
    lAC              LAC,
    rAC              RAC,
    iE-Extensions   ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL
}

CN-PS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CNDomainType ::= ENUMERATED {
    cs-domain,
    ps-domain,
    dont-care,
    ...
}
-- See in [16]

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

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

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

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

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

DCH-Specific-FDD-Item ::= SEQUENCE {
    dCH-ID          DCH-ID,

```

```

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

DCH-FDD-SpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    .../
    { ID id-Guaranteed-Rate-Information      CRITICALITY ignore EXTENSION Guaranteed-Rate-Information      PRESENCE optional }
}

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

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

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

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

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

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

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

```

```

}

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

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

DCH-Specific-TDD-Item-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    .../
    { ID id-Guaranteed-Rate-Information CRITICALITY ignore EXTENSION Guaranteed-Rate-Information PRESENCE optional }
}

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              RSCP-Value, -- TDD only
    rxTimingDeviationValue Rx-Timing-Deviation-Value, -- TDD only
    roundTripTime     Round-Trip-Time-Value, -- FDD only
    ...
}

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

```

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

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

DedicatedMeasurementnotAvailable ::= NULL

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DL-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

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

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

```

DSCH-FDD-Information ::= SEQUENCE {
    dsch-Specific-Information      DSCH-Specific-FDD-Item,
    pdSCH-RL-ID                   RL-ID,
    tFCS                           TFCS,
    iE-Extensions                  ProtocolExtensionContainer { {DSCH-FDD-Information-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

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

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

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

```



```

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

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

DSCH-FlowControlItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

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

-- E

EventA ::= SEQUENCE {
    measurementTreshold          MeasurementThreshold,
    measurementHysteresisTime    MeasurementHysteresisTime      OPTIONAL,
    IE-Extensions                ProtocolExtensionContainer { {EventA-ExtIEs} } OPTIONAL,
    ...
}

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

EventB ::= SEQUENCE {
    measurementTreshold          MeasurementThreshold,

```

```
measurementHysteresisTime MeasurementHysteresisTime OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {EventB-ExtIEs} } OPTIONAL,
...
}

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

EventC ::= SEQUENCE {
measurementIncreaseDecreaseThreshold MeasurementIncreaseDecreaseThreshold,
measurementChangeTime MeasurementChangeTime,
iE-Extensions ProtocolExtensionContainer { {EventC-ExtIEs} } OPTIONAL,
...
}

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

EventD ::= SEQUENCE {
measurementIncreaseDecreaseThreshold MeasurementIncreaseDecreaseThreshold,
measurementChangeTime MeasurementChangeTime,
iE-Extensions ProtocolExtensionContainer { {EventD-ExtIEs} } OPTIONAL,
...
}

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

EventE ::= SEQUENCE {
measurementThreshold1 MeasurementThreshold,
measurementThreshold2 MeasurementThreshold OPTIONAL,
measurementHysteresisTime MeasurementHysteresisTime OPTIONAL,
reportPeriodicity ReportPeriodicity OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {EventE-ExtIEs} } OPTIONAL,
...
}

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

EventF ::= SEQUENCE {
measurementThreshold1 MeasurementThreshold,
measurementThreshold2 MeasurementThreshold OPTIONAL,
measurementHysteresisTime MeasurementHysteresisTime OPTIONAL,
reportPeriodicity ReportPeriodicity OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {EventF-ExtIEs} } OPTIONAL,
```

```

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

-- F

FACH-FlowControlInformation ::= SEQUENCE (SIZE (1..16)) OF FACH-FlowControlInformationItem

FACH-FlowControlInformationItem ::= SEQUENCE {
    fACH-SchedulingPriority      SchedulingPriorityIndicator,
    mAC-c-sh-SDU-Lengths        MAC-c-sh-SDU-LengthList,
    fACH-InitialWindowSize      FACH-InitialWindowSize,
    iE-Extensions                ProtocolExtensionContainer { {FACH-FlowControlInformationItem-ExtIEs} } OPTIONAL,
    ...
}

FACH-FlowControlInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-InitialWindowSize          ::= INTEGER { unlimited(255) } (0..255)
-- Number of frames MAC-c-sh SDUs.
-- 255 = Unlimited number of FACH data frames

FACH-PCH-InformationList ::= SEQUENCE (SIZE(1..maxFACHCountPlus1)) OF FACH-PCH-InformationItem

FACH-PCH-InformationItem ::= SEQUENCE {
    transportFormatSet          TransportFormatSet,
    iE-Extensions                ProtocolExtensionContainer { { FACH-PCH-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

FACH-PCH-InformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FDD-DCHs-to-Modify            ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifyItem

FDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode                  UL-FP-Mode          OPTIONAL,
    toAWS                        ToAWS              OPTIONAL,
    toAWE                        ToAWE              OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    dCH-SpecificInformationList  FDD-DCHs-to-ModifySpecificInformationList,
    iE-Extensions                ProtocolExtensionContainer { {FDD-DCHs-to-ModifyItem-ExtIEs} } OPTIONAL,
    ...
}

```

```
FDD-DCHs-to-ModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
FDD-DCHs-to-ModifySpecificInformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifySpecificItem
```

```
FDD-DCHs-to-ModifySpecificItem ::= 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 { {FDD-DCHs-to-ModifySpecificItem-ExtIEs} } OPTIONAL,
  ...
}
```

```
FDD-DCHs-to-ModifySpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
  { ID id-Guaranteed-Rate-Information CRITICALITY ignore EXTENSION Guaranteed-Rate-Information PRESENCE optional }
}
```

```
FDD-DL-ChannelisationCodeNumber ::= INTEGER (0..511)
-- According to the mapping in [27]. The maximum value is equal to the DL spreading factor -1--
```

```
FDD-DL-CodeInformation ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF FDD-DL-CodeInformationItem
```

```
FDD-DL-CodeInformationItem ::= 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 { {FDD-DL-CodeInformationItem-ExtIEs} } OPTIONAL,
  ...
}
```

```
FDD-DL-CodeInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
FDD-S-CCPCH-Offset ::= INTEGER (0..149)
```

```
FDD-TPC-DownlinkStepSize ::= ENUMERATED {
  step-size0-5,
  step-size1,
  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

-- G

GapLength ::= INTEGER (1..14)
-- Unit Slot

GapDuration ::= INTEGER (1..144,...)
-- Unit Frame

GA-Cell ::= SEQUENCE (SIZE (1..maxNrOfPoints)) OF
    SEQUENCE {
        geographicalCoordinate GeographicalCoordinate,
        iE-Extensions ProtocolExtensionContainer { {GA-Cell-ExtIEs} } OPTIONAL,
        ...
    }

GA-Cell-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-AccessPointPosition ::= SEQUENCE {
    geographicalCoordinate GeographicalCoordinate,
    iE-Extensions ProtocolExtensionContainer { {GA-AccessPoint-ExtIEs} } OPTIONAL,
    ...
}

GA-AccessPoint-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GeographicalCoordinate ::= SEQUENCE {
    latitudeSign ENUMERATED { north, south },
    latitude INTEGER (0..8388607),
    longitude INTEGER (-8388608..8388607),
    iE-Extensions ProtocolExtensionContainer { {GeographicalCoordinate-ExtIEs} } OPTIONAL,
    ...
}

```

```

}

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

GSM-Output-Power ::= SEQUENCE { -- Value range (and type?) to be aligned with WG2!!!!!!!!!!!!!!
}

Guaranteed-Rate-Information ::= SEQUENCE {
    guaranteed-UL-Rate          Guaranteed-Rate OPTIONAL,
    guaranteed-DL-Rate          Guaranteed-Rate OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { {Guaranteed-Rate-Information-ExtIEs} } OPTIONAL,
    ...
}

Guaranteed-Rate-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Guaranteed-Rate ::= INTEGER (1..maxNrOfTFs)

-- H

-- I

IB-SchedulingInformation ::= SEQUENCE {
    iB-SG-Rep                   IB-SG-REP,
    iB-segmentInformationList    IB-SegmentInformationList,
    iE-Extensions               ProtocolExtensionContainer { { IB-SchedulingInformation-ExtIEs } } OPTIONAL,
    ...
}

IB-SchedulingInformation-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IB-SegmentInformationList ::= SEQUENCE (SIZE(1..maxIBSEG)) OF IB-SegmentInformationItem

IB-SegmentInformationItem ::= SEQUENCE {
    iB-SG-POS                   IB-SG-POS,
    iE-Extensions               ProtocolExtensionContainer { { IB-SegmentInformationItem-ExtIEs } } OPTIONAL,
    ...
}

IB-SegmentInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IB-SG-POS ::= INTEGER (0..4094)
-- Only even positions allowed

```

```
IB-SG-REP ::= ENUMERATED {rep4, rep8, rep16, rep32, rep64, rep128, rep256, rep512, rep1024, rep2048, rep4096}
IMSI ::= OCTET STRING (SIZE(3..8))
InnerLoopDLPCStatus ::= ENUMERATED {active, inactive}
-- J
-- K
-- L
LAC ::= OCTET STRING (SIZE (2)) --(EXCEPT ('0000'H|'FFFF'H))
LimitedPowerIncrease ::= ENUMERATED {
    used,
    not-used
}
L3-Information ::= BIT STRING
-- M
MaxNrOfUL-DPCHs ::= INTEGER (1..6)
MAC-c-sh-SDU-Length ::= INTEGER (1..5000)
MAC-c-sh-SDU-LengthList ::= SEQUENCE(SIZE(1..maxNrOfMACcshSDU-Length)) OF MAC-c-sh-SDU-Length
MaximumAllowedULTxPower ::= INTEGER (-50..33)
MaxNrDLPhysicalchannels ::= INTEGER (1..224)
MaxNrTimeslots ::= INTEGER (1..14)
MaxNrULPhysicalchannels ::= INTEGER (1..2)
MaxTFCIvalue ::= INTEGER (1..1023)
MeasurementAvailabilityIndicator ::= ENUMERATED {
    measurementAvailable,
    measurementnotAvailable
}
MeasurementFilterCoefficient ::= ENUMERATED{k0, k1, k2, k3, k4, k5, k6, k7, k8, k9, k11, k13, k15, k17, k19,...}
-- Measurement Filter Coefficient to be used for measurement
MeasurementID ::= INTEGER (0..1048575)
MinimumSpreadingFactor ::= INTEGER (1..16)
Multi-code-info ::= INTEGER (1..16)
```

```

MultipleURAsIndicator ::= ENUMERATED {
    multiple-URAs-exist,
    single-URA-exists
}

MaxAdjustmentStep      ::= INTEGER(1..10)
-- Unit Slot

MeasurementChangeTime  ::= INTEGER (1..6000,...)
-- The MeasurementChangeTime gives the MeasurementChangeTime
-- in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10 ms

MeasurementHysteresisTime ::= INTEGER (1..6000,...)
-- The MeasurementHysteresisTime gives the
-- MeasurementHysteresisTime in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10ms

MeasurementIncreaseDecreaseThreshold ::= CHOICE {
    sir                SIR-Value-IncrDecrThres,
    sir-error          SIR-Error-Value-IncrDecrThres,
    transmitted-code-power Transmitted-Code-Power-Value-IncrDecrThres,
    rscp               RSCP-Value-IncrDecrThres,
    round-trip-time    Round-Trip-Time-IncrDecrThres,
    ...
}

MeasurementThreshold ::= CHOICE {
    sir                SIR-Value,
    sir-error          SIR-Error-Value,
    transmitted-code-power Transmitted-Code-Power-Value,
    rscp               RSCP-Value,
    rx-timing-deviation Rx-Timing-Deviation-Value,
    round-trip-time    Round-Trip-Time-Value,
    ...
}

MidambleShiftAndBurstType ::= CHOICE {
    type1              CHOICE {
        defaultMidamble    NULL,
        commonMidamble     NULL,
        ueSpecificMidamble MidambleShiftLong,
        ...
    },
    type2              CHOICE {
        defaultMidamble    NULL,
        commonMidamble     NULL,
        ueSpecificMidamble MidambleShiftShort,
    }
}

```



```

    },
    type3
        defaultMidamble
        ueSpecificMidamble
    },
    ...
}

MidambleShiftLong ::= INTEGER (0..15)

MidambleShiftShort ::= INTEGER (0..5)

MinUL-ChannelisationCodeLength ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256
}

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- N

NCC ::= BIT STRING (SIZE (3))

Neighbouring-UMTS-CellInformation ::= SEQUENCE (SIZE (1..maxNrOfNeighbouringRNCs)) OF ProtocolIE-Single-Container {{ Neighbouring-UMTS-CellInformationItemIE }}

Neighbouring-UMTS-CellInformationItemIE RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-UMTS-CellInformationItem CRITICALITY ignore TYPE Neighbouring-UMTS-CellInformationItem PRESENCE mandatory }
}

Neighbouring-UMTS-CellInformationItem ::= SEQUENCE {
    rNC-ID RNC-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    neighbouring-FDD-CellInformation Neighbouring-FDD-CellInformation OPTIONAL,
    neighbouring-TDD-CellInformation Neighbouring-TDD-CellInformation OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {Neighbouring-UMTS-CellInformationItem-ExtIEs} } OPTIONAL,
    ...
}

Neighbouring-UMTS-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}

Neighbouring-FDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfFDDNeighboursPerRNC,...)) OF Neighbouring-FDD-CellInformationItem

Neighbouring-FDD-CellInformationItem ::= 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 { { Neighbouring-FDD-CellInformationItem-ExtIEs } } OPTIONAL,
  ...
}

Neighbouring-FDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Neighbouring-GSM-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfGSMNeighboursPerRNC,...)) OF Neighbouring-GSM-CellInformationItem

Neighbouring-GSM-CellInformationItem ::= SEQUENCE {
  CGI                CGI,
  q-Offset-Serving-to-Neighbour Q-Offset-Serving-to-Neighbour,
  q-RxlevMin         Q-RxlevMin,
  maximumAllowedULTxPower MaximumAllowedULTxPower,
  bSIC               BSIC,
  bCCH-ARFCN        BCCH-ARFCN,
  gSM-Output-Power  GSM-Output-Power OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { { Neighbouring-GSM-CellInformationItem-ExtIEs } } OPTIONAL,
  ...
}

Neighbouring-GSM-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Neighbouring-TDD-CellInformation ::= SEQUENCE ( SIZE (1..maxNrOfTDDNeighboursPerRNC,...)) OF Neighbouring-TDD-CellInformationItem

Neighbouring-TDD-CellInformationItem ::= 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       OPTIONAL,
iE-Extensions      ProtocolExtensionContainer { { Neighbouring-TDD-CellInformationItem-ExtIEs } } OPTIONAL,
...
}

Neighbouring-TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NrOfDLchannelisationcodes ::= INTEGER (1..8)

NrOfTransportBlocks ::= INTEGER (0..512)

-- O

-- P

PagingCause ::= ENUMERATED {
    terminating-conversational-call,
    terminating-streaming-call,
    terminating-interactive-call,
    terminating-background-call,
    sms,
    ...
}
-- See in [16]

PagingRecordType ::= ENUMERATED {
    imsi-gsm-map,
    tmsi-gsm-map,
    p-tmsi-gsm-map,
    imsi-ds-41,
    tmsi-ds-41,
    ...
}
-- See 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,
    signallingMethod           PDSCHCodeMapping-SignallingMethod,
    iE-Extensions              ProtocolExtensionContainer { { PDSCHCodeMapping-ExtIEs } } OPTIONAL,
    ...
}
```

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

```
PDSCHCodeMapping-SignallingMethod ::= CHOICE {
    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,
    start-CodeNumber         CodeNumber,
    stop-CodeNumber          CodeNumber,
    iE-Extensions            ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-CodeRange-ExtIEs } } OPTIONAL,
    ...
}
```

```
PDSCHCodeMapping-SignallingMethod-CodeRange-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
PDSCHCodeMapping-SignallingMethod-TFCIRange ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
SEQUENCE {
    maxTFCIvalue            MaxTFCIvalue,
    spreadingFactor          SpreadingFactor,
    multi-code-info          Multi-code-info,
    codeNumber              CodeNumber,
    iE-Extensions            ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-TFCIRange-ExtIEs } } OPTIONAL,
    ...
}
```

```
PDSCHCodeMapping-SignallingMethod-TFCIRange-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
PDSCHCodeMapping-SignallingMethod-Explicit ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF
```

```

SEQUENCE {
    spreadingFactor          SpreadingFactor,
    multi-code-info         Multi-code-info,
    codeNumber              CodeNumber,
    iE-Extensions           ProtocolExtensionContainer { { PDSCHCodeMapping-SignallingMethod-Explicit-ExtIEs} } OPTIONAL,
    ...
}

PDSCHCodeMapping-SignallingMethod-Explicit-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Periodic ::= SEQUENCE {
    reportPeriodicity       ReportPeriodicity,
    iE-Extensions           ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
    ...
}

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

PLMN-ID ::= OCTET STRING (SIZE(3))

PowerAdjustmentType ::= ENUMERATED {
    none,
    common,
    individual
}

PowerOffset ::= INTEGER (0..24)

Pre-emptionCapability ::= ENUMERATED {
    shall-not-trigger-pre-emption,
    may-trigger-pre-emption
}

Pre-emptionVulnerability ::= ENUMERATED {
    not-pre-emptable,
    pre-emptable
}

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

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

PrimaryCCPCH-RSCP ::= INTEGER (0..91)
-- According to mapping in [14]

PrimaryScramblingCode ::= INTEGER (0..511)

```

```
PriorityLevel ::= INTEGER (0..15)
-- 0 = spare, 1 = highest priority, ...14 = lowest priority and 15 = no priority

PropagationDelay ::= INTEGER (0..255)

PunctureLimit ::= INTEGER (0..15)
-- 0: 40%; 1: 44%; ... 14: 96%; 15: 100

-- Q

QE-Selector ::= ENUMERATED {
    selected,
    non-selected
}

Q-Offset-Serving-to-Neighbour ::= INTEGER (-50..50)

Q-RxlevMin ::= INTEGER (-58..-13)
-- Actual value = (IE value * 2) + 1
-- Range -115 to -25 dBm, Step 2 dB

-- R

RAC ::= OCTET STRING (SIZE(1))

RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

RB-Identity ::= INTEGER (0..31)

RB-Info ::= SEQUENCE (SIZE(1..maxNoOfRB)) OF RB-Identity

RefTFCNumber ::= INTEGER (0..15)

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64
}

RepetitionNumber ::= INTEGER (1..256)

ReportCharacteristics ::= CHOICE {
```

```
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF,
    ...
}

ReportPeriodicity ::= CHOICE {
    ten-msec          INTEGER (1..6000,...),
    -- The Report Periodicity gives the reporting periodicity in number of 10 ms periods.
    -- E.g. value 6000 means 60000ms (i.e. 1min)
    -- Unit ms, Step 10ms
    min              INTEGER (1..60,...),
    -- Unit min, Step 1min
    ...
}

RL-ID                ::= INTEGER (0..31)

RL-Set-ID            ::= INTEGER (0..31)

RNC-ID               ::= INTEGER (0..4095)

Round-Trip-Time-IncrDecrThres ::= INTEGER(0..32766)

Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [23]

RSCP-Value ::= INTEGER (0..81)
-- According to mapping in [24]

RSCP-Value-IncrDecrThres ::= INTEGER (0..80)

Received-total-wide-band-power          ::= INTEGER (0..621)
-- According to mapping in [23]

RxTimingDeviationForTA                  ::= INTEGER (0..127)
-- As specified in [5], ch. 6.2.7.6

Rx-Timing-Deviation-Value ::= INTEGER (0..2047)

-- S

SAC                ::= OCTET STRING (SIZE (2))

SAI ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
```

```

    LAC                LAC,
    sAC                SAC,
    iE-Extensions     ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}

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

SCH-TimeSlot          ::= INTEGER (0..6)

ScaledAdjustmentRatio ::= INTEGER(0..100)
-- AdjustmentRatio = ScaledAdjustmentRatio / 100

Secondary-CCPCH-Info ::= 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,
    iB-schedulingInformation   IB-SchedulingInformation,
    iE-Extensions              ProtocolExtensionContainer { { Secondary-CCPCH-Info-ExtIEs} } OPTIONAL,
    ...
}

Secondary-CCPCH-Info-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeslot-related,
    ...
}

SIR-Error-Value          ::= INTEGER (0..125)

SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)

SIR-Value                ::= INTEGER (0..63)
-- According to mapping in 25.215/25.225

SIR-Value-IncrDecrThres ::= INTEGER (0..62)

SecondaryCCPCH-SlotFormat ::= INTEGER (0..17,...)
-- refer to 25.211
```



```
SN ::= TimeSlot

S-FieldLength ::= ENUMERATED {
    v1,
    v2,
    ...
}

SpreadingFactor ::= INTEGER (4| 8| 16| 32| 64| 128| 256)

S-RNTI ::= INTEGER (0..1048575)
-- From 0 to 2^20-1

SSDT-CellID ::= ENUMERATED {
    a,
    b,
    c,
    d,
    e,
    f,
    g,
    h
}

SSDT-CellID-Length ::= ENUMERATED {
    short,
    medium,
    long
}

SSDT-Indication ::= ENUMERATED {
    sSDT-active-in-the-UE,
    sSDT-not-active-in-the-UE
}

SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-supported,
    sSDT-not-supported
}

STTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

STTD-SupportIndicator ::= ENUMERATED {
    sTTD-Supported,
    sTTD-not-Supported
}
```

```
SyncCase ::= INTEGER (1..2,...)
```

```
-- T
```

```
TDD-ChannelisationCode ::= ENUMERATED {
```

```
  chCode1div1,
  chCode2div1,
  chCode2div2,
  chCode4div1,
  chCode4div2,
  chCode4div3,
  chCode4div4,
  chCode8div1,
  chCode8div2,
  chCode8div3,
  chCode8div4,
  chCode8div5,
  chCode8div6,
  chCode8div7,
  chCode8div8,
  chCode16div1,
  chCode16div2,
  chCode16div3,
  chCode16div4,
  chCode16div5,
  chCode16div6,
  chCode16div7,
  chCode16div8,
  chCode16div9,
  chCode16div10,
  chCode16div11,
  chCode16div12,
  chCode16div13,
  chCode16div14,
  chCode16div15,
  chCode16div16,
```

```
  ...
```

```
}
```

```
TDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF TDD-DCHs-to-ModifyItem
```

```
TDD-DCHs-to-ModifyItem ::= SEQUENCE {
```

```
  ul-FP-Mode          UL-FP-Mode OPTIONAL,
  toAWS               ToAWS          OPTIONAL,
  toAWE               ToAWE          OPTIONAL,
  transportBearerRequestIndicator TransportBearerRequestIndicator,
  dCH-SpecificInformationList TDD-DCHs-to-ModifySpecificInformationList,
  iE-Extensions       ProtocolExtensionContainer { {TDD-DCHs-to-ModifyItem-ExtIEs} } OPTIONAL,
```

```
  ...
```

```
}
```

```

TDD-DCHs-to-ModifyItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DCHs-to-ModifySpecificInformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF TDD-DCHs-to-ModifySpecificItem

TDD-DCHs-to-ModifySpecificItem ::= 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,
    iE-Extensions         ProtocolExtensionContainer { {TDD-DCHs-to-ModifySpecificItem-ExtIEs} } OPTIONAL,
    ...
}

TDD-DCHs-to-ModifySpecificItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
    { ID id-Guaranteed-Rate-Information CRITICALITY ignore EXTENSION Guaranteed-Rate-Information PRESENCE optional }
}

TDD-DL-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-DL-Code-InformationItem

TDD-DL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions         ProtocolExtensionContainer { {TDD-DL-Code-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

TDD-DPCHOffset ::= CHOICE {
    initialOffset    INTEGER (0..255),
    noinitialOffset  INTEGER (0..63)
}

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size1,
    step-size2,
    step-size3,
    ...
}

TDD-UL-Code-Information ::= SEQUENCE ( SIZE (1..maxNrOfDPCHs)) OF TDD-UL-Code-InformationItem

```

```
TDD-UL-Code-InformationItem ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    iE-Extensions          ProtocolExtensionContainer { {TDD-UL-Code-InformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    ...
}

TFCI-Presence ::= ENUMERATED {
    present,
    not-present
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

TGD ::= INTEGER (0|15..269)
-- 0 = Undefined, only one transmission gap in the transmission gap pattern sequence

TGPRC ::= INTEGER (0..63)
-- 0 = infinity

TGPSID ::= INTEGER (1.. maxTGPS)

TGSN ::= INTEGER (0..14)

TimeSlot ::= INTEGER (0..14)

TimingAdvanceApplied ::= ENUMERATED {
    yes,
    no
}

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)
```

```

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
SEQUENCE {
    tGPSID          TGPSID,
    tGSN            TGSN,
    tGL1            GapLength,
    tGL2            GapLength OPTIONAL,
    tGD             TGD,
    tGPL1           GapDuration,
    tGPL2           GapDuration OPTIONAL,
    uL-DL-mode      UL-DL-mode,
    downlink-Compressed-Mode-Method Downlink-Compressed-Mode-Method OPTIONAL,
    -- This IE is only present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
    uplink-Compressed-Mode-Method Uplink-Compressed-Mode-Method OPTIONAL,
    -- This IE is only present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
    dL-FrameType    DL-FrameType,
    delta-SIR1      DeltaSIR,
    delta-SIR-after1 DeltaSIR,
    delta-SIR2      DeltaSIR OPTIONAL,
    delta-SIR-after2 DeltaSIR OPTIONAL,
    iE-Extensions   ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
    ...
}

Transmission-Gap-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Transmission-Gap-Pattern-Sequence-ScramblingCode-Information ::= ENUMERATED{
    code-change,
    nocode-change
}

Transmission-Gap-Pattern-Sequence-Status-List ::= SEQUENCE (SIZE (0..maxTGPS)) OF
SEQUENCE {
    tGPSID          TGPSID,
    tGPRC           TGPRC,
    tGCFN           CFN,
    iE-Extensions   ProtocolExtensionContainer { { Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs } } OPTIONAL,
    ...
}

Transmission-Gap-Pattern-Sequence-Status-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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,
        iE-Extensions ProtocolExtensionContainer { { SignalledGainFactors-ExtIEs } } OPTIONAL,
        ...
    },
    refTFCNumber RefTFCNumber,
    ...
}

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

TFCS ::= SEQUENCE {
    tFCSvalues CHOICE {
        no-Split-in-TFCI TFCS-TFCSList,
        split-in-TFCI SEQUENCE {
            transportFormatCombination-DCH TFCS-DCHList,
            signallingMethod CHOICE {
                tFCI-Range TFCS-MappingOnDSCHList,
                explicit TFCS-DSCHList,
            }
        }
    }
}

```

```

        },
        iE-Extensions          ProtocolExtensionContainer { { Split-in-TFCI-ExtIEs } } OPTIONAL,
        ...
    },
    iE-Extensions          ProtocolExtensionContainer { { TFCS-ExtIEs } }          OPTIONAL,
    ...
}

Split-in-TFCI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

TFCS-TFCSList ::= SEQUENCE (SIZE (1..maxNrOfTFCS)) OF
    SEQUENCE {
        cTFC                TFCS-CTFC,
        tFC-Beta            TransportFormatCombination-Beta          OPTIONAL,
        iE-Extensions       ProtocolExtensionContainer { { TFCS-TFCSList-ExtIEs } } OPTIONAL,
        ...
    }

TFCS-TFCSList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCS-CTFC ::= CHOICE {
    ctfc2bit                INTEGER (0..3),
    ctfc4bit                INTEGER (0..15),
    ctfc6bit                INTEGER (0..63),
    ctfc8bit                INTEGER (0..255),
    ctfc12bit               INTEGER (0..4095),
    ctfc16bit               INTEGER (0..65535),
    ctfcmaxbit              INTEGER (0..maxCTFC)
}

TFCS-DCHList ::= SEQUENCE (SIZE (1..maxTFCI1Combs)) OF
    SEQUENCE {
        cTFC                TFCS-CTFC,
        iE-Extensions       ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs } }          OPTIONAL,
        ...
    }

TFCS-DCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

TFCS-MappingOnDSCHList ::= SEQUENCE (SIZE (1..maxNoTFCIGroups)) OF
  SEQUENCE {
    maxTFCI-field2-Value      TFCS-MaxTFCI-field2-Value,
    cTFC-DSCH                 TFCS-CTFC,
    iE-Extensions             ProtocolExtensionContainer { { TFCS-MappingOnDSCHList-ExtIEs} } OPTIONAL,
    ...
  }

TFCS-MappingOnDSCHList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxTFCI2Combs-1)

TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxTFCI2Combs)) OF
  SEQUENCE {
    cTFC-DSCH                 TFCS-CTFC,
    iE-Extensions             ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs} } 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
  SEQUENCE {
    nrOfTransportBlocks        NrOfTransportBlocks,
    transportBlockSize         TransportBlockSize OPTIONAL
    -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
    mode                       TransportFormatSet-ModeDP,
    iE-Extensions              ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-ExtIEs} } OPTIONAL,
    ...
  }

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```



```

TransportFormatSet-ModeDP ::= CHOICE {
    tdd                TDD-TransportFormatSet-ModeDP,
    notApplicable     NULL,
    ...
}

TDD-TransportFormatSet-ModeDP ::= SEQUENCE {
    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.
    iE-Extensions                      ProtocolExtensionContainer { {TDD-TransportFormatSet-ModeDP-ExtIEs} } OPTIONAL,
    ...
}

TDD-TransportFormatSet-ModeDP-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransmissionTimeIntervalInformation ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
    SEQUENCE {
        transmissionTimeInterval  TransmissionTimeIntervalDynamic,
        iE-Extensions            ProtocolExtensionContainer { {TransmissionTimeIntervalInformation-ExtIEs} } OPTIONAL,
        ...
    }

TransmissionTimeIntervalInformation-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 {
    transmissionTime          TransmissionTimeIntervalSemiStatic,
    channelCoding             ChannelCodingType,
    codingRate                CodingRate                OPTIONAL
    -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
    rateMatchingAttribute     RateMatchingAttribute,
    crc-Size                 CRC-Size,
    mode                      TransportFormatSet-ModeSSP,
    iE-Extensions            ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs} } OPTIONAL,
    ...
}

```

```
TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd                SecondInterleavingMode,
    notApplicable     NULL,
    ...
}

TransportLayerAddress      ::= BIT STRING (SIZE(1..160, ...))

TrCH-SrcStatisticsDescr   ::= ENUMERATED {
    speech,
    rRC,
    unknown,
    ...
}

TxDiversityIndicator      ::= ENUMERATED {
    true,
    false
}

-- U

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

```

}

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

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

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

UL-TimeslotISCP ::= INTEGER (0..81)
-- According to mapping in [14]

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

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

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

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

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

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

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

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

USCH-InformationItem ::= SEQUENCE {
    uSCH-ID                USCH-ID,
    ul-CCTrCH-ID           CCTrCH-ID,
    trChSourceStatisticsDescriptor TrCh-SrcStatisticsDescr,
    transportFormatSet     TransportFormatSet,

```

Release 1999

183

Error! No text of specified style in document.

```
allocationRetentionPriority      AllocationRetentionPriority,
schedulingPriorityIndicator      SchedulingPriorityIndicator,
rb-Info                          RB-Info,
iE-Extensions                    ProtocolExtensionContainer { {USCH-InformationItem-ExtIEs} } OPTIONAL,
...
}

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

-- V
-- W
-- X
-- Y
-- Z

END
```

9.3.6 Constant Definitions

```

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes;

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

id-commonTransportChannelResourcesInitialisation      ProcedureCode ::= 0
id-commonTransportChannelResourcesRelease             ProcedureCode ::= 1
id-compressedModeCommand                             ProcedureCode ::= 2
id-dCHRateControl                                    ProcedureCode ::= xxx
id-downlinkPowerControl                              ProcedureCode ::= 3
id-downlinkPowerTimeslotControl                      ProcedureCode ::= 4
id-downlinkSignallingTransfer                        ProcedureCode ::= 5
id-errorIndication                                   ProcedureCode ::= 6
id-measurementFailure                                ProcedureCode ::= 7
id-measurementInitiation                             ProcedureCode ::= 8
id-measurementReporting                              ProcedureCode ::= 9
id-measurementTermination                           ProcedureCode ::= 10
id-paging                                             ProcedureCode ::= 11
id-physicalChannelReconfiguration                   ProcedureCode ::= 12
id-privateMessage                                    ProcedureCode ::= 13
id-radioLinkAddition                                ProcedureCode ::= 14
id-radioLinkCongestion                              ProcedureCode ::= xxx34
id-radioLinkDeletion                                ProcedureCode ::= 15
id-radioLinkFailure                                  ProcedureCode ::= 16
id-radioLinkPreemption                              ProcedureCode ::= 17
id-radioLinkRestoration                             ProcedureCode ::= 18
id-radioLinkSetup                                    ProcedureCode ::= 19
id-relocationCommit                                  ProcedureCode ::= 20

```

id-synchronisedRadioLinkReconfigurationCancellation	ProcedureCode ::= 21
id-synchronisedRadioLinkReconfigurationCommit	ProcedureCode ::= 22
id-synchronisedRadioLinkReconfigurationPreparation	ProcedureCode ::= 23
id-unsynchronisedRadioLinkReconfiguration	ProcedureCode ::= 24
id-uplinkSignallingTransfer	ProcedureCode ::= 25

```
-- *****
--
-- 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
maxNrOfULTs	INTEGER ::= 15
maxNrOfDLTs	INTEGER ::= 15
maxRNCinURA-1	INTEGER ::= 15
maxTTI-Count	INTEGER ::= 4
maxCTFC	INTEGER ::= 16777215
maxNrOfNeighbouringRNCs	INTEGER ::= 10
maxNrOfFDDNeighboursPerRNC	INTEGER ::= 256
maxNrOfGSMNeighboursPerRNC	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
--
-- *****

id-AllowedQueuingTime ProtocolIE-ID ::= 4
id-AllowedRateInformation ProtocolIE-ID ::= 42
id-BindingID ProtocolIE-ID ::= 5
id-C-ID ProtocolIE-ID ::= 6
id-C-RNTI ProtocolIE-ID ::= 7
id-CFN ProtocolIE-ID ::= 8
id-CN-CS-DomainIdentifier ProtocolIE-ID ::= 9
id-CN-PS-DomainIdentifier ProtocolIE-ID ::= 10
id-Cause ProtocolIE-ID ::= 11
id-CriticalityDiagnostics ProtocolIE-ID ::= 20
id-D-RNTI ProtocolIE-ID ::= 21
id-D-RNTI-ReleaseIndication ProtocolIE-ID ::= 22
id-DCHs-to-Add-FDD ProtocolIE-ID ::= 26
id-DCHs-to-Add-TDD ProtocolIE-ID ::= 27
id-DCH-DeleteList-RL-ReconfPrepFDD ProtocolIE-ID ::= 30
id-DCH-DeleteList-RL-ReconfPrepTDD ProtocolIE-ID ::= 31
id-DCH-DeleteList-RL-ReconfRqstFDD ProtocolIE-ID ::= 32
id-DCH-DeleteList-RL-ReconfRqstTDD ProtocolIE-ID ::= 33
id-DCH-FDD-Information ProtocolIE-ID ::= 34
id-DCH-TDD-Information ProtocolIE-ID ::= 35
id-FDD-DCHs-to-Modify ProtocolIE-ID ::= 39
id-TDD-DCHs-to-Modify ProtocolIE-ID ::= 40
id-DCH-InformationResponse ProtocolIE-ID ::= 43
id-DCH-Rate-InformationItem-DCHRateCtrlComRL-ConnEstInd ProtocolIE-ID ::= 38
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD ProtocolIE-ID ::= 44
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD ProtocolIE-ID ::= 45
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD ProtocolIE-ID ::= 46
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD ProtocolIE-ID ::= 47
id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD ProtocolIE-ID ::= 48
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD ProtocolIE-ID ::= 49
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD ProtocolIE-ID ::= 50
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ProtocolIE-ID ::= 51
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ProtocolIE-ID ::= 52
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD ProtocolIE-ID ::= 53
id-FDD-DL-CodeInformation ProtocolIE-ID ::= 54
id-DL-DPCH-Information-RL-ReconfPrepFDD ProtocolIE-ID ::= 59
id-DL-DPCH-Information-RL-SetupRqstFDD ProtocolIE-ID ::= 60
id-DL-DPCH-Information-RL-ReconfRqstFDD ProtocolIE-ID ::= 61
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD ProtocolIE-ID ::= 62
id-DL-DPCH-InformationItem-RL-AdditionRspTDD ProtocolIE-ID ::= 63
id-DL-DPCH-InformationItem-RL-SetupRspTDD ProtocolIE-ID ::= 64
id-DLReferencePower ProtocolIE-ID ::= 67
id-DLReferencePowerList-DL-PC-Rqst ProtocolIE-ID ::= 68
id-DL-ReferencePowerInformation-DL-PC-Rqst ProtocolIE-ID ::= 69
id-DRXCycleLengthCoefficient ProtocolIE-ID ::= 70
id-DedicatedMeasurementObjectType-DM-Rprt ProtocolIE-ID ::= 71
id-DedicatedMeasurementObjectType-DM-Rqst ProtocolIE-ID ::= 72
```


Release 1999

187

Error! No text of specified style in document.

id-DedicatedMeasurementObjectType-DM-Rsp	ProtocolIE-ID ::= 73
id-DedicatedMeasurementType	ProtocolIE-ID ::= 74
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD	ProtocolIE-ID ::= 82
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD	ProtocolIE-ID ::= 83
id-Guaranteed-Rate-Information	ProtocolIE-ID ::= 41
id-IMSI	ProtocolIE-ID ::= 84
id-L3-Information	ProtocolIE-ID ::= 85
id-AdjustmentPeriod	ProtocolIE-ID ::= 90
id-MaxAdjustmentStep	ProtocolIE-ID ::= 91
id-MeasurementFilterCoefficient	ProtocolIE-ID ::= 92
id-MeasurementID	ProtocolIE-ID ::= 93
id-Neighbouring-GSM-CellInformation	ProtocolIE-ID ::= 13
id-Neighbouring-UMTS-CellInformationItem	ProtocolIE-ID ::= 95
id-PagingArea-PagingRqst	ProtocolIE-ID ::= 102
id-FACH-FlowControlInformation	ProtocolIE-ID ::= 103
id-PowerAdjustmentType	ProtocolIE-ID ::= 107
id-ProcedureScope-DL-PC-Rqst	ProtocolIE-ID ::= 108
id-RANAP-RelocationInformation	ProtocolIE-ID ::= 109
id-RL-Information-PhyChReconfRqstFDD	ProtocolIE-ID ::= 110
id-RL-Information-PhyChReconfRqstTDD	ProtocolIE-ID ::= 111
id-RL-Information-RL-AdditionRqstFDD	ProtocolIE-ID ::= 112
id-RL-Information-RL-AdditionRqstTDD	ProtocolIE-ID ::= 113
id-RL-Information-RL-DeletionRqst	ProtocolIE-ID ::= 114
id-RL-Information-RL-FailureInd	ProtocolIE-ID ::= 115
id-RL-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 116
id-RL-Information-RL-RestoreInd	ProtocolIE-ID ::= 117
id-RL-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 118
id-RL-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 119
id-RL-InformationItem-DCHRateCtrlComRL-CongestInd	ProtocolIE-ID ::= 55
id-RL-InformationItem-DM-Rprt	ProtocolIE-ID ::= 120
id-RL-InformationItem-DM-Rqst	ProtocolIE-ID ::= 121
id-RL-InformationItem-DM-Rsp	ProtocolIE-ID ::= 122
id-RL-InformationItem-RL-PreemptRequiredInd	ProtocolIE-ID ::= 2
id-RL-InformationItem-RL-SetupRqstFDD	ProtocolIE-ID ::= 123
id-RL-InformationList-DCHRateCtrlComRL-CongestInd	ProtocolIE-ID ::= 56
id-RL-InformationList-RL-AdditionRqstFDD	ProtocolIE-ID ::= 124
id-RL-InformationList-RL-DeletionRqst	ProtocolIE-ID ::= 125
id-RL-InformationList-RL-PreemptRequiredInd	ProtocolIE-ID ::= 1
id-RL-InformationList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 126
id-RL-InformationResponse-RL-AdditionRspTDD	ProtocolIE-ID ::= 127
id-RL-InformationResponse-RL-ReconfReadyTDD	ProtocolIE-ID ::= 128
id-RL-InformationResponse-RL-SetupRspTDD	ProtocolIE-ID ::= 129
id-RL-InformationResponseItem-RL-AdditionRspFDD	ProtocolIE-ID ::= 130
id-RL-InformationResponseItem-RL-ReconfReadyFDD	ProtocolIE-ID ::= 131
id-RL-InformationResponseItem-RL-ReconfRspFDD	ProtocolIE-ID ::= 132
id-RL-InformationResponseItem-RL-SetupRspFDD	ProtocolIE-ID ::= 133
id-RL-InformationResponseList-RL-AdditionRspFDD	ProtocolIE-ID ::= 134
id-RL-InformationResponseList-RL-ReconfReadyFDD	ProtocolIE-ID ::= 135
id-RL-InformationResponseList-RL-ReconfRspFDD	ProtocolIE-ID ::= 136
id-RL-InformationResponse-RL-ReconfRspTDD	ProtocolIE-ID ::= 28
id-RL-InformationResponseList-RL-SetupRspFDD	ProtocolIE-ID ::= 137

Release 1999

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-ReportCharacteristics
id-Reporting-Object-RL-FailureInd
id-Reporting-Object-RL-RestoreInd
id-S-RNTI
id-SAI
id-SRNC-ID
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-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-SetupRqstTDD
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-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-SIRTarget
id-URA-Information
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-CauseLevel-RL-AdditionFailureFDD
id-CauseLevel-RL-AdditionFailureTDD
id-CauseLevel-RL-ReconfFailure
id-CauseLevel-RL-SetupFailureFDD
id-CauseLevel-RL-SetupFailureTDD

188

ProtocolIE-ID ::= 141
ProtocolIE-ID ::= 143
ProtocolIE-ID ::= 144
ProtocolIE-ID ::= 145
ProtocolIE-ID ::= 146
ProtocolIE-ID ::= 147
ProtocolIE-ID ::= 152
ProtocolIE-ID ::= 153
ProtocolIE-ID ::= 154
ProtocolIE-ID ::= 155
ProtocolIE-ID ::= 156
ProtocolIE-ID ::= 157
ProtocolIE-ID ::= 159
ProtocolIE-ID ::= 160
ProtocolIE-ID ::= 161
ProtocolIE-ID ::= 162
ProtocolIE-ID ::= 163
ProtocolIE-ID ::= 164
ProtocolIE-ID ::= 165
ProtocolIE-ID ::= 166
ProtocolIE-ID ::= 167
ProtocolIE-ID ::= 168
ProtocolIE-ID ::= 169
ProtocolIE-ID ::= 170
ProtocolIE-ID ::= 171
ProtocolIE-ID ::= 172
ProtocolIE-ID ::= 173
ProtocolIE-ID ::= 174
ProtocolIE-ID ::= 175
ProtocolIE-ID ::= 176
ProtocolIE-ID ::= 177
ProtocolIE-ID ::= 178
ProtocolIE-ID ::= 179
ProtocolIE-ID ::= 180
ProtocolIE-ID ::= 181
ProtocolIE-ID ::= 182
ProtocolIE-ID ::= 183
ProtocolIE-ID ::= 184
ProtocolIE-ID ::= 185
ProtocolIE-ID ::= 188
ProtocolIE-ID ::= 189
ProtocolIE-ID ::= 190
ProtocolIE-ID ::= 191
ProtocolIE-ID ::= 192
ProtocolIE-ID ::= 193
ProtocolIE-ID ::= 194
ProtocolIE-ID ::= 197
ProtocolIE-ID ::= 198
ProtocolIE-ID ::= 199
ProtocolIE-ID ::= 200
ProtocolIE-ID ::= 201

Error! No text of specified style in document.

Release 1999

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-DPCH-InformationAddListIE-RL-ReconfReadyTDD
id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD
id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD
id-DSCHs-to-Add-TDD
id-DSCHs-to-Add-FDD
id-DSCH-DeleteList-RL-ReconfPrepTDD
id-DSCH-Delete-RL-ReconfPrepFDD
id-DSCH-FDD-Information
id-DSCH-InformationListIE-RL-AdditionRspTDD
id-DSCH-InformationListIEs-RL-SetupRspTDD
id-DSCH-TDD-Information
id-DSCH-FDD-InformationResponse
id-DSCH-Information-RL-SetupRqstFDD
id-DSCH-ModifyList-RL-ReconfPrepTDD
id-DSCH-Modify-RL-ReconfPrepFDD
id-DSCHsToBeAddedOrModified-FDD
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD
id-GA-AccessPointPosition
id-GA-Cell
id-Transmission-Gap-Pattern-Sequence-Information
id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD
id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD
id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD
id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD
id-USCHs-to-Add
id-USCH-DeleteList-RL-ReconfPrepTDD
id-USCH-InformationListIE-RL-AdditionRspTDD
id-USCH-InformationListIEs-RL-SetupRspTDD
id-USCH-Information
id-USCH-ModifyList-RL-ReconfPrepTDD
id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD
id-DL-Physical-Channel-Information-RL-SetupRqstTDD
id-UL-Physical-Channel-Information-RL-SetupRqstTDD
id-ClosedLoopModel-SupportIndicator
id-ClosedLoopMode2-SupportIndicator
id-STTD-SupportIndicator
id-CFNReportingIndicator
id-CNOriginatedPage-PagingRqst

189

ProtocolIE-ID ::= 205
ProtocolIE-ID ::= 206
ProtocolIE-ID ::= 207
ProtocolIE-ID ::= 208
ProtocolIE-ID ::= 209
ProtocolIE-ID ::= 210
ProtocolIE-ID ::= 212
ProtocolIE-ID ::= 213
ProtocolIE-ID ::= 214
ProtocolIE-ID ::= 215
ProtocolIE-ID ::= 216
ProtocolIE-ID ::= 217
ProtocolIE-ID ::= 218
ProtocolIE-ID ::= 219
ProtocolIE-ID ::= 220
ProtocolIE-ID ::= 221
ProtocolIE-ID ::= 222
ProtocolIE-ID ::= 223
ProtocolIE-ID ::= 226
ProtocolIE-ID ::= 227
ProtocolIE-ID ::= 228
ProtocolIE-ID ::= 229
ProtocolIE-ID ::= 230
ProtocolIE-ID ::= 231
ProtocolIE-ID ::= 232
ProtocolIE-ID ::= 255
ProtocolIE-ID ::= 256
ProtocolIE-ID ::= 257
ProtocolIE-ID ::= 258
ProtocolIE-ID ::= 259
ProtocolIE-ID ::= 260
ProtocolIE-ID ::= 261
ProtocolIE-ID ::= 262
ProtocolIE-ID ::= 263
ProtocolIE-ID ::= 264
ProtocolIE-ID ::= 265
ProtocolIE-ID ::= 266
ProtocolIE-ID ::= 267
ProtocolIE-ID ::= 268
ProtocolIE-ID ::= 269
ProtocolIE-ID ::= 270
ProtocolIE-ID ::= 271
ProtocolIE-ID ::= 272
ProtocolIE-ID ::= 273
ProtocolIE-ID ::= 274
ProtocolIE-ID ::= 275
ProtocolIE-ID ::= 276
ProtocolIE-ID ::= 277
ProtocolIE-ID ::= 279
ProtocolIE-ID ::= 14
ProtocolIE-ID ::= 23

Error! No text of specified style in document.

Release 1999

id-InnerLoopDLPCStatus
id-PropagationDelay
id-RxTimingDeviationForTA
id-timeSlot-ISCLList-DL-PC-Rqst-TDD

END

190

ProtocolIE-ID ::= 24
ProtocolIE-ID ::= 25
ProtocolIE-ID ::= 36
ProtocolIE-ID ::= 37

Error! No text of specified style in document.

CHANGE REQUEST

⌘ **25.427** **CR 045** ⌘ rev **1** ⌘ Current version: **3.5.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ DPC Rate Reduction in Soft Handover		
Source:	⌘ R-WG3		
Work item code:	⌘ RANimp-RRMopt	Date:	⌘ February 2001
Category:	⌘ B	Release:	⌘ REL-4
	<p><i>Use <u>one</u> of the following categories:</i></p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>

Reason for change:	⌘ The WG1 and WG2 have specified procedures for DPC rate reduction in soft handover. This procedure is not supported by RAN3 specifications. The needed changes in the lub/lur specifications were agreed in RAN3#18 meeting: <ul style="list-style-type: none"> • Initialisation of the DPC mode in NBAP and RNSAP specifications • Change of the DPC mode in DCH FP in the Radio Interface Parameter Update frame
Summary of change:	⌘ DPC mode field has been added into the Radio Interface Parameter Update control frame.
Consequences if not approved:	⌘ The Work Task 'DPC Rate Reduction in soft handover' in the Work Item ' RRM optimisations for lur and lub' cannot be closed. This change is backward compatible.

Clauses affected:	⌘ 5.8, 9.1.23, 9.3.3		
Other specs affected:	⌘ <input checked="" type="checkbox"/> Other core specifications	⌘ R3-010957, CR-320 (25.423) R3-010958, CR-373 (25.433)	
	<input type="checkbox"/> Test specifications		
	<input type="checkbox"/> O&M Specifications		
Other comments:	⌘		

How to create CRs using this form:

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

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

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

5.8 Radio Interface Parameter Update [FDD]

This procedure is used to update radio interface parameters which are applicable to all RL's for the concerning UE. Both synchronised and unsynchronised parameter updates are supported.

The procedure consists of a RADIO INTERFACE PARAMETER UPDATE control frame sent by the SRNC to the Node B.

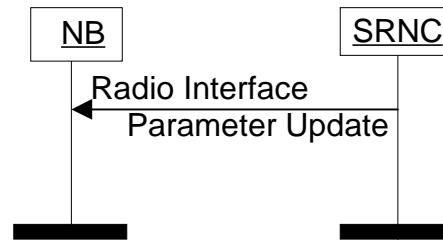


Figure 9: Radio Interface Parameter Update

If the RADIO INTERFACE PARAMETER UPDATE control frame contains a TPC Power Offset value, the Node B shall apply the newly provided TPC PO in DL. If the frame contains a DPC mode value, the Node B shall apply the newly provided value in DL power control. The new values shall be applied as soon as possible in case no CFN is included or from the indicated CFN.

6.3.3.9 Radio Interface Parameter Update

6.3.3.9.1 Payload structure

The figure below shows the structure of the payload when the control frame is used for signalling radio interface parameter updates.

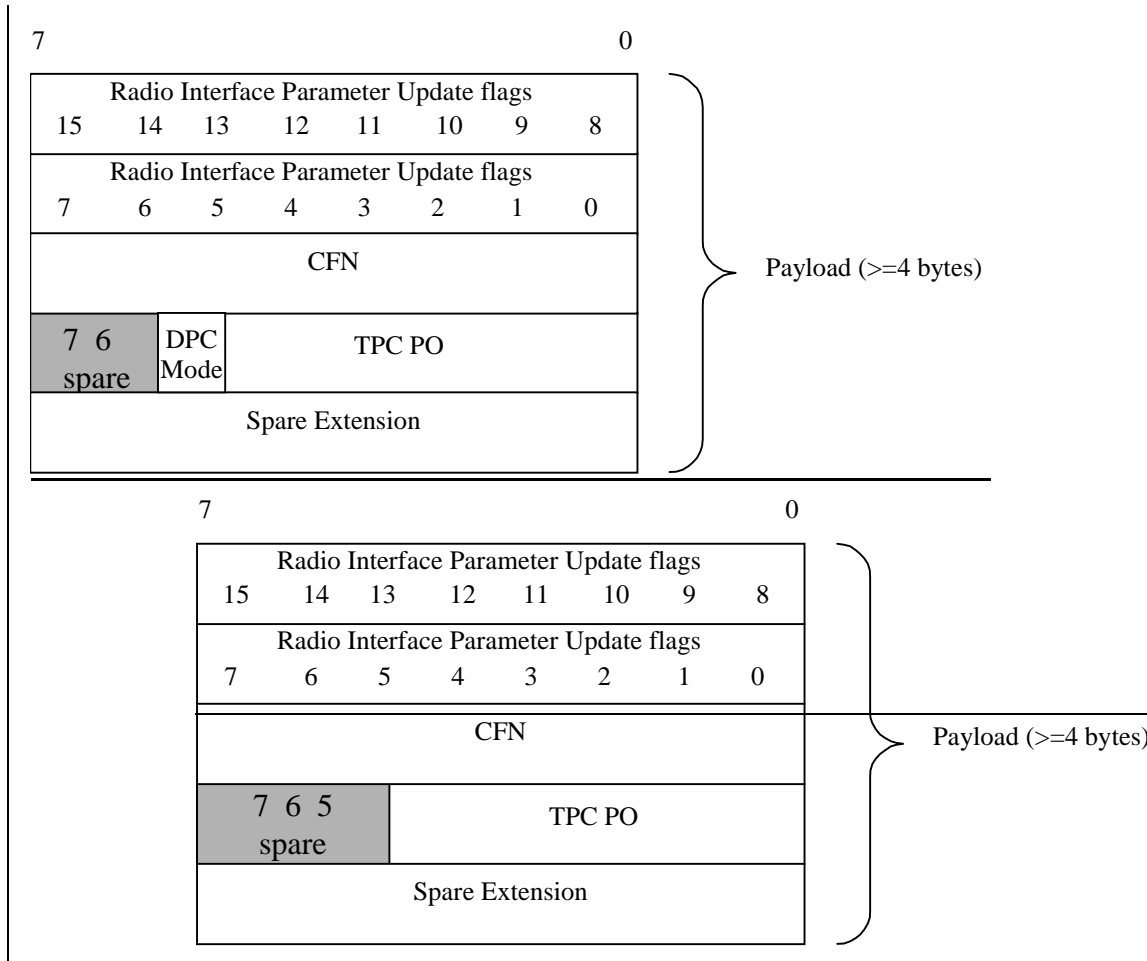


Figure 22: Structure of the payload for the Radio Interface Parameter Update control frame

6.3.3.9.2 Radio Interface Parameter Update flags

Description: Contains flags indicating which information is present in this control frame.

Value range:

Bit 0: Indicates if the 3rd byte of the control frame payload contains a CFN (1) or not (0);

Bit 1: Indicates if the 4th byte (bits 0-4) of the control frame payload contains a TPC PO (1) or not (0);

Bit 2: Indicates if the 4th byte (bit 5) of the control frame payload contains a DPC mode (1) or not (0);

Bit 3-15: Set to (0): reserved in this user plane revision. Any indicated flags shall be ignored by the receiver.

Field length: 16 bits.

6.3.3.9.3 TPC power offset

Description: Power offset to be applied in the DL between the DPDCH information and the TPC bits on the DPCCH.

Value range: 0-7.75, resolution in 0.25 dB.

Field length: 5 bits.

6.3.3.9.4 Spare Extension

The Spare Extension is described in subclause 6.3.3.1.4.

6.3.3.9.5 DPC mode

Description: DPC mode to be applied in the UL.

Value range: 0: The Node B shall estimate the UE transmitted TPC command and update the power in every slot

1: The Node B shall estimate the UE transmitted TPC command over three slots and shall update the power in every three slots.

Field length: 1 bit.

CHANGE REQUEST

⌘ **25.433** **CR 373** ⌘ rev **2** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ DPC Rate Reduction in Soft Handover		
Source:	⌘ R-WG3		
Work item code:	⌘ RANimp-RRMopt	Date:	⌘ February 2001
Category:	⌘ B	Release:	⌘ REL-4
	<i>Use <u>one</u> of the following categories:</i> 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.		<i>Use <u>one</u> of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ The WG1 and WG2 have specified procedures for DPC rate reduction in soft handover. This procedure is not supported by RAN3 specifications. The needed changes in the lub/lur specifications were agreed in RAN3#18 meeting: <ul style="list-style-type: none"> • Initialisation of the DPC mode in NBAP and RNSAP specifications • Change of the DPC mode in DCH FP in the Radio Interface Parameter Update frame
Summary of change:	⌘ <p>R1: When establishing a new Radio Link with the Radio Link Set Up Request message, the DRNC sends a new IE 'DPC Mode'</p> <p>(1) to request the flexibility to change the DPC mode during the life time of the RL and</p> <p>(2) to set the initial DPC mode value.</p> <p>If the Node B does not support the User Plane DPC mode change procedure, it shall reject the request with a new cause code 'DPC Mode change not supported'.</p> <p>R2: IE-id added, IE name updated, IE-type reference corrected in the tabular format.</p>
Consequences if not approved:	⌘ The Work Task 'DPC Rate Reduction in soft handover' in the Work Item ' RRM optimisations for lur and lub' cannot be closed.
	This change is backward compatible.

Clauses affected: ⌘ 8.2.17.3, 9.1.36.1, 9.2.1.6, 9.2.2.13AA, 9.3.3, 9.3.4, 9.3.6

Other specs	⌘	<input checked="" type="checkbox"/>	Other core specifications	⌘	R3-010956 CR-045 (25.427) R3-011013 CR-320 (25.423)
affected:		<input type="checkbox"/>	Test specifications		
		<input type="checkbox"/>	O&M Specifications		
Other comments:	⌘				

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

8.2.17 Radio Link Setup

8.2.17.1 General

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

8.2.17.2 Successful Operation

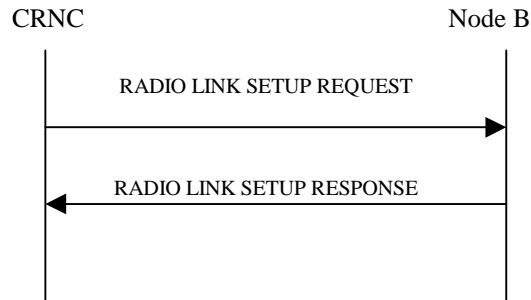


Figure 24: Radio Link Setup procedure: Successful Operation

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

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

[FDD – The RL Setup procedure can be used to setup one or more radio links. The procedure shall include the establishment of one or more DCHs on all radio links, and in addition, it can include the establishment of one or more DSCHs on one radio link.]

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

[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 Node B shall use a TPC pattern of $n \cdot "01" + "1"$ 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 parameter n shall be set equal to the value received in the *DL TPC pattern 01 count* IE in the Cell Setup procedure. The TPC pattern shall continuously be repeated but shall be restarted at the beginning of every frame with $CFN \bmod 4 = 0$. For all other RLs, the Node B 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 the first RL in the message) whether the Node B shall combine the concerned RL or not. If the *Diversity Control Field* IE indicates, "may be combined with already existing RLs", then Node B shall decide for either of the alternatives. If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL. Diversity combining is applied to Dedicated Transport Channels (DCH), i.e. it is not applied to the DSCHs. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.]

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

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

If the RADIO LINK SETUP REQUEST message includes a *DCH Info* IE with multiple *DCH Specific Info* IEs then, the Node B shall treat the DCHs in the *DCH Info* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.

[FDD – 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 DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to “selected”, the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If the QE-Selector is set to “non-selected”, the Physical channel BER shall be used for the QE in the UL data frames, ref. [16].]

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

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

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

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

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

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

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

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

[FDD - The Node B shall start the DL transmission using the initial DL power specified in the message on each DL channelisation code of the RL until either UL synchronisation is achieved for the RLS or a DL POWER CONTROL REQUEST message is received. No inner loop power control or balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10], chapter 5.2.1.2) ~~with DPC MODE=0~~ and the power control procedure (see 8.3.7), but shall always be kept within the maximum and minimum limit specified in the RL SETUP REQUEST message.]

[TDD - The Node B shall start the DL transmission using the initial DL power specified in the message on each DL channelisation code and on each Time Slot of the RL until the UL synchronisation is achieved for the RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], chapter 4.2.3.3), but shall always be kept within the maximum and minimum limit specified in the RL SETUP REQUEST message.]

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

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

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

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

[FDD - If the *TFCI Signaling Mode* IE within the RADIO LINK SETUP message indicates that there shall be a hard split on the TFCI field but the *TFCI2 Bearer Information* IE is not included in the message then the Node B shall transmit the TFCI2 field with zero power.]

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

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

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

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the Node B shall immediately activate the indicated Transmission Gap Pattern Sequences. For each sequence the *TGCFN* refers to the latest passed CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the Node B shall behave as specified in subclause 8.3.12.]

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

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

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

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

If the RLs are successfully setup, the Node B shall start reception on the new RL(s) and respond with a RADIO LINK SETUP RESPONSE message.

[FDD - The Node B shall indicate with the *Diversity Indication* IE whether the RL is combined or not. In case of combining, only the *Reference RL ID* IE shall be included to indicate one of the existing RLs that the concerned RL is combined with. In case of not combining the Node B shall include in the RL SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

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

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

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

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

After sending of the RADIO LINK SETUP RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The Node B shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [16].

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity* IE, the Node B may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE.]

[FDD - Irrespective of SSDT activation, the Node B shall include in the RADIO LINK SETUP RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK SETUP REQUEST message requested SSDT activation and the RADIO LINK SETUP RESPONSE message indicates that the SSDT capability is supported for this RL, SSDT is activated in the Node B.]

[FDD –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].

8.2.17.3 Unsuccessful Operation

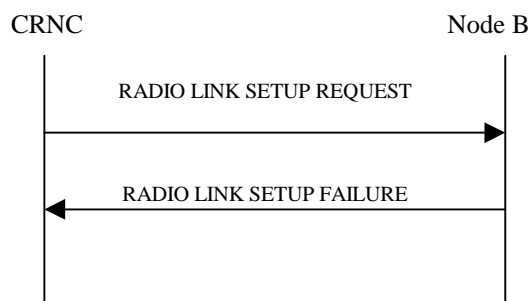


Figure 25: Radio Link Setup procedure: Unsuccessful Operation

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

[FDD - If some radio links were established successfully, the Node B shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.]

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

Typical cause values are as follows:

Radio Network Layer Cause

- RL Already Activated/allocated
- Combining not supported
- Combining Resources not available
- Requested Tx Diversity Mode not supported
- Invalid CM Settings
- Number of DL codes not supported
- UL SF not supported
- DL SF not supported
- Dedicated Transport Channel Type not supported

- Downlink Shared Channel Type not supported
- Uplink Shared Channel Type not supported
- CM not supported
- DPC mode change not supported

Transport Layer Cause

- Transport Resources Unavailable

Protocol Cause

- Semantic error

Miscellaneous Cause

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

8.2.17.4 Abnormal Conditions

-

9.1.36 RADIO LINK SETUP REQUEST

9.1.36.1 FDD message

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Discriminator	M		9.2.1.45		–	
Message Type	M		9.2.1.46		YES	reject
CRNC Communication Context ID	M		9.2.1.18	The reserved value "All CRNCC C" shall not be used.	YES	reject
Transaction ID	M		9.2.1.62		–	
UL DPCH Information		1			YES	reject
>UL Scrambling Code	M		9.2.2.59		–	
>Min UL Channelisation Code length	M		9.2.2.22		–	
>Max Number of UL DPDCHs	C – CodeLen		9.2.2.21		–	
>puncture Limit	M		9.2.1.50	For UL	–	
>TFCS	M		9.2.1.58	for UL	–	
>UL DPCCH Slot Format	M		9.2.2.57		–	
> UL SIR Target	M		UL SIR 9.2.2.58		–	
>Diversity mode	M		9.2.2.9		–	
>SSDT cell ID Length	O		9.2.2.45		–	
>S Field Length	C-FBI		9.2.2.40		–	
>DPC mode	<u>Q</u>		<u>9.2.2.13AA</u>		<u>YES</u>	<u>reject</u>
DL DPCH Information		1			YES	reject
>TFCS	M		9.2.1.58	For DL	–	
>DL DPCH Slot Format	M		9.2.2.10		–	
>TFCI signalling mode	M		9.2.2.50		–	
>TFCI presence	C- SlotFormat		9.2.1.57		–	
>Multiplexing Position	M		9.2.2.23		–	
>PDSCH RL ID	C-DSCH		RL ID 9.2.1.53		–	
>PDSCH code mapping	C-DSCH		9.2.2.25		–	
>Power Offset Information		1			–	
>>PO1	M		Power Offset 9.2.2.29	Power offset for the TFCI bits	–	
>>PO2	M		Power Offset 9.2.2.29	Power offset for the TPC bits	–	
>>PO3	M		Power Offset 9.2.2.29	Power offset for the pilot bits	–	
>FDD TPC DL Step Size	M		9.2.2.16		–	
>Limited Power Increase	M		9.2.2.18A		–	
>Inner Loop DL PC Status	M		9.2.2.18B		–	
DCH Information	M		DCH FDD Information 9.2.2.4D		YES	reject
DSCH Information	O		DSCH FDD Information 9.2.2.13B		YES	reject
TFCI2 bearer information		0..1			-	

>ToAWS	M		9.2.1.61		-	
>ToAWE	M		9.2.1.60		-	
RL Information		1 to <maxnoof RLs>			EACH	notify
>RL ID	M		9.2.1.53		-	
>C-ID	M		9.2.1.9		-	
>First RLS Indicator	M		9.2.2.16A		-	
>Frame Offset	M		9.2.1.31		-	
>Chip Offset	M		9.2.2.2		-	
>Propagation Delay	O		9.2.2.35		-	
>Diversity Control Field	C – NotFirstRL		9.2.1.25		-	
>DL Code Information	M		FDD DL Code Information 9.2.2.14A		-	
>Initial DL transmission Power	M		DL Power 9.2.1.21		-	
>Maximum DL power	M		DL Power 9.2.1.21		-	
>Minimum DL power	M		DL Power 9.2.1.21		-	
>SSDT Cell Identity	O		9.2.2.44		-	
>Transmit Diversity Indicator	C – Diversity mode		9.2.2.53		-	
Transmission Gap Pattern Sequence Information	O		9.2.2.53A		YES	reject
Active Pattern Sequence Information	O		9.2.2.A		YES	reject

9.2.1.6 Cause

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE <i>Cause group</i>				
> <i>Radio Network Layer</i>				
>Radio Network Layer Cause	M		Enumerated (unknown C-ID, Cell not available, Power level not supported, DL radio resources not available, UL radio resources not available, RL Already Activated/allocated, Node B Resources Unavailable, Measurement not supported for the object, Combining Resources not available, Requested configuration not supported, Synchronization failure, Priority transport channel established, SIB Origination in Node B not Supported, Requested Tx Diversity Mode not supported, Unspecified, BCCH scheduling error, Measurement Temporarily not Available, Invalid CM Setting, Reconfiguration CFN not elapsed, Number of DL codes not supported, S-CPICH not supported, Combining not supported, UL SF not supported, DL SF not supported, Common Transport Channel Type not supported, Dedicated Transport Channel Type not supported, Downlink Shared Channel Type not supported, Uplink Shared Channel Type not supported, CM not supported, Tx diversity no longer supported, Unknown Local Cell ID, DPC Mode Change not Supported)	
> <i>Transport Layer</i>				
>Transport Layer Cause	M		Enumerated (Transport resource unavailable, Unspecified, ...)	
> <i>Protocol</i>				
>Protocol Cause			Enumerated (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), ...)	
>Misc				
>Miscellaneous Cause	M		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
BCCH scheduling error	The Node B has detected an illegal BCCH schedule update (see 8.2.16.3)
Cell not Available,	The concerning cell or local cell is not available
Combining not supported	The Node B does not support RL combining for the concerning cells
Combining Resources Not Available	The value of the received <i>Diversity Control Field</i> IE was set to 'Must', but the Node B cannot perform the requested combining
CM not supported	The concerning cell(s) do not support Compressed Mode
Common Transport Channel Type not supported	The concerning cell(s) do not support the RACH and/or FACH and/or CPCH Common Transport Channel Type
Dedicated Transport Channel Type not supported	The concerning cell(s) do not support the Dedicated Transport Channel Type
DL Radio Resources not Available	The Node B 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 supported	The concerning cell(s) do not support the Downlink Shared Channel Type
<u>DPC Mode Change not Supported</u>	<u>The concerning cells do not support DPC mode changes</u>
Invalid CM Settings	The concerning cell(s) consider the requested Compressed Mode settings invalid
Measurement not Supported For The Object	At least one of the concerning cell(s) does not support the requested measurement on the concerning object type
Measurement Temporarily not Available	The Node B can temporarily not provide the requested measurement value
Node B resources unavailable	The Node B does not have sufficient resources available
Number of DL codes not supported	The concerning cell(s) do not support the requested number of DL codes
Power Level not Supported	A DL power level was requested which the concerning cell(s) do not support
Priority transport channel established	The CRNC cannot perform the requested blocking since a transport channel with a high priority is present
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
Requested Configuration not Supported	The concerning cell(s) do not support the requested configuration i.e. power levels, Transport Formats, physical channel parameters,.....
Requested Tx Diversity mode not supported	The concerning cell(s) do not support the requested transmit diversity mode
RL already Activated/ allocated	The Node B has already allocated an RL with the requested RL-id for this UE context
S-CPICH not supported	The concerning cell(s) do not support S-CPICH
SIB origination in Node B not supported	The Node B does not support the origination of the requested SIB for the concerning cell
Synchronisation Failure	Loss of UL Uu synchronisation

Tx diversity no longer supported	Tx diversity can no longer be supported in the concerning cell.
UL Radio Resources not Available	The Node B does not have sufficient UL radio resources available
UL SF not supported	The concerning cell(s) do not support the requested UL SF
UL Shared Channel Type not supported	The concerning cell(s) do not support the Uplink Shared Channel Type
Unknown C-ID	The Node B is not aware of a cell with the provided C-ID
Unknown Local Cell ID	The Node B is not aware of a local cell with the provided Local Cell ID
Unspecified	Sent when none of the above cause values applies but still the cause is Radio Network layer related

9.2.2.13 DL Scrambling Code

DL scrambling code to be used by the RL. One cell may have multiple DL scrambling codes available.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL Scrambling Code			INTEGER (0..15)	0= Primary scrambling code of the cell 1...15= Secondary scrambling code

9.2.2.13A DL TPC pattern 01 count

The *DL TPC pattern 01 count* IE contains the value of the parameter n, which is used for determining the DL TPC pattern on Radio Links marked with “first RLS” by the *First RLS indicator* IE before UL synchronisation is achieved.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL TPC pattern 01 count			INTEGER(0..30,...)	

9.2.2.13AA DPC Mode

The *DPC Mode* IE indicates the DPC mode to be applied [10].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DPC Mode			ENUMERATED (Mode0, Mode1, ...)	Mode0: The Node B shall estimate the UE transmitted TPC command and update the DL power in every slot Mode1: The Node B shall estimate the UE transmitted TPC command over three slots and shall update the DL power in every three slots

9.2.2.13B DSCH FDD Information

The *DSCH FDD Information* IE provides information for DSCHs to be established.

IE/Group Name	Presence	Range	IE type and reference	Semantics descriptions	Criticality	Assigned Criticality
DSCH FDD Information		1 to <maxnoof DSCHs>			–	
>DSCH ID	M		9.2.1.27		–	
>Transport Format Set	M		9.2.1.59	For DSCH	–	
>Allocation/Retention Priority	M		9.2.1.1A		–	
>Frame Handling Priority	M		9.2.1.30		–	
>ToAWS	M		9.2.1.61		–	
>ToAWE	M		9.2.1.60		–	

Range bound	Explanation
MaxnoofDSCHs	Maximum number of DSCHs for one UE.

9.3.3 PDU Definitions

```

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
  Active-Pattern-Sequence-Information,
  AddorDeleteIndicator,
  AICH-Power,
  AICH-TransmissionTiming,
  AllocationRetentionPriority,
  APPreambleSignature,
  APSubChannelNumber,
  AvailabilityStatus,
  BCCH-ModificationTime,
  BindingID,
  BlockingPriorityIndicator,
  BlockSTTD-Indicator,
  Cause,
  CCTrCH-ID,
  CDSubChannelNumbers,
  CellParameterID,
  CFN,
  Channel-Assignment-Indication,
  ChipOffset,
  C-ID,
  Closedlooptimingadjustmentmode,
  CommonChannelsCapacityConsumptionLaw,
  Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD,
  CommonMeasurementType,
  CommonMeasurementValue,
  CommonMeasurementValueInformation,
  CommonPhysicalChannelID,
  Common-PhysicalChannel-Status-Information,

```

Common-TransportChannel-Status-Information,
CommonTransportChannelID,
CommonTransportChannel-InformationResponse,
CommunicationControlPortID,
ConfigurationGenerationID,
ConstantValue,
CriticalityDiagnostics,
CPCH-Allowed-Total-Rate,
CPCHScramblingCodeNumber,
CPCH-UL-DPCCH-SlotFormat,
CRNC-CommunicationContextID,
DCH-FDD-Information,
DCH-InformationResponse,
DCH-ID,
FDD-DCHs-to-Modify,
TDD-DCHs-to-Modify,
DCH-TDD-Information,
DedicatedChannelsCapacityConsumptionLaw,
DedicatedMeasurementType,
DedicatedMeasurementValue,
DedicatedMeasurementValueInformation,
DiversityControlField,
DiversityMode,
DL-DPCH-SlotFormat,
DL-or-Global-CapacityCredit,
DL-Power,
DLPowerAveragingWindowSize,
DL-ScramblingCode,
DL-TimeslotISCP,
DL-Timeslot-Information,
DL-TimeslotISCPInfo,
DL-TPC-Pattern01Count,
DPC-Mode,
DPCH-ID,
DSCH-ID,
DSCH-FDD-Information,
DSCH-InformationResponse,
DSCH-TDD-Information,
End-Of-Audit-Sequence-Indicator,
FDD-DL-ChannelisationCodeNumber,
FDD-DL-CodeInformation,
FDD-S-CCPCH-Offset,
FDD-TPC-DownlinkStepSize,
FirstRLS-Indicator,
FNReportingIndicator,
FrameHandlingPriority,
FrameOffset,
IB-OC-ID,
IB-SG-DATA,
IB-SG-POS,
IB-SG-REP,
IB-Type,
IndicationType,

InnerLoopDLPCStatus,
LimitedPowerIncrease,
Local-Cell-ID,
MaximumDL-PowerCapability,
MaximumTransmissionPower,
Max-Number-of-PCPCHes,
MaxNrOfUL-DPDCHs,
MaxPRACH-MidambleShifts,
MeasurementFilterCoefficient,
MeasurementID,
MidambleShiftAndBurstType,
MinimumDL-PowerCapability,
MinSpreadingFactor,
MinUL-ChannelisationCodeLength,
MultiplexingPosition,
NEOT,
NFmax,
N-INSYNC-IND,
N-OUTSYNC-IND,
NodeB-CommunicationContextID,
NStartMessage,
PagingIndicatorLength,
PayloadCRC-PresenceIndicator,
PCCPCH-Power,
PCP-Length,
PDSCH-CodeMapping,
PDSCHSet-ID,
PDSCH-ID,
PICH-Mode,
PICH-Power,
PowerAdjustmentType,
PowerOffset,
PowerRaiseLimit,
PRACH-Midamble,
PreambleSignatures,
PreambleThreshold,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
SCH-TimeSlot,
PunctureLimit,
PUSCHSet-ID,
PUSCH-ID,
QE-Selector,
RACH-SlotFormat,
RACH-SubChannelNumbers,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
ResourceOperationalState,
RL-Set-ID,
RL-ID,
Received-total-wide-band-power-Value,

AdjustmentPeriod,
ScaledAdjustmentRatio,
MaxAdjustmentStep,
ScramblingCodeNumber,
SecondaryCCPCH-SlotFormat,
Segment-Type,
S-FieldLength,
SFN,
ShutdownTimer,
SIB-Originator,
SSDT-Cell-Identity,
SSDT-CellID-Length,
SSDT-Indication,
Start-Of-Audit-Sequence-Indicator,
STTD-Indicator,
SSDT-SupportIndicator,
SyncCase,
T-Cell,
T-RLFFAILURE,
TDD-ChannelisationCode,
TDD-DPCHOffset,
TDD-TPC-DownlinkStepSize,
TDD-PhysicalChannelOffset,
TFCI2-BearerInformationResponse,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TFCS,
TimeSlot,
TimeSlotDirection,
TimeSlotStatus,
TimingAdvanceApplied,
ToAWE,
ToAWS,
TransmissionDiversityApplied,
TransmitDiversityIndicator,
TransmissionGapPatternSequenceCodeInformation,
Transmission-Gap-Pattern-Sequence-Information,
TransportBearerRequestIndicator,
TransportFormatSet,
TransportLayerAddress,
TSTD-Indicator,
UARFCN,
USCH-Information,
USCH-InformationResponse,
UL-CapacityCredit,
UL-DPCCH-SlotFormat,
UL-SIR,
UL-FP-Mode,
UL-PhysCH-SF-Variation,
UL-ScramblingCode,
UL-Timeslot-Information,

```
UL-TimeSlot-ISCP-Info,
UL-TimeslotISCP-Value,
UL-TimeslotISCP-Value-IncrDecrThres,
USCH-ID
FROM NBAP-IEs

PrivateIE-Container{},
ProtocolExtensionContainer{},
ProtocolIE-Container{},
ProtocolIE-Single-Container{},
ProtocolIE-ContainerList{},
NBAP-PRIVATE-IES,
NBAP-PROTOCOL-IES,
NBAP-PROTOCOL-EXTENSION
FROM NBAP-Containers

id-Active-Pattern-Sequence-Information,
id-AdjustmentRatio,
id-AICH-Information,
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD,
id-AP-AICH-Information,
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD,
id-BCH-Information,
id-BCCH-ModificationTime,
id-BlockingPriorityIndicator,
id-Cause,
id-CauseLevel-PSCH-ReconfFailureTDD,
id-CauseLevel-RL-AdditionFailureFDD,
id-CauseLevel-RL-AdditionFailureTDD,
id-CauseLevel-RL-ReconfFailure,
id-CauseLevel-RL-SetupFailureFDD,
id-CauseLevel-RL-SetupFailureTDD,
id-CCP-InformationItem-AuditRsp,
id-CCP-InformationList-AuditRsp,
id-CCP-InformationItem-ResourceStatusInd,
id-CDCA-ICH-Information,
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD,
id-Cell-InformationItem-AuditRsp,
id-Cell-InformationItem-ResourceStatusInd,
id-Cell-InformationList-AuditRsp,
id-CellParameterID,
id-CFN,
id-CFNReportingIndicator,
id-C-ID,
id-Closed-Loop-Timing-Adjustment-Mode,
id-CommonMeasurementObjectType-CM-Rprt,
id-CommonMeasurementObjectType-CM-Rqst,
id-CommonMeasurementObjectType-CM-Rsp,
id-CommonMeasurementType,
id-CommonPhysicalChannelID,
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD,
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD,
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD,
```

id-CommonTransportChannelType-CTCH-ReconfRqstTDD,
id-CommunicationContextInfoItem-Reset,
id-CommunicationControlPortID,
id-CommunicationControlPortInfoItem-Reset,
id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD,
id-ConfigurationGenerationID,
id-CPCH-Information,
id-CPCH-Parameters-CTCH-SetupRsp,
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD,
id-CRNC-CommunicationContextID,
id-CriticalityDiagnostics,
id-DCHs-to-Add-FDD,
id-DCHs-to-Add-TDD,
id-DCH-AddList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfPrepFDD,
id-DCH-DeleteList-RL-ReconfPrepTDD,
id-DCH-DeleteList-RL-ReconfRqstFDD,
id-DCH-DeleteList-RL-ReconfRqstTDD,
id-DCH-FDD-Information,
id-DCH-TDD-Information,
id-DCH-InformationResponse,
id-FDD-DCHs-to-Modify,
id-TDD-DCHs-to-Modify,
id-DedicatedMeasurementObjectType-DM-Rprt,
id-DedicatedMeasurementObjectType-DM-Rqst,
id-DedicatedMeasurementObjectType-DM-Rsp,
id-DedicatedMeasurementType,
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD,
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD,
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD,
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
id-DL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD,
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD,
id-DL-DPCH-InformationList-RL-SetupRqstTDD,
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,
id-DL-DPCH-Information-RL-ReconfPrepFDD,
id-DL-DPCH-Information-RL-ReconfRqstFDD,
id-DL-DPCH-Information-RL-SetupRqstFDD,
id-DL-ReferencePowerInformationItem-DL-PC-Rqst,
id-DLReferencePower,
id-DLReferencePowerList-DL-PC-Rqst,
id-DL-TPC-Pattern01Count,
id-DPC-Mode,
id-DPCHConstant,

id-DSCH-AddItem-RL-ReconfPrepFDD,
id-DSCH-AddItem-RL-ReconfRqstFDD,
id-DSCHs-to-Add-FDD,
id-DSCH-DeleteItem-RL-ReconfPrepFDD,
id-DSCH-DeleteItem-RL-ReconfRqstFDD,
id-DSCH-DeleteList-RL-ReconfPrepFDD,
id-DSCH-ID,
id-DSCHs-to-Add-TDD,
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD,
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD,
id-DSCH-InformationResponse,
id-DSCH-FDD-Information,
id-DSCH-TDD-Information,
id-DSCH-ModifyItem-RL-ReconfPrepFDD,
id-DSCH-ModifyItem-RL-ReconfRqstFDD,
id-DSCH-ModifyList-RL-ReconfPrepFDD,
id-End-Of-Audit-Sequence-Indicator,
id-FACH-Information,
id-FACHItem-CTCH-SetupRsp,
id-FACH-ParametersList-CTCH-ReconfRqstTDD,
id-FACH-ParametersList-CTCH-SetupRsp,
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD,
id-FACH-ParametersListIE-CTCH-SetupRqstFDD,
id-FACH-ParametersListIE-CTCH-SetupRqstTDD,
id-IndicationType-ResourceStatusInd,
id-InnerLoopDLPCStatus,
id-Limited-power-increase-information-Cell-SetupRqstFDD,
id-Local-Cell-ID,
id-Local-Cell-Group-InformationItem-AuditRsp,
id-Local-Cell-Group-InformationItem-ResourceStatusInd,
id-Local-Cell-Group-InformationItem2-ResourceStatusInd,
id-Local-Cell-Group-InformationList-AuditRsp,
id-Local-Cell-InformationItem-AuditRsp,
id-Local-Cell-InformationItem-ResourceStatusInd,
id-Local-Cell-InformationItem2-ResourceStatusInd,
id-Local-Cell-InformationList-AuditRsp,
id-AdjustmentPeriod,
id-MaxAdjustmentStep,
id-MaximumTransmissionPower,
id-MeasurementFilterCoefficient,
id-MeasurementID,
id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst,
id-NodeB-CommunicationContextID,
id-P-CCPCH-Information,
id-P-CPICH-Information,
id-P-SCH-Information,
id-PCCPCH-Information-Cell-ReconfRqstTDD,
id-PCCPCH-Information-Cell-SetupRqstTDD,
id-PCH-Parameters-CTCH-ReconfRqstTDD,
id-PCH-Parameters-CTCH-SetupRsp,
id-PCH-ParametersItem-CTCH-ReconfRqstFDD,
id-PCH-ParametersItem-CTCH-SetupRqstFDD,
id-PCH-ParametersItem-CTCH-SetupRqstTDD,

id-PCH-Information,
id-PCPCH-Information,
id-PCPCH-ParametersList-CTCH-ReconfRqstFDD,
id-PICH-ParametersItem-CTCH-ReconfRqstFDD,
id-PD,
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst,
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst,
id-PDSCHSets-AddList-PSCH-ReconfRqst,
id-PDSCHSets-DeleteList-PSCH-ReconfRqst,
id-PDSCHSets-ModifyList-PSCH-ReconfRqst,
id-PICH-Information,
id-PICH-Parameters-CTCH-ReconfRqstTDD,
id-PICH-ParametersItem-CTCH-SetupRqstTDD,
id-PowerAdjustmentType,
id-PRACH-Information,
id-PRACHConstant,
id-PRACH-ParametersItem-CTCH-SetupRqstTDD,
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD,
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD,
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD,
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD,
id-PrimaryCPICH-Information-Cell-SetupRqstFDD,
id-PrimarySCH-Information-Cell-ReconfRqstFDD,
id-PrimarySCH-Information-Cell-SetupRqstFDD,
id-PrimaryScramblingCode,
id-ProcedureScopeType-DL-PC-Rqst,
id-SCH-Information-Cell-ReconfRqstTDD,
id-SCH-Information-Cell-SetupRqstTDD,
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst,
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst,
id-PUSCHConstant,
id-PUSCHSets-AddList-PSCH-ReconfRqst,
id-PUSCHSets-DeleteList-PSCH-ReconfRqst,
id-PUSCHSets-ModifyList-PSCH-ReconfRqst,
id-RACH-Information,
id-RACHItem-CTCH-SetupRsp,
id-RACH-Parameters-CTCH-SetupRsp,
id-RACH-ParametersItem-CTCH-SetupRqstFDD,
id-RACH-ParameterItem-CTCH-SetupRqstTDD,
id-ReportCharacteristics,
id-Reporting-Object-RL-FailureInd,
id-Reporting-Object-RL-RestoreInd,
id-ResetIndicator,
id-RL-ID,
id-RL-InformationItem-DM-Rprt,
id-RL-InformationItem-DM-Rqst,
id-RL-InformationItem-DM-Rsp,
id-RL-InformationItem-RL-AdditionRqstFDD,
id-RL-informationItem-RL-DeletionRqst,
id-RL-InformationItem-RL-FailureInd,
id-RL-InformationItem-RL-PreemptRequiredInd,
id-RL-InformationItem-RL-ReconfPrepFDD,
id-RL-InformationItem-RL-ReconfRqstFDD,

id-RL-InformationItem-RL-RestoreInd,
id-RL-InformationItem-RL-SetupRqstFDD,
id-RL-InformationList-RL-AdditionRqstFDD,
id-RL-informationList-RL-DeletionRqst,
id-RL-InformationList-RL-PreemptRequiredInd,
id-RL-InformationList-RL-ReconfPrepFDD,
id-RL-InformationList-RL-ReconfRqstFDD,
id-RL-InformationList-RL-SetupRqstFDD,
id-RL-InformationResponseItem-RL-AdditionRspFDD,
id-RL-InformationResponseItem-RL-ReconfReady,
id-RL-InformationResponseItem-RL-ReconfRsp,
id-RL-InformationResponseItem-RL-SetupRspFDD,
id-RL-InformationResponseList-RL-AdditionRspFDD,
id-RL-InformationResponseList-RL-ReconfReady,
id-RL-InformationResponseList-RL-ReconfRsp,
id-RL-InformationResponseList-RL-SetupRspFDD,
id-RL-InformationResponse-RL-AdditionRspTDD,
id-RL-InformationResponse-RL-SetupRspTDD,
id-RL-Information-RL-AdditionRqstTDD,
id-RL-Information-RL-ReconfRqstTDD,
id-RL-Information-RL-ReconfPrepTDD,
id-RL-Information-RL-SetupRqstTDD,
id-RL-ReconfigurationFailureItem-RL-ReconfFailure,
id-RL-Set-InformationItem-DM-Rprt,
id-RL-Set-InformationItem-DM-Rsp,
id-RL-Set-InformationItem-RL-FailureInd,
id-RL-Set-InformationItem-RL-RestoreInd,
id-S-CCPCH-Information,
id-S-CPICH-Information,
id-SCH-Information,
id-S-SCH-Information,
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD,
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD,
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD,
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD,
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD,
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD,
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD,
id-SecondarySCH-Information-Cell-ReconfRqstFDD,
id-SecondarySCH-Information-Cell-SetupRqstFDD,
id-SegmentInformationListIE-SystemInfoUpdate,
id-SFN,
id-SFNReportingIndicator,
id-ShutdownTimer,
id-Start-Of-Audit-Sequence-Indicator,
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD,
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD,
id-Successful-RL-InformationRespList-RL-AdditionFailureFDD,
id-Successful-RL-InformationRespList-RL-SetupFailureFDD,
id-Synchronisation-Configuration-Cell-ReconfRqst,
id-Synchronisation-Configuration-Cell-SetupRqst,
id-SyncCase,
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH,

id-T-Cell,
id-TFCI2-Bearer-Information-RL-SetupRqstFDD,
id-TFCI2-BearerInformationResponse,
id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD,
id-Transmission-Gap-Pattern-Sequence-Information,
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD,
id-TimeSlotConfigurationList-Cell-SetupRqstTDD,
id-TimeslotISCPInfoList-DL-PC-RqstTDD,
id-TimingAdvanceApplied,
id-TransmissionDiversityApplied,
id-UARFCNforNt,
id-UARFCNforNd,
id-UARFCNforNu,
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD,
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD,
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD,
id-UL-DPCH-InformationList-RL-SetupRqstTDD,
id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,
id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,
id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,
id-UL-DPCH-Information-RL-ReconfPrepFDD,
id-UL-DPCH-Information-RL-ReconfRqstFDD,
id-UL-DPCH-Information-RL-SetupRqstFDD,
id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD,
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD,
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD,
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD,
id-Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD,
id-Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD,
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD,
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD,
id-USCH-Information-Add,
id-USCH-Information-AddList-RL-ReconfRqstTDD,
id-USCH-Information-DeleteList-RL-ReconfPrepTDD,
id-USCH-Information-DeleteList-RL-ReconfRqstTDD,
id-USCH-Information-ModifyList-RL-ReconfPrepTDD,
id-USCH-Information-ModifyList-RL-ReconfRqstTDD,
id-USCH-InformationResponse,
id-USCH-Information,

maxNrOfCCTrCHs,
maxNrOfCodes,
maxNrOfCPCHs,
maxNrOfDCHs,


```
maxNrOfDLCodes,  
maxNrOfDLTSs,  
maxNrOfDPCHs,  
maxNrOfDSCHs,  
maxNrOfFACHs,  
maxNrOfRLs,  
maxNrOfRLSets,  
maxNrOfPCPCHs,  
maxNrOfPDSCHs,  
maxNrOfPUSCHs,  
maxNrOfPDSCHSets,  
maxNrOfPUSCHSets,  
maxNrOfSCCPCHs,  
maxNrOfULTSs,  
maxNrOfUSCHs,  
maxAPSigNum,  
maxCPCHCell,  
maxFACHCell,  
maxNoofLen,  
maxRACHCell,  
maxPCPCHCell,  
maxPRACHCell,  
maxSCCPCHCell,  
maxSCPICHCell,  
maxCellinNodeB,  
maxCCPinNodeB,  
maxCommunicationContext,  
maxLocalCellinNodeB,  
maxNrOfSlotFormatsPRACH,  
maxIB,  
maxIBSEG  
FROM NBAP-Constants;
```

***** Partly omitted *****

```

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

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

RadioLinkSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY reject          TYPE CRNC-CommunicationContextID          PRESENCE
      mandatory }|
    { ID id-UL-DPCH-Information-RL-SetupRqstFDD  CRITICALITY reject          TYPE UL-DPCH-Information-RL-SetupRqstFDD  PRESENCE
      mandatory }|
    { ID id-DL-DPCH-Information-RL-SetupRqstFDD  CRITICALITY reject          TYPE DL-DPCH-Information-RL-SetupRqstFDD  PRESENCE
      mandatory }|
    { ID id-DCH-FDD-Information          CRITICALITY reject          TYPE DCH-FDD-Information          PRESENCE mandatory }|
    { ID id-DSCH-FDD-Information          CRITICALITY reject          TYPE DSCH-FDD-Information          PRESENCE optional }|
    { ID id-TFCI2-Bearer-Information-RL-SetupRqstFDD  CRITICALITY ignore          TYPE TFCI2-Bearer-Information-RL-SetupRqstFDD  PRESENCE
      optional }|
    { ID id-RL-InformationList-RL-SetupRqstFDD  CRITICALITY notify          TYPE RL-InformationList-RL-SetupRqstFDD          PRESENCE
      mandatory }|
    { ID id-Transmission-Gap-Pattern-Sequence-Information  CRITICALITY reject          TYPE Transmission-Gap-Pattern-Sequence-Information
      PRESENCE optional }|
    { ID id-Active-Pattern-Sequence-Information  CRITICALITY reject          TYPE Active-Pattern-Sequence-Information  PRESENCE optional
    },
    ...
}

RadioLinkSetupRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPDCHs          MaxNrOfUL-DPDCHs          OPTIONAL,
    -- This IE is present only if "Min UL Channelisation Code length" equals to 4 --
    ul-PunctureLimit          PunctureLimit,
    tFCS                      TFCS,
    ul-DPCCH-SlotFormat        UL-DPCCH-SlotFormat,
    ul-SIR-Target              UL-SIR,
    diversityMode              DiversityMode,
    sSDT-CellID-Length         SSdT-CellID-Length          OPTIONAL,
    s-FieldLength              S-FieldLength          OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```
UL-DPCH-Information-RL-SetupRqtFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {  
  {ID id-DPC-Mode CRITICALITY reject EXTENSION DPC-Mode PRESENCE optional },  
  ...  
}
```

9.3.4 Information Elements Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfTFCs,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS,
    maxNrOfUSCHs,
    maxNrOfULTSs,
    maxNrOfDPCHs,
    maxNrOfCodes,
    maxNrOfDSCHs,
    maxNrOfDLTSs,
    maxNrOfDCHs

FROM NBAP-Constants

    Criticality,
    ProcedureID,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM NBAP-CommonDataTypes

    NBAP-PROTOCOL-IES,
    ProtocolExtensionContainer{},
    ProtocolIE-Single-Container{},
    NBAP-PROTOCOL-EXTENSION
```



```
AllocationRetentionPriority ::= SEQUENCE {
    priorityLevel          PriorityLevel,
    pre-emptionCapability  Pre-emptionCapability,
    pre-emptionVulnerability Pre-emptionVulnerability,
    iE-Extensions          ProtocolExtensionContainer { {AllocationRetentionPriority-ExtIEs} } OPTIONAL,
    ...
}

AllocationRetentionPriority-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

APPreambleSignature ::= INTEGER (0..15)

APSubChannelNumber ::= INTEGER (0..11)

AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
    off-duty,
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}

-- =====
-- B
-- =====

BCCH-ModificationTime ::= INTEGER (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed

BindingID ::= OCTET STRING (SIZE (1..4, ...))

BetaCD ::= INTEGER (0..15)

BlockingPriorityIndicator ::= ENUMERATED {
    high,
    normal,
    low,
    ...
}
-- High priority: Block resource immediately.
-- Normal priority: Block resource when idle or upon timer expiry.
-- Low priority: Block resource when idle.
```

```
BlockSTTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

-- =====
-- C
-- =====

Cause ::= CHOICE {
    radioNetwork          CauseRadioNetwork,
    transport             CauseTransport,
    protocol              CauseProtocol,
    misc                  CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    oam-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    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,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    rl-already-ActivatedOrAllocated,
    nodeB-Resources-unavailable,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    requested-configuration-not-supported,
    synchronisation-failure,
    priority-transport-channel-established,
    sIB-Origination-in-Node-B-not-Supported,
    requested-tx-diversity-mode-not-supported,
}
```

```
unspecified,  
bCCH-scheduling-error,  
measurement-temporarily-not-available,  
invalid-CM-settings,  
reconfiguration-CFN-not-elapsed,  
number-of-DL-codes-not-supported,  
s-cipch-not-supported,  
combining-not-supported,  
ul-sf-not-supported,  
dl-SF-not-supported,  
common-transport-channel-type-not-supported,  
dedicated-transport-channel-type-not-supported,  
downlink-shared-channel-type-not-supported,  
uplink-shared-channel-type-not-supported,  
cm-not-supported,  
tx-diversity-no-longer-supported,  
unknown-Local-Cell-ID,  
...  
dpc-mode-change-not-supported
```

***** Partly omitted *****


```

-- =====
-- D
-- =====

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

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

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

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

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

DCH-Specific-FDD-Item ::= SEQUENCE {
    dCH-ID                            DCH-ID,
    ul-TransportFormatSet             TransportFormatSet,
    dl-TransportFormatSet             TransportFormatSet,
    allocationRetentionPriority        AllocationRetentionPriority,
    frameHandlingPriority             FrameHandlingPriority,
    qE-Selector                       QE-Selector,
    iE-Extensions                     ProtocolExtensionContainer { { DCH-Specific-FDD-Item-ExtIEs} } OPTIONAL,
    ...
}

DCH-Specific-FDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

DCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

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

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

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

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

```
DCH-Specific-TDD-Item ::= SEQUENCE {
    dCH-ID                            DCH-ID,
    ul-CCTrCH-ID                      CCTrCH-ID,
    dl-CCTrCH-ID                      CCTrCH-ID,
    ul-TransportFormatSet             TransportFormatSet,
    dl-TransportFormatSet             TransportFormatSet,
    allocationRetentionPriority        AllocationRetentionPriority,
    frameHandlingPriority              FrameHandlingPriority OPTIONAL,
    qE-Selector                       QE-Selector OPTIONAL,
    -- This IE is present only if DCH is part of set of Coordinated DCHs
    iE-Extensions                     ProtocolExtensionContainer { { DCH-Specific-TDD-Item-ExtIEs } } OPTIONAL,
    ...
}
```

```
DCH-Specific-TDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

FDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF FDD-DCHs-to-ModifyItem

```
FDD-DCHs-to-ModifyItem ::= SEQUENCE {
    ul-FP-Mode                        UL-FP-Mode OPTIONAL,
    toAWS                             ToAWS OPTIONAL,
    toAWE                             ToAWE OPTIONAL,
    transportBearerRequestIndicator    TransportBearerRequestIndicator,
    dCH-SpecificInformationList       DCH-ModifySpecificInformation-TDD,
    iE-Extensions                     ProtocolExtensionContainer { { FDD-DCHs-to-ModifyItem-ExtIEs } } OPTIONAL,
    ...
}
```

```
FDD-DCHs-to-ModifyItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

DCH-ModifySpecificInformation-FDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-FDD

```

DCH-ModifySpecificItem-FDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    ul-TransportFormatSet TransportFormatSet OPTIONAL,
    dl-TransportFormatSet TransportFormatSet OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority  FrameHandlingPriority OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { DCH-ModifySpecificItem-FDD-ExtIEs } } OPTIONAL,
    ...
}

DCH-ModifySpecificItem-FDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TDD-DCHs-to-Modify ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-TDD

DCH-ModifyItem-TDD ::= SEQUENCE {
    ul-FP-Mode            UL-FP-Mode OPTIONAL,
    toAWS                 ToAWS OPTIONAL,
    toAWE                 ToAWE OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    dCH-SpecificInformationList DCH-ModifySpecificInformation-TDD,
    iE-Extensions         ProtocolExtensionContainer { { TDD-DCHs-to-ModifyItem-ExtIEs } } OPTIONAL,
    ...
}

TDD-DCHs-to-ModifyItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifySpecificInformation-TDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-TDD

DCH-ModifySpecificItem-TDD ::= 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,
    iE-Extensions         ProtocolExtensionContainer { { DCH-ModifySpecificItem-TDD-ExtIEs } } OPTIONAL,
    ...
}

DCH-ModifySpecificItem-TDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
SEQUENCE {
    dl-Cost-RLS          INTEGER (0..65535),

```

```

dl-Cost-RL          INTEGER (0..65535),
ul-Cost-RLS        INTEGER (0..65535),
ul-Cost-RL         INTEGER (0..65535),
iE-Extensions      ProtocolExtensionContainer { { DedicatedChannelsCapacityConsumptionLaw-ExtIEs } } OPTIONAL,
...
}

DedicatedChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

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               RSCP-Value,
rxTimingDeviationValue Rx-Timing-Deviation-Value,
roundTripTime      Round-Trip-Time-Value,
...
}

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

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

DedicatedMeasurementAvailableItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

```

```
DedicatedMeasurementnotAvailable ::= NULL

Detected-PCPCH-access-preambles ::= INTEGER (0..240,...)

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

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

DiversityMode ::= ENUMERATED {
    none,
    sTTD,
    closed-loop-mode1,
    closed-loop-mode2,
    ...
}

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

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

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

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

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

DL-or-Global-CapacityCredit ::= INTEGER (0..65535)

DL-Power ::= INTEGER (-350..150)
-- DL-Power = power * 10
-- If Power <=-35 DL-Power shall be set to -350
-- if Power >=15 DL-Power shall be set to 150
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB
```

```

DLPowerAveragingWindowSize ::= INTEGER (1..60)

DL-ScramblingCode ::= INTEGER (0..15)
-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --

DL-TimeslotISCP ::= INTEGER (0..91)

DL-TimeslotISCPInfo ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-TimeslotISCPInfoItem

DL-TimeslotISCPInfoItem ::= SEQUENCE {
    timeslot                TimeSlot,
    dL-TimeslotISCP         DL-TimeslotISCP,
    iE-Extensions           ProtocolExtensionContainer { {DL-TimeslotISCPInfoItem-ExtIEs} }    OPTIONAL,
    ...
}

DL-TimeslotISCPInfoItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-TPC-Pattern01Count ::= INTEGER (0..30,...)

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

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

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

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

DSCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-InformationResponseItem

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

```

9.3.6 Constant Definitions

***** Partly omitted *****

```
-- *****
--
-- IEs
--
-- *****
```

id-AICH-Information	ProtocolIE-ID ::= 0
id-AICH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 1
id-BCH-Information	ProtocolIE-ID ::= 7
id-BCH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 8
id-BCCH-ModificationTime	ProtocolIE-ID ::= 9
id-BlockingPriorityIndicator	ProtocolIE-ID ::= 10
id-Cause	ProtocolIE-ID ::= 13
id-CCP-InformationItem-AuditRsp	ProtocolIE-ID ::= 14
id-CCP-InformationList-AuditRsp	ProtocolIE-ID ::= 15
id-CCP-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 16
id-Cell-InformationItem-AuditRsp	ProtocolIE-ID ::= 17
id-Cell-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 18
id-Cell-InformationList-AuditRsp	ProtocolIE-ID ::= 19
id-CellParameterID	ProtocolIE-ID ::= 23
id-CFN	ProtocolIE-ID ::= 24
id-C-ID	ProtocolIE-ID ::= 25
id-CommonMeasurementObjectType-CM-Rprt	ProtocolIE-ID ::= 31
id-CommonMeasurementObjectType-CM-Rqst	ProtocolIE-ID ::= 32
id-CommonMeasurementObjectType-CM-Rsp	ProtocolIE-ID ::= 33
id-CommonMeasurementType	ProtocolIE-ID ::= 34
id-CommonPhysicalChannelID	ProtocolIE-ID ::= 35
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 36
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 37
id-CommonTransportChannelType-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 38
id-CommunicationControlPortID	ProtocolIE-ID ::= 40
id-ConfigurationGenerationID	ProtocolIE-ID ::= 43
id-CRNC-CommunicationContextID	ProtocolIE-ID ::= 44
id-CriticalityDiagnostics	ProtocolIE-ID ::= 45
id-DCHs-to-Add-FDD	ProtocolIE-ID ::= 48
id-DCH-AddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 49
id-DCHs-to-Add-TDD	ProtocolIE-ID ::= 50
id-DCH-DeleteList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 52
id-DCH-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 53
id-DCH-DeleteList-RL-ReconfRqstFDD	ProtocolIE-ID ::= 54

id-DCH-DeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 55
id-DCH-FDD-Information	ProtocolIE-ID ::= 56
id-DCH-TDD-Information	ProtocolIE-ID ::= 57
id-DCH-InformationResponse	ProtocolIE-ID ::= 59
id-FDD-DCHs-to-Modify	ProtocolIE-ID ::= 62
id-TDD-DCHs-to-Modify	ProtocolIE-ID ::= 63
id-DCH-ModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 65
id-DedicatedMeasurementObjectType-DM-Rprt	ProtocolIE-ID ::= 67
id-DedicatedMeasurementObjectType-DM-Rqst	ProtocolIE-ID ::= 68
id-DedicatedMeasurementObjectType-DM-Rsp	ProtocolIE-ID ::= 69
id-DedicatedMeasurementType	ProtocolIE-ID ::= 70
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 72
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD	ProtocolIE-ID ::= 73
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 76
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD	ProtocolIE-ID ::= 77
id-DL-DPCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 79
id-DL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 81
id-DL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 82
id-DL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 83
id-DL-ReferencePowerInformationItem-DL-PC-Rqst	ProtocolIE-ID ::= 84
id-DLReferencePower	ProtocolIE-ID ::= 85
id-DLReferencePowerList-DL-PC-Rqst	ProtocolIE-ID ::= 86
id-DSCH-AddItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 87
id-DSCH-AddItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 88
id-DSCHs-to-Add-FDD	ProtocolIE-ID ::= 89
id-DSCH-DeleteItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 91
id-DSCH-DeleteItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 92
id-DSCH-DeleteList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 93
id-DSCH-ID	ProtocolIE-ID ::= 95
id-DSCHs-to-Add-TDD	ProtocolIE-ID ::= 96
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 98
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 100
id-DSCH-InformationResponse	ProtocolIE-ID ::= 105
id-DSCH-FDD-Information	ProtocolIE-ID ::= 106
id-DSCH-TDD-Information	ProtocolIE-ID ::= 107
id-DSCH-ModifyItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 108
id-DSCH-ModifyItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 109
id-DSCH-ModifyList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 112
id-End-Of-Audit-Sequence-Indicator	ProtocolIE-ID ::= 113
id-FACH-Information	ProtocolIE-ID ::= 116
id-FACH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 117
id-FACHItem-CTCH-SetupRsp	ProtocolIE-ID ::= 118
id-FACH-ParametersList-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 120
id-FACH-ParametersListIE-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 121
id-FACH-ParametersListIE-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 122
id-IndicationType-ResourceStatusInd	ProtocolIE-ID ::= 123
id-Local-Cell-ID	ProtocolIE-ID ::= 124
id-Local-Cell-Group-InformationItem-AuditRsp	ProtocolIE-ID ::= 2
id-Local-Cell-Group-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 3
id-Local-Cell-Group-InformationItem2-ResourceStatusInd	ProtocolIE-ID ::= 4
id-Local-Cell-Group-InformationList-AuditRsp	ProtocolIE-ID ::= 5
id-Local-Cell-InformationItem-AuditRsp	ProtocolIE-ID ::= 125
id-Local-Cell-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 126

id-Local-Cell-InformationItem2-ResourceStatusInd	ProtocolIE-ID ::= 127
id-Local-Cell-InformationList-AuditRsp	ProtocolIE-ID ::= 128
id-AdjustmentPeriod	ProtocolIE-ID ::= 129
id-MaxAdjustmentStep	ProtocolIE-ID ::= 130
id-MaximumTransmissionPower	ProtocolIE-ID ::= 131
id-MeasurementFilterCoefficient	ProtocolIE-ID ::= 132
id-MeasurementID	ProtocolIE-ID ::= 133
id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst	ProtocolIE-ID ::= 134
id-NodeB-CommunicationContextID	ProtocolIE-ID ::= 143
id-P-CCPCH-Information	ProtocolIE-ID ::= 144
id-P-CCPCH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 145
id-P-CPICH-Information	ProtocolIE-ID ::= 146
id-P-CPICH-InformationItem-ResourceStatusInd	ProtocolIE-ID ::= 147
id-P-SCH-Information	ProtocolIE-ID ::= 148
id-PCCPCH-Information-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 150
id-PCCPCH-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 151
id-PCH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 155
id-PCH-ParametersItem-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 156
id-PCH-ParametersItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 157
id-PCH-Information	ProtocolIE-ID ::= 158
id-PD	ProtocolIE-ID ::= 160
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 161
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 162
id-PDSCHSets-AddList-PSCH-ReconfRqst	ProtocolIE-ID ::= 163
id-PDSCHSets-DeleteList-PSCH-ReconfRqst	ProtocolIE-ID ::= 164
id-PDSCHSets-ModifyList-PSCH-ReconfRqst	ProtocolIE-ID ::= 165
id-PICH-Information	ProtocolIE-ID ::= 166
id-PICH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 168
id-PowerAdjustmentType	ProtocolIE-ID ::= 169
id-PRACH-Information	ProtocolIE-ID ::= 170
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 175
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 176
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 177
id-PrimaryCPICH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 178
id-PrimarySCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 179
id-PrimarySCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 180
id-PrimaryScramblingCode	ProtocolIE-ID ::= 181
id-ProcedureScopeType-DL-PC-Rqst	ProtocolIE-ID ::= 182
id-SCH-Information-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 183
id-SCH-Information-Cell-SetupRqstTDD	ProtocolIE-ID ::= 184
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 185
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst	ProtocolIE-ID ::= 186
id-PUSCHSets-AddList-PSCH-ReconfRqst	ProtocolIE-ID ::= 187
id-PUSCHSets-DeleteList-PSCH-ReconfRqst	ProtocolIE-ID ::= 188
id-PUSCHSets-ModifyList-PSCH-ReconfRqst	ProtocolIE-ID ::= 189
id-RACH-Information	ProtocolIE-ID ::= 190
id-RACHItem-CTCH-SetupRsp	ProtocolIE-ID ::= 192
id-RACH-ParametersItem-CTCH-SetupRqstFDD	ProtocolIE-ID ::= 196
id-RACH-ParameterItem-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 197
id-ReportCharacteristics	ProtocolIE-ID ::= 198
id-Reporting-Object-RL-FailureInd	ProtocolIE-ID ::= 199
id-Reporting-Object-RL-RestoreInd	ProtocolIE-ID ::= 200
id-RL-ID	ProtocolIE-ID ::= 201

id-RL-InformationItem-DM-Rprt	ProtocolIE-ID ::= 202
id-RL-InformationItem-DM-Rqst	ProtocolIE-ID ::= 203
id-RL-InformationItem-DM-Rsp	ProtocolIE-ID ::= 204
id-RL-InformationItem-RL-AdditionRqstFDD	ProtocolIE-ID ::= 205
id-RL-informationItem-RL-DeletionRqst	ProtocolIE-ID ::= 206
id-RL-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 207
id-RL-InformationItem-RL-PreemptRequiredInd	ProtocolIE-ID ::= 286
id-RL-InformationItem-RL-ReconfPrepFDD	ProtocolIE-ID ::= 208
id-RL-InformationItem-RL-ReconfRqstFDD	ProtocolIE-ID ::= 209
id-RL-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 210
id-RL-InformationItem-RL-SetupRqstFDD	ProtocolIE-ID ::= 211
id-RL-InformationList-RL-AdditionRqstFDD	ProtocolIE-ID ::= 212
id-RL-informationList-RL-DeletionRqst	ProtocolIE-ID ::= 213
id-RL-InformationList-RL-PreemptRequiredInd	ProtocolIE-ID ::= 237
id-RL-InformationList-RL-ReconfPrepFDD	ProtocolIE-ID ::= 214
id-RL-InformationList-RL-ReconfRqstFDD	ProtocolIE-ID ::= 215
id-RL-InformationList-RL-SetupRqstFDD	ProtocolIE-ID ::= 216
id-RL-InformationResponseItem-RL-AdditionRspFDD	ProtocolIE-ID ::= 217
id-RL-InformationResponseItem-RL-ReconfReady	ProtocolIE-ID ::= 218
id-RL-InformationResponseItem-RL-ReconfRsp	ProtocolIE-ID ::= 219
id-RL-InformationResponseItem-RL-SetupRspFDD	ProtocolIE-ID ::= 220
id-RL-InformationResponseList-RL-AdditionRspFDD	ProtocolIE-ID ::= 221
id-RL-InformationResponseList-RL-ReconfReady	ProtocolIE-ID ::= 222
id-RL-InformationResponseList-RL-ReconfRsp	ProtocolIE-ID ::= 223
id-RL-InformationResponseList-RL-SetupRspFDD	ProtocolIE-ID ::= 224
id-RL-InformationResponse-RL-AdditionRspTDD	ProtocolIE-ID ::= 225
id-RL-InformationResponse-RL-SetupRspTDD	ProtocolIE-ID ::= 226
id-RL-Information-RL-AdditionRqstTDD	ProtocolIE-ID ::= 227
id-RL-Information-RL-ReconfRqstTDD	ProtocolIE-ID ::= 228
id-RL-Information-RL-ReconfPrepTDD	ProtocolIE-ID ::= 229
id-RL-Information-RL-SetupRqstTDD	ProtocolIE-ID ::= 230
id-RL-ReconfigurationFailureItem-RL-ReconfFailure	ProtocolIE-ID ::= 236
id-RL-Set-InformationItem-DM-Rprt	ProtocolIE-ID ::= 238
id-RL-Set-InformationItem-DM-Rsp	ProtocolIE-ID ::= 240
id-RL-Set-InformationItem-RL-FailureInd	ProtocolIE-ID ::= 241
id-RL-Set-InformationItem-RL-RestoreInd	ProtocolIE-ID ::= 242
id-S-CCPCH-Information	ProtocolIE-ID ::= 247
id-S-CPICH-Information	ProtocolIE-ID ::= 249
id-SCH-Information	ProtocolIE-ID ::= 251
id-S-SCH-Information	ProtocolIE-ID ::= 253
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 257
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD	ProtocolIE-ID ::= 258
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD	ProtocolIE-ID ::= 259
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 260
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD	ProtocolIE-ID ::= 261
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 262
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD	ProtocolIE-ID ::= 263
id-SecondarySCH-Information-Cell-ReconfRqstFDD	ProtocolIE-ID ::= 264
id-SecondarySCH-Information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 265
id-SegmentInformationListIE-SystemInfoUpdate	ProtocolIE-ID ::= 266
id-SFN	ProtocolIE-ID ::= 268
id-ShutdownTimer	ProtocolIE-ID ::= 269
id-Start-Of-Audit-Sequence-Indicator	ProtocolIE-ID ::= 114

id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD	ProtocolIE-ID ::= 270
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD	ProtocolIE-ID ::= 271
id-Successful-RL-InformationRespList-RL-AdditionFailureFDD	ProtocolIE-ID ::= 272
id-Successful-RL-InformationRespList-RL-SetupFailureFDD	ProtocolIE-ID ::= 273
id-SyncCase	ProtocolIE-ID ::= 274
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH	ProtocolIE-ID ::= 275
id-T-Cell	ProtocolIE-ID ::= 276
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD	ProtocolIE-ID ::= 277
id-TimeSlotConfigurationList-Cell-SetupRqstTDD	ProtocolIE-ID ::= 278
id-TransmissionDiversityApplied	ProtocolIE-ID ::= 279
id-UARFCNforNt	ProtocolIE-ID ::= 280
id-UARFCNforNd	ProtocolIE-ID ::= 281
id-UARFCNforNu	ProtocolIE-ID ::= 282
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD	ProtocolIE-ID ::= 284
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD	ProtocolIE-ID ::= 285
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 288
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD	ProtocolIE-ID ::= 289
id-UL-DPCH-InformationList-RL-SetupRqstTDD	ProtocolIE-ID ::= 291
id-UL-DPCH-Information-RL-ReconfPrepFDD	ProtocolIE-ID ::= 293
id-UL-DPCH-Information-RL-ReconfRqstFDD	ProtocolIE-ID ::= 294
id-UL-DPCH-Information-RL-SetupRqstFDD	ProtocolIE-ID ::= 295
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD	ProtocolIE-ID ::= 296
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD	ProtocolIE-ID ::= 297
id-Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD	ProtocolIE-ID ::= 298
id-Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD	ProtocolIE-ID ::= 299
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD	ProtocolIE-ID ::= 300
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD	ProtocolIE-ID ::= 301
id-USCH-Information-Add	ProtocolIE-ID ::= 302
id-USCH-Information-AddList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 303
id-USCH-Information-DeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 304
id-USCH-Information-DeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 305
id-USCH-Information-ModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 306
id-USCH-Information-ModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 307
id-USCH-InformationResponse	ProtocolIE-ID ::= 309
id-USCH-Information	ProtocolIE-ID ::= 310
id-Active-Pattern-Sequence-Information	ProtocolIE-ID ::= 315
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 316
id-AdjustmentRatio	ProtocolIE-ID ::= 317
id-AP-AICH-Information	ProtocolIE-ID ::= 320
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 322
id-FACH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 323
id-CauseLevel-PSCH-ReconfFailureTDD	ProtocolIE-ID ::= 324
id-CauseLevel-RL-AdditionFailureFDD	ProtocolIE-ID ::= 325
id-CauseLevel-RL-AdditionFailureTDD	ProtocolIE-ID ::= 326
id-CauseLevel-RL-ReconfFailure	ProtocolIE-ID ::= 327
id-CauseLevel-RL-SetupFailureFDD	ProtocolIE-ID ::= 328
id-CauseLevel-RL-SetupFailureTDD	ProtocolIE-ID ::= 329
id-CDCA-ICH-Information	ProtocolIE-ID ::= 330
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 332
id-Closed-Loop-Timing-Adjustment-Mode	ProtocolIE-ID ::= 333
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 334
id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD	ProtocolIE-ID ::= 335
id-CPCH-Information	ProtocolIE-ID ::= 336

id-CPCH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 342
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 343
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 346
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 347
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 348
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 349
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD	ProtocolIE-ID ::= 350
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD	ProtocolIE-ID ::= 351
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD	ProtocolIE-ID ::= 352
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 353
id-DL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 354
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 355
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 356
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD	ProtocolIE-ID ::= 357
id-DL-TPC-Pattern01Count	ProtocolIE-ID ::= 358
id-DPC-Mode	ProtocolIE-ID ::= 450
id-DPCHConstant	ProtocolIE-ID ::= 359
id-FACH-ParametersList-CTCH-SetupRsp	ProtocolIE-ID ::= 362
id-Limited-power-increase-information-Cell-SetupRqstFDD	ProtocolIE-ID ::= 369
id-PCH-Parameters-CTCH-SetupRsp	ProtocolIE-ID ::= 374
id-PCH-ParametersItem-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 375
id-PCPCH-Information	ProtocolIE-ID ::= 376
id-PCPCH-ParametersList-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 379
id-PICH-ParametersItem-CTCH-ReconfRqstFDD	ProtocolIE-ID ::= 380

CHANGE REQUEST

⌘ **25.433** **CR 387** ⌘ rev **1** ⌘ Current version: **3.4.1** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Limited Power Increase Range		
Source:	⌘ R-WG3		
Work item code:	⌘ RANimp-RRMopt	Date:	⌘ February 2001
Category:	⌘ F	Release:	⌘ REL-4
	<p><i>Use <u>one</u> of the following categories:</i></p> <p>F (essential correction) A (corresponds to a correction in an earlier release) B (Addition of feature), C (Functional modification of feature) D (Editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p><i>Use <u>one</u> of the following releases:</i></p> <p>2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)</p>

Reason for change:	<p>⌘ R0: There is currently a misalignment between WG 1 specification (25.214) and NBAP (25.433) concerning the power adjustment when Limited Power Control is used.</p> <p>The NBAP specification states that the 'DL_power_averaging_window_size' is an integer number of timeslots.</p> <p>TS25.214 section 5.2.1.2.2 states that Dsum(k) is the "temporary sum of the last (DL_power_averaging_window_size) inner loop adjustments". This means that the window size is not defined as number of slots but as number of power adjustments.</p> <p>When having DPC mode 1 in use, power adjustment is not performed in every slot.</p> <p>When having DPC mode 0 (which is the only alternative in Release 99) power adjustment is performed in every slot, and therefore this CR is relevant only from Release 4 onwards.</p> <p>R1: 'Inner loop' added into the semantics description.</p>
Summary of change:	⌘ The DL_power_averaging_window_size description has been changed in NBAP according to WG1 specification.
Consequences if not approved:	<p>⌘ The Limited power increase would not work properly when DPC mode 1 is used.</p> <p>This CR do not cause backward compatibility problems because DPC mode 1 is</p>

not used in Release 99.

Clauses affected:	⌘	9.2.2.12A		
Other specs affected:	⌘	<input type="checkbox"/> Other core specifications	⌘	
		<input type="checkbox"/> Test specifications		
		<input type="checkbox"/> O&M Specifications		
Other comments:	⌘			

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://www.3gpp.org/specs/>. For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.2.2.12A DL_power_averaging_window_size

DL_power_averaging_window_size IE defines the window size when Limited Power Increase is used [10].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
DL_power_averaging_window_size			INTEGER (1..60)	1-60 time slots inner loop power adjustments, step size 1 slot adjustment