TSG RAN Meeting #19 **RP-030055**
Birmingham, UK, 11 - 14 March 2003

Title **CRs (R99 and Rel-4/Rel-5 Category A) to TS 25.423 on Support of Cell Individual Offset in RNSAP**
Source **TSG RAN WG3**
Agenda Item **8.3.3**

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-030337	25.423	3.12.0	3.13.0	R99	788	2	F	Support of Cell Individual Offset in RNSAP	TEI
R3-030338	25.423	4.7.0	4.8.0	REL-4	789	2	A	Support of Cell Individual Offset in RNSAP	TEI
R3-030339	25.423	5.4.0	5.5.0	REL-5	790	2	A	Support of Cell Individual Offset in RNSAP	TEI

3GPP TSG-RAN3 Meeting #34
Sophia Antipolis, France, 17 – 21 February 2003

Tdoc ⌘R3-030337

CR-Form-v7

CHANGE REQUEST

⌘ **25.423** **CR** **788** ⌘**rev** **2** ⌘ Current version: **3.12.0** ⌘

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

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

Title:	⌘	Support of Cell Individual Offset in RNSAP
Source:	⌘	RAN WG3
Work item code:	⌘	TEI
Date:	⌘	18/02/2003
Category:	⌘	**F**
Release:	⌘	R99

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

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

Reason for change:	⌘	During radio link set up/addition in a DRNS, if there are GSM neighbouring cells to the cell(s) where a radio link is setup/added, the DRNC shall, if available, include *Cell Individual Offset* IE in the *Neighbouring GSM Cell Information* IE in the RADIO LINK SETUP/ADDITION RESPONSE message for each of the GSM neighbouring cells. The value range used for Cell Individual Offset in RRC is as follows: - Intra/Inter-frequency: -10…+10 dB - Inter RAT/GSM: -50…+50 dB However, RNSAP supports only a common Cell Individual Offset for Intra/Inter frequency case as well as Inter-RAT as follows: - Intra/Inter Frequency case & Inter RAT/GSM: -10…+10 dB(in steps of 0.5 dB)
Summary of change:	⌘	RNSAP is aligned with RRC with respect to the support for Cell Individual Offset Impact Analysis: Impact assessment towards the previous version of the specification (same release): this CR has isolated impact on the previous version of the specification (same release) because only one function is impacted. This CR has an impact under the protocol point of view. The impact can be considered as isolated as it affects only one function, namely the Inter-RAT measurement event triggering.
Consequences if not approved:	⌘	If this CR is not approved, there will exist inconsistencies between RNSAP and RRC leading to undesirable behaviour in terms of Inter-RAT measurement event triggering. Further, full range of CIO for GSM supported by RRC, and is required

	by operators, cannot be used.

Clauses affected:	⌘	8.3.1.2, 8.3.2.2, 9.2.1.41c, New 9.2.1.x, 9.3.4 and 9.3.6			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ CR789 on 25.423 v 4.7.0 CR790 on 25.423 v 5.4.0
Affected:			**X**	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

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

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

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

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

8.3 DCH Procedures

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

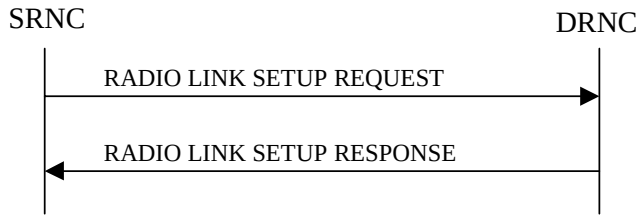

Figure 5: Radio Link Setup procedure: Successful Operation

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

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

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

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

Transport Channels Handling:

DCH(s):

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

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

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

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

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

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

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

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

DSCH(s):

If the *DSCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNC shall establish the requested DSCHs [FDD - on the RL indicated by the PDSCH RL ID IE]. In addition, the DRNC shall send a valid set of *DSCH Scheduling Priority* IE and *MAC-c/sh SDU Length* IE parameters to the SRNC in the RADIO LINK SETUP RESPONSE message. If the *PDSCH RL ID* IE indicates a radio link in the DRNS, then the DRNC shall allocate a DSCH-RNTI to the UE Context and include the *DSCH-RNTI* IE in the RADIO LINK SETUP RESPONSE message.

[TDD - USCH(s)]:

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

Physical Channels Handling:

[FDD - Compressed Mode]:

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

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

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

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

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

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

[FDD - DL Code Information]:

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

General:

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

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

Radio Link Handling:

Diversity Combination Control:

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

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

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

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

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

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

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

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

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

[FDD-Transmit Diversity]:

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

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

DL Power Control:

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

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

[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 – The DRNS shall start the DL transmission using the indicated DL TX power level (if received) or the decided DL TX power level on each DL channelisation code of a RL until UL synchronisation is achieved on the Uu interface for the concerned RLS or Power Balancing is activated. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10] subclause 5.2.1.2) 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 on the Uu interface for the concerned RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22] subclause 4.2.3.3).]

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

Neighbouring Cell Handling:

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

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

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

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

General:

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

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

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

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

[TDD – If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include the *UARFCN* IE, the *Cell Parameter ID* IE, the *Sync Case* IE, the *SCH Time Slot* IE or *Time Slot* IE, the *SCTD Indicator* IE, and the *PCCPCH Power* IE in the RADIO LINK SETUP RESPONSE message.]

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

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

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

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

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

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

[FDD - Radio Link Set Handling]:

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

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

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

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

Response Message:

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

After sending the RADIO LINK SETUP RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation on the Uu interface. [FDD - The DRNS shall start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

8.3.1.3 Unsuccessful Operation

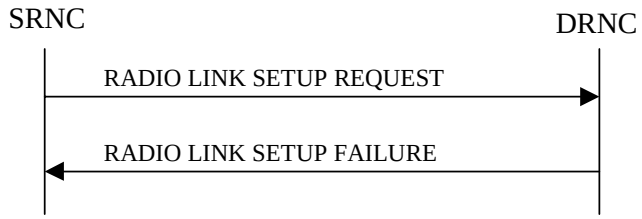

Figure 6: Radio Link Setup procedure: Unsuccessful Operation

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

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

[FDD – If the RL identified by the PDSCH RL ID IE is a radio link in the DRNS and this RL is successfully established, then the DRNC shall allocate a DSCH-RNTI to the UE Context and include the DSCH-RNTI IE in the RADIO LINK SETUP FAILURE message.]

Typical cause values are:

Radio Network Layer Causes:

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

- Cell reserved for operator use.

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

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

8.3.1.4 Abnormal Conditions

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

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

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

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

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

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

8.3.2 Radio Link Addition

8.3.2.1 General

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

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

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

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

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

8.3.2.2 Successful Operation

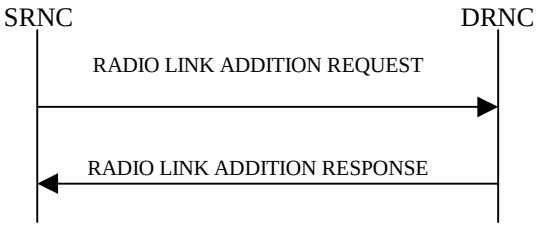

Figure 7: Radio Link Addition procedure: Successful Operation

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

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

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

Transport Channel Handling:

DSCH:

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

Physical Channels Handling:

[FDD-Compressed Mode]:

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

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

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

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

FDD - If the *Active Pattern Sequence Information* IE is not included, the DRNS shall not activate the ongoing compressed mode pattern in the new RLs, but the ongoing pattern in the existing RL shall be maintained.]

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

[FDD-DL Code Information]:

[FDD – When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When *p* number of DL DPDCHs are assigned to each RL,

the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to "*PhCH number 1*", the second to "*PhCH number 2"*, and so on until the *p*th to "*PhCH number p*".]

General:

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

Radio Link Handling:

Diversity Combination Control:

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

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

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

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

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

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

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

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

[FDD-Transmit Diversity]:

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

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

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

DL Power Control:

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

[TDD - If the *Primary CCPCH RSCP* IE and/or the *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 shall set the Initial DL TX Power based on the power relative to the Primary CCPCH power used by the existing RL.]

[FDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that RLS or Power Balancing is activated. No inner loop power control or power balancing

shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [10] subclause 5.2.1.2) 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 on the Uu interface for that RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [22] subclause 4.2.3.3).].

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

The DRNC shall provide the configured *Maximum DL TX Power* IE and *Minimum DL TX Power* IE for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IE or lower than indicated by the *Minimum DL TX Power* IE on any DL DPCH of the RL [FDD – except during compressed mode, when the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.].

DL Code Information:

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

Neighbouring Cell Handling:

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

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

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

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

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

General:

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

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

For each Radio Link established in a cell where at least one URA Identity is being broadcast, the DRNC shall include a URA Identity for this cell in the *URA ID* IE, the *Multiple URAs Indicator* IE indicating

whether or not multiple URA Identities are being broadcast in the cell, and the RNC Identity of all other RNCs that are having at least one cell within the URA in the cell in the *URA Information* IE in the RADIO LINK ADDITION RESPONSE message.

[FDD - If the UE has been allocated one or several DCH controlled by DRAC and if the DRNS supports the DRAC, the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message the *Secondary CCPCH Info* IE for the FACH where the DRAC information is sent, for each Radio Link established in a cell where DRAC is active. If the DRNS does not support DRAC, the DRNC shall not provide these IEs in the RADIO LINK ADDITION RESPONSE message.]

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

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

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

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

[FDD-Radio Link Set Handling]:

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

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

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

Response message:

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

After sending the RADIO LINK ADDITION RESPONSE message, the DRNS shall continuously attempt to obtain UL synchronisation on the Uu interface. [FDD - The DRNS shall start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

8.3.2.3 Unsuccessful Operation

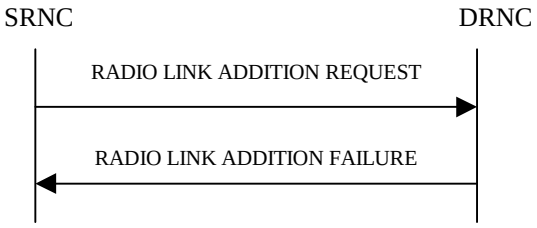

Figure 8: Radio Link Addition procedure: Unsuccessful Operation

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.

Typical cause values are:

Radio Network Layer Causes:

- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Combining Resources not Available;
- Combining not Supported;
- Cell not Available;
- [FDD - Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- CM not Supported;
- Reconfiguration CFN not Elapsed;
- Number of DL Codes not Supported;
- Number of UL codes not supported;
- Cell reserved for operator use.

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

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

8.3.2.4 Abnormal Conditions

If the RADIO LINK ADDITION REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the Permanent NAS UE Identity is not available in the DRNC for the considered UE Context, the DRNC shall consider the procedure as failed for this particular Radio Link and send the RADIO LINK ADDITION FAILURE message.

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Transmission Gap Pattern Sequence Status* IEs in the *Active Pattern Sequence Information* IE and it does 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 message is used to establish a new RL without compressed mode when compressed mode is active for the existing RL(s) (as specified in subclause 8.3.2.2), but at least one new RL is to be established in a cell that has the same UARFCN (both UL and DL) 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".]

<<< Unchanged Text is Removed>>>

9.2.1.41C Neighbouring GSM Cell Information

The *Neighbouring GSM Cell Information* IE provides information for all GSM Celsl that are a neighbouring cell to a cell in the DRNC.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Neighbouring GSM Cell Information		*1..<maxnoofGSMneighbours>*			GLOBAL	ignore
>CGI		*1*		Cell Global Identity as defined in ref. [1].	–	
>>LAI		*1*			–	
>>>PLMN Identity	M		OCTET STRING (3)	- digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN Identity consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).	–	
>>>LAC	M		OCTET STRING (2)	0000 and FFFE not allowed	–	
>>CI	M		OCTET STRING (2)		–	
>Cell Individual Offset	O		9.2.1.7	The Cell Individual Offset to be used for UEs using DCHs. Should be ignored if the *GSM Cell Individual Offset* IE is included	–	
>BSIC		*1*		Base Station Identity Code as defined in ref. [1].	–	
>>NCC	M		BIT STRING(3)	Network Colour Code.	–	
>>BCC	M		BIT STRING(3)	Base Station Colour Code.	–	
>Band Indicator	M		ENUMERATED (DCS 1800 band,	Indicates whether or not the BCCH	–	

			PCS 1900 band, …)	ARFCN belongs to the 1800 band or 1900 band of GSM frequencies.		
>BCCH ARFCN	M		INTEGER (0..1023)	BCCH Frequency as defined in ref. [29].	–	
>GSM Cell Individual Offset	O		9.2.1.x	The GSM Cell Individual Offset to be used for UEs using DCHs.	YES	ignore

Range bound	Explanation
maxnoofGSMneighbours	Maximum number of neighbouring GSM cells for one cell.

<<< Unchanged Text is Removed>>>

9.2.1.x GSM Cell Individual Offset

GSM Cell individual offset is an offset that will be applied by UE to the measurement results for GSM carrier RSSI according to [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
GSM Cell Individual Offset			INTEGER (-50,..,+50)	Unit in dB. Step size is 1 dB

<<< Unchanged Text is Removed>>>

9.3.4 Information Element Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

    id-DSCH-Specific-FDD-Additional-List,
    id-Neighbouring-GSM-CellInformation,
    id-Neighbouring-UMTS-CellInformationItem,
    maxNrOfLevels,
    id-MessageStructure,
    id-RestrictionStateIndicator,
    id-TypeOfError,
    id-GSMCellIndividualOffset

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;

UNCHANGED TEXT IS REMOVED
```

```
-- 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 ::= {
    ...
}

GSMCellIndividualOffset ::= INTEGER (-50..50)

UNCHANGED TEXT IS REMOVED

-- 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 ::= {
    { ID id-RestrictionStateIndicator               CRITICALITY ignore          EXTENSION
RestrictionStateIndicator       PRESENCE optional   },
    ...
}

Neighbouring-GSM-CellInformation ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-
CellInformationIE }}

Neighbouring-GSM-CellInformationIE RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-GSM-CellInformation    CRITICALITY ignore  TYPE    Neighbouring-GSM-
CellInformationIEs  PRESENCE    mandatory }
}

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

Neighbouring-GSM-CellInformationItem ::= SEQUENCE {
    cGI                                 CGI,
    cellIndividualOffset                CellIndividualOffset    OPTIONAL,
    bSIC                                BSIC,
    band-Indicator                      Band-Indicator,
    bCCH-ARFCN                          BCCH-ARFCN,
    iE-Extensions                       ProtocolExtensionContainer { { Neighbouring-GSM-
CellInformationItem-ExtIEs} } OPTIONAL,
    ...
}

Neighbouring-GSM-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-GSMCellIndividualOffset             CRITICALITY ignore          EXTENSION
GSMCellIndividualOffset     PRESENCE optional   },
    ...
}

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 shall be present if Sync Case = Case1 -- ,
    sCH-TimeSlot                    SCH-TimeSlot            OPTIONAL
    -- This IE shall be present if Sync Case = Case2 -- ,
    sCTD-Indicator          SCTD-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 ::= {
    { ID id-RestrictionStateIndicator               CRITICALITY ignore          EXTENSION
RestrictionStateIndicator       PRESENCE optional   },
    ...
}

NrOfDLchannelisationcodes   ::= INTEGER (1..8)
```

```
NrOfTransportBlocks         ::= INTEGER (0..512)

UNCHANGED TEXT IS REMOVED
```

9.3.6 Constant Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes;

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

id-commonTransportChannelResourcesInitialisation           ProcedureCode ::= 0
id-commonTransportChannelResourcesRelease                  ProcedureCode ::= 1
id-compressedModeCommand                                   ProcedureCode ::= 2
id-downlinkPowerControl                                    ProcedureCode ::= 3
id-downlinkPowerTimeslotControl                            ProcedureCode ::= 4
id-downlinkSignallingTransfer                              ProcedureCode ::= 5
id-errorIndication                                         ProcedureCode ::= 6
id-dedicatedMeasurementFailure                             ProcedureCode ::= 7
id-dedicatedMeasurementInitiation                          ProcedureCode ::= 8
id-dedicatedMeasurementReporting                           ProcedureCode ::= 9
id-dedicatedMeasurementTermination                         ProcedureCode ::= 10
id-paging                                                  ProcedureCode ::= 11
id-physicalChannelReconfiguration                          ProcedureCode ::= 12
id-privateMessage                                          ProcedureCode ::= 13
id-radioLinkAddition                                       ProcedureCode ::= 14
id-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
maxNrOfFACHs                            INTEGER ::= 8
maxFACHCountPlus1                       INTEGER ::= 10
maxIBSEG                                INTEGER ::= 16
maxNrOfSCCPCHs                          INTEGER ::= 8
maxTFCI1Combs                           INTEGER ::= 512
maxTFCI2Combs                           INTEGER ::= 1024
maxTFCI2Combs-1                         INTEGER ::= 1023
maxTGPS                                 INTEGER ::= 6
maxNrOfTS                               INTEGER ::= 15
maxNrOfLevels                           INTEGER ::= 256
maxNoOfDSCHs-1                          INTEGER ::= 9

-- **************************************************************
--
-- 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-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-MessageStructure                                              ProtocolIE-ID ::= 57
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-Permanent-NAS-UE-Identity                                     ProtocolIE-ID ::= 17
id-PowerAdjustmentType                                           ProtocolIE-ID ::= 107
id-RANAP-RelocationInformation                                   ProtocolIE-ID ::= 109
id-RL-Information-PhyChReconfRqstFDD                             ProtocolIE-ID ::= 110
id-RL-Information-PhyChReconfRqstTDD                             ProtocolIE-ID ::= 111
id-RL-Information-RL-AdditionRqstFDD                             ProtocolIE-ID ::= 112
id-RL-Information-RL-AdditionRqstTDD                             ProtocolIE-ID ::= 113
id-RL-Information-RL-DeletionRqst                                ProtocolIE-ID ::= 114
id-RL-Information-RL-FailureInd                                  ProtocolIE-ID ::= 115
id-RL-Information-RL-ReconfPrepFDD                               ProtocolIE-ID ::= 116
id-RL-Information-RL-RestoreInd                                  ProtocolIE-ID ::= 117
id-RL-Information-RL-SetupRqstFDD                                ProtocolIE-ID ::= 118
id-RL-Information-RL-SetupRqstTDD                                ProtocolIE-ID ::= 119
id-RL-InformationItem-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-Reporing-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-TransportBearerID                                             ProtocolIE-ID ::= 163
id-TransportBearerRequestIndicator                               ProtocolIE-ID ::= 164
id-TransportLayerAddress                                         ProtocolIE-ID ::= 165
id-TypeOfError                                                   ProtocolIE-ID ::= 140
id-UC-ID                                                         ProtocolIE-ID ::= 166
id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD                     ProtocolIE-ID ::= 167
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 169
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD                     ProtocolIE-ID ::= 171
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD                     ProtocolIE-ID ::= 172
id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD                ProtocolIE-ID ::= 173
id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD                 ProtocolIE-ID ::= 174
id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD                 ProtocolIE-ID ::= 175
id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD                    ProtocolIE-ID ::= 176
id-UL-DPCH-Information-RL-ReconfPrepFDD                          ProtocolIE-ID ::= 177
id-UL-DPCH-Information-RL-ReconfRqstFDD                          ProtocolIE-ID ::= 178
id-UL-DPCH-Information-RL-SetupRqstFDD                           ProtocolIE-ID ::= 179
id-UL-DPCH-InformationItem-PhyChReconfRqstTDD                    ProtocolIE-ID ::= 180
id-UL-DPCH-InformationItem-RL-AdditionRspTDD                     ProtocolIE-ID ::= 181
id-UL-DPCH-InformationItem-RL-SetupRspTDD                        ProtocolIE-ID ::= 182
id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD                ProtocolIE-ID ::= 183
```

```
id-UL-SIRTarget                                                  ProtocolIE-ID ::= 184
id-URA-Information                                               ProtocolIE-ID ::= 185
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD      ProtocolIE-ID ::= 188
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD         ProtocolIE-ID ::= 189
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD         ProtocolIE-ID ::= 190
id-Active-Pattern-Sequence-Information                           ProtocolIE-ID ::= 193
id-AdjustmentRatio                                               ProtocolIE-ID ::= 194
id-CauseLevel-RL-AdditionFailureFDD                              ProtocolIE-ID ::= 197
id-CauseLevel-RL-AdditionFailureTDD                              ProtocolIE-ID ::= 198
id-CauseLevel-RL-ReconfFailure                                   ProtocolIE-ID ::= 199
id-CauseLevel-RL-SetupFailureFDD                                 ProtocolIE-ID ::= 200
id-CauseLevel-RL-SetupFailureTDD                                 ProtocolIE-ID ::= 201
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD              ProtocolIE-ID ::= 205
id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD              ProtocolIE-ID ::= 206
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD              ProtocolIE-ID ::= 207
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD              ProtocolIE-ID ::= 208
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD              ProtocolIE-ID ::= 209
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD              ProtocolIE-ID ::= 210
id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD                ProtocolIE-ID ::= 212
id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD             ProtocolIE-ID ::= 213
id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD             ProtocolIE-ID ::= 214
id-DSCHs-to-Add-TDD                                              ProtocolIE-ID ::= 215
id-DSCHs-to-Add-FDD                                              ProtocolIE-ID ::= 216
id-DSCH-DeleteList-RL-ReconfPrepTDD                              ProtocolIE-ID ::= 217
id-DSCH-Delete-RL-ReconfPrepFDD                                  ProtocolIE-ID ::= 218
id-DSCH-FDD-Information                                          ProtocolIE-ID ::= 219
id-DSCH-InformationListIE-RL-AdditionRspTDD                      ProtocolIE-ID ::= 220
id-DSCH-InformationListIEs-RL-SetupRspTDD                        ProtocolIE-ID ::= 221
id-DSCH-TDD-Information                                          ProtocolIE-ID ::= 222
id-DSCH-FDD-InformationResponse                                  ProtocolIE-ID ::= 223
id-DSCH-Information-RL-SetupRqstFDD                              ProtocolIE-ID ::= 226
id-DSCH-ModifyList-RL-ReconfPrepTDD                              ProtocolIE-ID ::= 227
id-DSCH-Modify-RL-ReconfPrepFDD                                  ProtocolIE-ID ::= 228
id-DSCH-Specific-FDD-Additional-List                             ProtocolIE-ID ::= 324
id-DSCHsToBeAddedOrModified-FDD                                  ProtocolIE-ID ::= 229
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD                 ProtocolIE-ID ::= 230
id-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-ClosedLoopMode1-SupportIndicator                              ProtocolIE-ID ::= 276
id-ClosedLoopMode2-SupportIndicator                              ProtocolIE-ID ::= 277
id-STTD-SupportIndicator                                         ProtocolIE-ID ::= 279
id-CFNReportingIndicator                                         ProtocolIE-ID ::= 14
id-CNOriginatedPage-PagingRqst                                   ProtocolIE-ID ::= 23
id-InnerLoopDLPCStatus                                           ProtocolIE-ID ::= 24
id-PropagationDelay                                              ProtocolIE-ID ::= 25
id-RxTimingDeviationForTA                                        ProtocolIE-ID ::= 36
id-timeSlot-ISCP                                                 ProtocolIE-ID ::= 37
id-CCTrCH-InformationItem-RL-FailureInd                          ProtocolIE-ID ::= 15
id-CCTrCH-InformationItem-RL-RestoreInd                          ProtocolIE-ID ::= 16
id-RestrictionStateIndicator                                     ProtocolIE-ID ::= 142
id-SplitType                                                     ProtocolIE-ID ::= 247
id-LengthOfTFCI2                                                 ProtocolIE-ID ::= 295
id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD                            ProtocolIE-ID ::= 202
id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD                        ProtocolIE-ID ::= 203
id-DSCH-RNTI                                                     ProtocolIE-ID ::= 249
id-PDSCH-RL-ID                                                   ProtocolIE-ID ::= 323
id-TimeSlot-RL-SetupRspTDD                                       ProtocolIE-ID ::= 325
id-GSMCellIndividualOffset                                       ProtocolIE-ID ::= 514
```

END

<<< END OF THE CORRECTED SECTION>>>

3GPP TSG-RAN3 Meeting #34
Sophia Antipolis, France, 17 – 21 February 2003

Tdoc ⌘R3-030338

CR-Form-v7

CHANGE REQUEST

⌘ **25.423** **CR** **789** ⌘**rev** **2** ⌘ Current version: **4.7.0** ⌘

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

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

Title:	⌘	Support of Cell Individual Offset in RNSAP			
Source:	⌘	RAN WG3			
Work item code:	⌘	TEI	***Date:*** ⌘	18/02/2003	
Category:	⌘	**A**	***Release:*** ⌘	Rel-4	
		Use one of the following categories:		*Use one of the following releases:*	
		F *(correction)*		*2*	*(GSM Phase 2)*
		A *(corresponds to a correction in an earlier release)*		*R96*	*(Release 1996)*
		B *(addition of feature),*		*R97*	*(Release 1997)*
		C *(functional modification of feature)*		*R98*	*(Release 1998)*
		D *(editorial modification)*		*R99*	*(Release 1999)*
		Detailed explanations of the above categories can be found in 3GPP TR 21.900.		*Rel-4*	*(Release 4)*
				Rel-5	*(Release 5)*
				Rel-6	*(Release 6)*

Reason for change:	⌘	During radio link set up/addition in a DRNS, if there are GSM neighbouring cells to the cell(s) where a radio link is setup/added, the DRNC shall, if available, include *Cell Individual Offset* IE in the *Neighbouring GSM Cell Information* IE in the RADIO LINK SETUP/ADDITION RESPONSE message for each of the GSM neighbouring cells. The value range used for Cell Individual Offset in RRC is as follows: - Intra/Inter-frequency: -10…+10 dB - Inter RAT/GSM: -50…+50 dB However, RNSAP supports only a common Cell Individual Offset for Intra/Inter frequency case as well as Inter-RAT as follows: - Intra/Inter Frequency case & Inter RAT/GSM: -10…+10 dB(in steps of 0.5 dB)
Summary of change:	⌘	RNSAP is aligned with RRC with respect to the support for Cell Individual Offset Impact Analysis: Impact assessment towards the previous version of the specification (same release): this CR has isolated impact on the previous version of the specification (same release) because only one function is impacted. This CR has an impact under the protocol point of view. The impact can be considered as isolated as it affects only one function, namely the Inter-RAT measurement event triggering.
Consequences if not approved:	⌘	If this CR is not approved, there will exist inconsistencies between RNSAP and RRC leading to undesirable behaviour in terms of Inter-RAT measurement event triggering. Further, full range of CIO for GSM supported by RRC, and is required

	by operators, cannot be used.

Clauses affected:	⌘	8.3.1.2, 8.3.2.2, 9.2.1.41c, New 9.2.1.x, 9.3.4 and 9.3.6				
		Y	**N**			
Other specs	⌘	**X**		Other core specifications	⌘	CR788 on 25.423 v 3.12.0 CR790 on 25.423 v 5.4.0
Affected:			**X**	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

How to create CRs using this form:

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

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

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

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

8.3 DCH Procedures

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

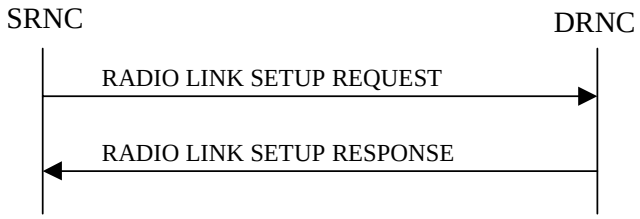

Figure 5: Radio Link Setup procedure: Successful Operation

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

Upon receipt of the RADIO LINK SETUP REQUEST message, 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.

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request for a time period not exceedingthe value of the *Allowed Queuing Time* IE before starting to execute the request.

Transport Channels Handling:

DCH(s):

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

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

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

For a set of co-ordinated DCHs, the DRNS shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" for the QE in the UL data frames, ref. [4]. [FDD - If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If all DCHs have *QE-Selector* IE set to "non-selected", the DRNS shall use the Physical channel BER for the QE, ref. [4].] [TDD - If no Transport channel BER is available for the selected DCH, the DRNS shall use 0 for the QE, ref. [4].]

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

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

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

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

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

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

DSCH(s):

If the *DSCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNC shall establish the requested DSCHs [FDD - on the RL indicated by the PDSCH RL ID IE]. In addition, the DRNC shall send a valid set of *DSCH Scheduling Priority* IE and *MAC-c/sh SDU Length* IE parameters to the SRNC in the RADIO LINK SETUP RESPONSE message. If the *PDSCH RL ID* IE indicates a radio link in the DRNS, then the DRNC shall allocate a DSCH-RNTI to the UE Context and include the *DSCH-RNTI* IE in the RADIO LINK SETUP RESPONSE message.

[TDD - USCH(s)]:

[TDD - If the *USCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNS shall establish the requested USCHs, and the DRNC shall provide the *USCH Information Response* IE in the RADIO LINK SETUP RESPONSE message.]

[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.]

[TDD – CCTrCH Handling]:

[TDD – If the *UL CCTrCH Information* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the new UL CCTrCH(s) according to the parameters given in the message.]

[TDD – If the *DL CCTrCH Information* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the new DL CCTrCH(s) according to the parameters given in the message.]

[TDD – If the *TPC CCTrCH List* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the identified UL CCTrCHs with TPC according to the parameters given in the message.]

Physical Channels Handling:

[FDD - Compressed Mode]:

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE, the DRNS shall store the information about the Transmission Gap Pattern

Sequences to be used in the Compressed Mode Configuration. This Compressed Mode Configuration shall be valid in the DRNS until the next Compressed Mode Configuration is configured in the DRNS or the last Radio Link is deleted.]

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

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

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

- [FDD - For all other Transmission Gap Pattern Sequences included in the *Active Pattern Sequence Information* IE, the DRNS shall activate each Transmission Gap Pattern Sequence at the first CFN after the CM Configuration Change CFN with a value equal to the *TGCFN* IE for the Transmission Gap Pattern Sequence.][FDD- If the *Downlink Compressed Mode Method* IE in one or more Transmission Gap Pattern Sequence is set to "SF/2" in the RADIO LINK SETUP REQUEST message, the DRNC shall include the *Transmission Gap Pattern Sequence Scrambling Code Information* IE in the RADIO LINK SETUP RESPONSE message indicating for each DL Channelisation Code whether the alternative scrambling code shall be used or not.]

[FDD - DL Code Information]:

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

General:

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

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

Radio Link Handling:

Diversity Combination Control:

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

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

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

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

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

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

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

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

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

[FDD-Transmit Diversity]:

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

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

DL Power Control:

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

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

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

[1.28McpsTDD - If the *TSTD Support Indicator* IE is present, the DRNS shall apply this information when configuring the transmit diversity for the new radio link..]

[FDD – The DRNS shall start the DL transmission using the indicated DL TX power level (if received) or the decided DL TX power level on each DL channelisation code of a RL until UL synchronisation is achieved on the Uu interface for the concerned RLS or Power Balancing is activated. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10] subclause 5.2.1.2) and the power control procedure (see 8.3.7).]

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

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

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

Neighbouring Cell Handling:

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

- The DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Neighbouring FDD Cell Information* IE and/or *Neighbouring TDD Cell Information* IE in the *Neighbouring UMTS Cell Information* IE for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Frame Offset* IE, *Primary CPICH Power* IE, *Cell Individual Offset* IE, *STTD Support Indicator* IE, *Closed Loop Mode1 Support Indicator* IE and *Closed Loop Mode2 Support Indicator* IE in the *Neighbouring FDD Cell Information* IE, and the *Frame Offset* IE, *Cell Individual Offset* IE, *DPCH Constant Value* IE and the *PCCPCH Power* IE in the *Neighbouring TDD Cell Information* IE or the *Neighbouring TDD Cell Information LCR* IE.If the *Neighbouring TDD Cell Information* IE includes the *Sync Case* IE for the set to "Case1", the DRNC shall include the *Time Slot For SCH* IE in the *Neighbouring TDD Cell Information* IE. If the *Neighbouring TDD Cell Information* IE includes *Sync Case* IE set to "Case2", the DRNC shall include the *SCH Time Slot* IE in the *Neighbouring TDD Cell Information* IE.

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

- If the information is available, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *DPC Mode Change Support Indicator* IE for each neighbour cell in the *Neighbouring FDD Cell Information* IE .

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

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

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

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

General:

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity for EDSCHPC* IE, the DRNS shall activate enhanced DSCH power control, if supported, using the *SSDT Cell Identity for EDSCHPC* IE and *SSDT Cell Identity Length* IE as well as *Enhanced DSCH PC* IE in accordance with ref.

[10] subclause 5.2.2. If the RADIO LINK SETUP REQUEST message includes both *SSDT Cell Identity* IE and *SSDT Cell Identity for EDSCHPC* IE, then the DRNS shall ignore the *SSDT Cell Identity for EDSCHPC* IE.]

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

If no *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *D-RNTI* IE, the *CN PS Domain Identifier* IE and/or the *CN CS Domain Identifier* IE for the CN domains (using LAC and RAC of the current cell) to which the DRNC is connected.

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

[TDD – If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *UARFCN* IE, the *Cell Parameter ID* IE and the *SCTD Indicator* IE.]

[3.84Mcps TDD - If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Sync Case* IE and if the *Sync Case* IE is set to "Case 2", the DRNC shall also include the *SCH Time Slot* IE in the RADIO LINK SETUP RESPONSE message. If the included *Sync Case* IE is set to "Case1", the DRNC shall also include the *Time Slot For SCH* IE]

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

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

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

Depending on local configuration in the DRNS, the DRNC may include in the RADIO LINK SETUP RESPONSE message the *UTRAN Access Point Position* IE and the geographical co-ordinates of the cell, represented either by the *Cell GAI* IE or by the *Cell GA Additional Shapes* IE.

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

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

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

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

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

[FDD - Radio Link Set Handling]:

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

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the DRNS shall assign to the RL a unique value for the *RL Set ID* IE which uniquely identifies the RL as an 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 to each RL the same value for the *RL Set ID* IE which uniquely identifies these RLs as members of the same RL Set within the UE Context.]

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

Response Message:

Upon receipt of the RADIO LINK SETUP REQUEST message, the DRNS allocates the 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, for each set of co-ordinated DCHs and for each DSCH [TDD – and USCH]. This information shall be sent to the SRNC in the RADIO LINK SETUP RESPONSE message when all the RLs have been successfully established.

After sending the RADIO LINK SETUP RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation on the Uu interface. [FDD - The DRNS shall start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

8.3.2 Radio Link Addition

8.3.2.1 General

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

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

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

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

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

8.3.2.2 Successful Operation

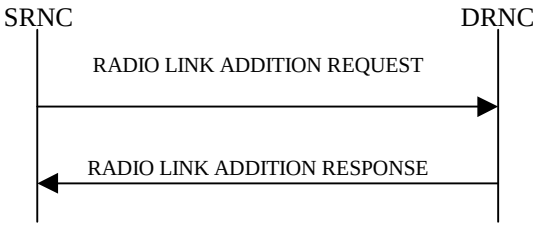

Figure 7: Radio Link Addition procedure: Successful Operation

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

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

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

Transport Channel Handling:

[TDD - The DRNC shall include the *UL/DL DPCH Information* IE within the *UL/DL CCTrCH Information* IE for each CCTrCH that requires DPCHs.]

DSCH:

[TDD - If the radio link to be added includes a DSCH, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a *DSCH Information Response* IE for each DSCH]

[TDD - USCH:]

[TDD - If the radio link to be added includes any USCHs, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a *USCH Information Response* IE for each USCH.]

Physical Channels Handling:

[FDD-Compressed Mode:]

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

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

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

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

[FDD - If the *Active Pattern Sequence Information* IE is not included, the DRNS shall not activate the ongoing compressed mode pattern in the new RLs, but the ongoing pattern in the existing RL shall be maintained.]

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

[FDD-DL Code Information]:

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

General:

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

Radio Link Handling:

Diversity Combination Control:

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

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

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

In the RADIO LINK ADDITION RESPONSE message, the DRNC shall indicate for each RL with the Diversity Indication in the *RL Information Response* IE whether the RL is combined or not:

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

- In the case of not combining, the DRNC shall include in the *DCH Information Response* IE in the RADIO LINK ADDITION RESPONSE message, the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL.

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

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

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

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

[FDD-Transmit Diversity]:

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

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

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

DL Power Control:

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

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

[FDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that RLS or Power Balancing is activated. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [10] subclause 5.2.1.2) and the power control procedure (see 8.3.7)].

[TDD – The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [22] subclause 4.2.3.3).].

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

UL Power Control:

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

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

The DRNC shall provide the configured *Maximum DL TX Power* IE and *Minimum DL TX Power* IE for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IEor lower than indicated by the *Minimum DL TX Power* IEon any DL DPCH of the RL [FDD – except during compressed mode, when the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.].

Neighbouring Cell Handling:

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

- The DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Neighbouring FDD Cell Information* IE and/or *Neighbouring TDD Cell Information* IE in the *Neighbouring UMTS Cell Information* IE for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Frame Offset* IE, *Primary CPICH Power* IE, *Cell Individual Offset* IE, *STTD Support Indicator* IE, *Closed Loop Mode1 Support Indicator* IE and *Closed Loop Mode2 Support Indicator* IE in the *Neighbouring FDD Cell Information* IE, and the *Frame Offset* IE, *Cell Individual Offset* IE, *DPCH Constant Value* IE and the *PCCPCH Power* IE in the *Neighbouring TDD Cell Information* IE or the *Neighbouring TDD Cell Information LCR* IE.If the *Neighbouring TDD Cell Information* IE includes the *Sync Case* IE set to "Case1", the DRNC shall include the *Time SlotFor SCH* IE in the *Neighbouring TDD Cell Information* IE. If the *Neighbouring TDD Cell Information* IE includes the *Sync Case* IE set to "Case2", the DRNC shall include the *SCH Time Slot* IE in the *Neighbouring TDD Cell Information* IE.

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

- [FDD - The DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *DPC Mode Change Support Indicator* IE for each neighbour cell in the *Neighbouring FDD Cell Information* IE if this information is available.]

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

If there are GSM neighbouring cells to the cell(s) in which 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 Cell Individual Offset* IE and/or the *Cell Individual Offset* IE in the *Neighbouring GSM Cell Information* IE. If the *GSM Cell Individual Offset* IE is included in the *Neighbouring GSM Cell Information* IE, then the DRNC shall include the *Cell Individual Offset* IE in the *Neighbouring GSM Cell Information* IE.

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

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

General:

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, the DRNS shall, if supported, activate SSDT for the concerned new RL using the indicated SSDT Cell Identity.]

Depending on local configuration in the DRNS, the DRNC may include in the RADIO LINK ADDITION RESPONSE message the *UTRAN Access Point Position* IE and the geographical co-ordinates of the cell, represented either by the *Cell GAI* IE or by the *Cell GA Additional Shapes* IE.

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

[FDD - If the UE has been allocated one or several DCH controlled by DRAC and if the DRNS supports the DRAC, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Secondary CCPCH Info* IE for the FACH in which the DRAC information is sent, for each Radio Link established in a cell in which DRAC is active. If the DRNS does not support DRAC, the DRNC shall not provide these IEs in the RADIO LINK ADDITION RESPONSE message.]

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

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

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

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

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

[FDD-Radio Link Set Handling]:

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the DRNS shall assign to the RL a unique value for the *RL Set ID* IE which uniquely identifies the RL as an 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 to each RL the same value for the *RL Set ID* IE which uniquely identifies these RLs as members of the same RL Set within the UE Context.]

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

Response message:

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

After sending the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation on the Uu interface. [FDD - The DRNS shall start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4].] [TDD – The DRNS shall start transmission on the new RL immediately as specified in ref. [4].]

8.3.2.3 Unsuccessful Operation

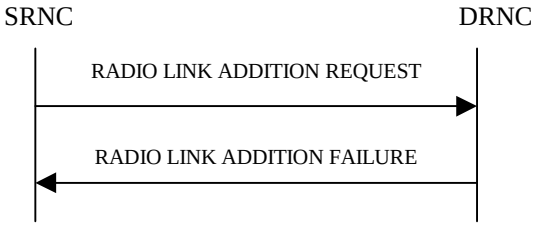

Figure 8: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one RL is unsuccessful, the DRNC shall respond with a RADIO LINK ADDITION FAILURE message. DRNC shall include in the RADIO LINK ADDITION FAILURE message a general *Cause* IE or a *Cause* IE for each failed radio link. The *Cause* IE indicates the reason for failure.

[FDD - 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.]

Typical cause values are:

Radio Network Layer Causes:

- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Combining Resources not Available;

- Combining not Supported
- Cell not Available;
- [FDD - Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- CM not Supported;
- Reconfiguration CFN not Elapsed;
- Number of DL Codes not Supported;
- Number of UL codes not Supported;
- [FDD – DPC mode change not Supported];
- Cell reserved for operator use.

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

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

8.3.2.4 Abnormal Conditions

If the RADIO LINK ADDITION REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the Permanent NAS UE Identity is not available in the DRNC for the considered UE Context, the DRNC shall reject the procedure for this particular Radio Link and send the RADIO LINK ADDITION FAILURE message.

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Transmission Gap Pattern Sequence Status* IEs in the *Active Pattern Sequence Information* IE and it does not address exactly all ongoing compressed mode patterns the DRNS shall reject the Radio Link Addition procedure and shall respond with a RADIO LINK ADDITION FAILURE message with the *Cause* IE value "Invalid CM settings".]

[FDD - If the RADIO LINK ADDITION REQUEST message is used to establish a new RL without compressed mode when compressed mode is active for the existing RL(s) (as specified in subclause 8.3.2.2), and if at least one of the new RLs is to be established in a cell that has the same UARFCN (both UL and DL) as at least one cell with an already existing RL, the DRNS shall reject the Radio Link Addition procedure and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

<<< Unchanged Text is Removed>>>

9.2.1.41C Neighbouring GSM Cell Information

The *Neighbouring GSM Cell Information* IE provides information for all GSM Cells that are a neighbouring cell to a cell in the DRNC.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Neighbouring GSM Cell Information		*1..<maxnoofGSMneighbours>*			GLOBAL	ignore
>CGI		*1*		Cell Global Identity as defined in ref. [1].	–	
>>LAI		*1*			–	
>>>PLMN Identity	M		OCTET STRING (3)	- digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN Identity consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).	–	
>>>LAC	M		OCTET STRING (2)	0000 and FFFE not allowed	–	
>>CI	M		OCTET STRING (2)		–	
>Cell Individual Offset	O		9.2.1.7	The Cell Individual Offset to be used for UEs using DCHs. Should be ignored if the *GSM Cell Individual Offset* IE is included	–	
>BSIC		*1*		Base Station Identity Code as defined in ref. [1].	–	
>>NCC	M		BIT STRING(3)	Network Colour Code.	–	
>>BCC	M		BIT STRING(3)	Base Station Colour Code.	–	
>Band Indicator	M		ENUMERATED (DCS 1800 band, PCS 1900 band, …)	Indicates whether or not the BCCH ARFCN belongs to the 1800 band or 1900 band of GSM frequencies.	–	
>BCCH ARFCN	M		INTEGER (0..1023)	BCCH Frequency as defined in ref. [29].	–	
>GSM Cell Individual Offset	O		9.2.1.x	The GSM Cell Individual Offset to be used for	YES	ignore

				UEs using DCHs.		

Range bound	Explanation
maxnoofGSMneighbours	Maximum number of neighbouring GSM cells for one cell.

<<< Unchanged Text is Removed>>>

9.2.1.x GSM Cell Individual Offset

GSM Cell individual offset is an offset that will be applied by UE to the measurement results for GSM carrier RSSI according to [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
GSM Cell Individual Offset			INTEGER (-50,..,+50)	Unit in dB. Step size is 1 dB

<<< Unchanged Text is Removed>>>

9.3.4 Information Element Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

    id-Allowed-Rate-Information,
    id-DPC-Mode-Change-SupportIndicator,
    id-DSCH-Specific-FDD-Additional-List,
    id-Guaranteed-Rate-Information,
    id-Load-Value,
    id-Load-Value-IncrDecrThres,
    id-Neighbouring-GSM-CellInformation,
    id-Neighbouring-UMTS-CellInformationItem,
    id-neighbouring-LCR-TDD-CellInformation,
    id-OnModification,
    id-Received-Total-Wideband-Power-Value,
    id-Received-Total-Wideband-Power-Value-IncrDecrThres,
    id-SFNSFNMeasurementThresholdInformation,
    id-Transmitted-Carrier-Power-Value,
    id-Transmitted-Carrier-Power-Value-IncrDecrThres,
    id-TUTRANGPSMeasurementThresholdInformation,
    id-UL-Timeslot-ISCP-Value,
    id-UL-Timeslot-ISCP-Value-IncrDecrThres,
    maxNrOfLevels,
```

```
    maxNrOfMeasNCell,
    maxNrOfMeasNCell-1,
    id-MessageStructure,
    id-EnhancedDSCHPC,
    id-RestrictionStateIndicator,
    id-Rx-Timing-Deviation-Value-LCR,
    id-TypeOfError,
    id-GSMCellIndividualOffset
FROM RNSAP-Constants

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

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

UNCHANGED TEXT IS REMOVED
-- G

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

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

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

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

GA-CellAdditionalShapes ::= CHOICE {
    pointWithUncertainty                            GA-PointWithUnCertainty,
    pointWithUncertaintyEllipse                     GA-PointWithUnCertaintyEllipse,
    pointWithAltitude                               GA-PointWithAltitude,
    pointWithAltitudeAndUncertaintyEllipsoid        GA-PointWithAltitudeAndUncertaintyEllipsoid,
    ellipsoidArc                                    GA-EllipsoidArc,
    ...
    }

GA-AltitudeAndDirection ::= SEQUENCE {
    directionOfAltitude     ENUMERATED {height, depth},
    altitude                INTEGER (0..32767),
    ...
}

GA-EllipsoidArc ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    innerRadius                 INTEGER (0..65535),
    uncertaintyRadius           INTEGER (0..127),
    offsetAngle                 INTEGER (0..179),
    includedAngle               INTEGER (0..179),
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-EllipsoidArc-ExtIEs} }
OPTIONAL,
    ...
}

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

GA-PointWithAltitude ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    altitudeAndDirection        GA-AltitudeAndDirection,
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithAltitude-ExtIEs} }
OPTIONAL,
    ...
```

```
}

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

GA-PointWithAltitudeAndUncertaintyEllipsoid ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    altitudeAndDirection        GA-AltitudeAndDirection,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    uncertaintyAltitude         INTEGER (0..127),
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-
PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs} } OPTIONAL,
    ...
}

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

GA-PointWithUnCertaintyEllipse ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithUnCertaintyEllipse-
ExtIEs} } OPTIONAL,
    ...
}

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

GA-UncertaintyEllipse ::= SEQUENCE {
    uncertaintySemi-major       INTEGER (0..127),
    uncertaintySemi-minor       INTEGER (0..127),
    orientationOfMajorAxis      INTEGER (0..179),
    ...
}

GA-PointWithUnCertainty ::=SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    uncertaintyCode         INTEGER (0..127),
    iE-Extensions           ProtocolExtensionContainer { {GA-PointWithUnCertainty-ExtIEs} }
OPTIONAL,
    ...
}

GA-PointWithUnCertainty-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 ::= {
    ...
}

GPS-Almanac ::= SEQUENCE {
    wna-alm                 BIT STRING (SIZE (8)),
    satellite-Almanac-Information       SEQUENCE (SIZE (1..maxNoSat)) OF
```

```
        SEQUENCE {
            dATA-ID             DATA-ID,
            sAT-ID              SAT-ID,
            gps-e-alm           BIT STRING (SIZE (16)),
            gps-toa-alm         BIT STRING (SIZE (8)),
            gps-delta-I-alm     BIT STRING (SIZE (16)),
            omegadot-alm        BIT STRING (SIZE (16)),
            svhealth-alm        BIT STRING (SIZE (8)),
            gps-a-sqrt-alm      BIT STRING (SIZE (24)),
            omegazero-alm       BIT STRING (SIZE (24)),
            m-zero-alm          BIT STRING (SIZE (24)),
            gps-omega-alm       BIT STRING (SIZE (24)),
            gps-af-zero-alm     BIT STRING (SIZE (11)),
            gps-af-one-alm      BIT STRING (SIZE (11)),
            iE-Extensions       ProtocolExtensionContainer { { Satellite-Almanac-Information-
ExtIEs} }       OPTIONAL,
            ...
        },
    sVGlobalHealth-alm      BIT STRING (SIZE (364))     OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { GPS-Almanac-ExtIEs} }        OPTIONAL,
    ...
}

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

GPS-Almanac-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPSInformation ::= SEQUENCE (SIZE (1..maxNoGPSTypes)) OF
    SEQUENCE {
        gPSInformationItem      ENUMERATED {
            gPS-NavigationModel-and-TimeRecovery,
            gPS-Ionospheric-Model,
            gPS-UTC-Model,
            gPS-Almanac,
            gPS-RealTime-Integrity,
            ...
        },
        iE-Extensions           ProtocolExtensionContainer { { GPSInformation-ExtIEs} }
    OPTIONAL,
        ...
    }
-- This IE shall be present if the Information Type IE indicates ‘GPS Information’

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

GPS-Ionospheric-Model ::= SEQUENCE {
    alpha-zero-ionos        BIT STRING (SIZE (8)),
    alpha-one-ionos         BIT STRING (SIZE (8)),
    alpha-two-ionos         BIT STRING (SIZE (8)),
    alpha-three-ionos       BIT STRING (SIZE (8)),
    beta-zero-ionos         BIT STRING (SIZE (8)),
    beta-one-ionos          BIT STRING (SIZE (8)),
    beta-two-ionos          BIT STRING (SIZE (8)),
    beta-three-ionos        BIT STRING (SIZE (8)),
    iE-Extensions           ProtocolExtensionContainer { { GPS-Ionospheric-Model-ExtIEs} }
    OPTIONAL,
    ...
}

GPS-Ionospheric-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-NavigationModel-and-TimeRecovery ::= SEQUENCE (SIZE (1..maxNoSat)) OF
    SEQUENCE {
        tx-tow-nav                      INTEGER (0..1048575),
        sAT-ID                          SAT-ID,
        tlm-message-nav                 BIT STRING (SIZE (14)),
        tlm-revd-c-nav                  BIT STRING (SIZE (2)),
        ho-word-nav                     BIT STRING (SIZE (22)),
        w-n-nav                         BIT STRING (SIZE (10)),
        ca-or-p-on-l2-nav               BIT STRING (SIZE (2)),
        user-range-accuracy-index-nav   BIT STRING (SIZE (4)),
```

```
        sv-health-nav                   BIT STRING (SIZE (6)),
        iodc-nav                        BIT STRING (SIZE (10)),
        l2-p-dataflag-nav               BIT STRING (SIZE (1)),
        sf1-reserved-nav                BIT STRING (SIZE (87)),
        t-gd-nav                        BIT STRING (SIZE (8)),
        t-oc-nav                        BIT STRING (SIZE (16)),
        a-f-2-nav                       BIT STRING (SIZE (8)),
        a-f-1-nav                       BIT STRING (SIZE (16)),
        a-f-zero-nav                    BIT STRING (SIZE (22)),
        c-rs-nav                        BIT STRING (SIZE (16)),
        delta-n-nav                     BIT STRING (SIZE (16)),
        m-zero-nav                      BIT STRING (SIZE (32)),
        c-uc-nav                        BIT STRING (SIZE (16)),
        gps-e-nav                       BIT STRING (SIZE (32)),
        c-us-nav                        BIT STRING (SIZE (16)),
        a-sqrt-nav                      BIT STRING (SIZE (32)),
        t-oe-nav                        BIT STRING (SIZE (16)),
        fit-interval-flag-nav           BIT STRING (SIZE (1)),
        aodo-nav                        BIT STRING (SIZE (5)),
        c-ic-nav                        BIT STRING (SIZE (16)),
        omega-zero-nav                  BIT STRING (SIZE (32)),
        c-is-nav                        BIT STRING (SIZE (16)),
        i-zero-nav                      BIT STRING (SIZE (32)),
        c-rc-nav                        BIT STRING (SIZE (16)),
        gps-omega-nav                   BIT STRING (SIZE (32)),
        omegadot-nav                    BIT STRING (SIZE (24)),
        idot-nav                        BIT STRING (SIZE (14)),
        spare-zero-fill                 BIT STRING (SIZE (20)),
        iE-Extensions                   ProtocolExtensionContainer { { GPS-NavigationModel-and-
TimeRecoveryItem-ExtIEs} }      OPTIONAL,
        ...
    }

GPS-NavigationModel-and-TimeRecoveryItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-RealTime-Integrity ::= CHOICE {
    badSatellites               BadSatellites,
    noBadSatellite              NULL
}

GPS-RX-POS ::= SEQUENCE {
    geographicalCoordinate      GeographicalCoordinate,
    altitudeAndDirection        GA-AltitudeAndDirection,
    iE-Extensions               ProtocolExtensionContainer { { GPS-RX-POS-ExtIEs} } OPTIONAL,
    ...
}

GPS-RX-POS-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-Status-Health ::= ENUMERATED {
   udre-1-0,
   udre-0-75,
   udre-0-5,
   udre-0-3,
   udre-0-1,
   no-data,
   invalid-data
}

GPSTOW ::= INTEGER (0..604799)

GPS-UTC-Model ::= SEQUENCE {
    a-one-utc               BIT STRING (SIZE (24)),
    a-zero-utc              BIT STRING (SIZE (32)),
    t-ot-utc                BIT STRING (SIZE (8)),
    delta-t-ls-utc          BIT STRING (SIZE (8)),
    w-n-t-utc               BIT STRING (SIZE (8)),
    w-n-lsf-utc             BIT STRING (SIZE (8)),
    dn-utc                  BIT STRING (SIZE (8)),
    delta-t-lsf-utc         BIT STRING (SIZE (8)),
    iE-Extensions           ProtocolExtensionContainer { { GPS-UTC-Model-ExtIEs} }      OPTIONAL,
    ...
}

GPS-UTC-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

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)
-- "1": TFI 0, "2": TFI 1, "3": TFI 2, ...

GSMCellIndividualOffset ::= INTEGER (-50..50)

UNCHANGED TEXT IS REMOVED

-- 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 ::= {
    { ID id-neighbouring-LCR-TDD-CellInformation            CRITICALITY  ignore     EXTENSION
    Neighbouring-LCR-TDD-CellInformation            PRESENCE optional },
    ...
}

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 ::= {
    { ID id-RestrictionStateIndicator               CRITICALITY ignore          EXTENSION
RestrictionStateIndicator       PRESENCE optional   }|
    { ID id-DPC-Mode-Change-SupportIndicator    CRITICALITY ignore      EXTENSION   DPC-Mode-
Change-SupportIndicator     PRESENCE optional },
    ...
}
```

```
NeighbouringFDDCellMeasurementInformation ::= SEQUENCE {
    uC-ID                                   UC-ID,
    uARFCN                                  UARFCN,
    primaryScramblingCode                   PrimaryScramblingCode,
    iE-Extensions                           ProtocolExtensionContainer { {
NeighbouringFDDCellMeasurementInformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

Neighbouring-GSM-CellInformation ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-
CellInformationIE }}

Neighbouring-GSM-CellInformationIE RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-GSM-CellInformation    CRITICALITY ignore  TYPE    Neighbouring-GSM-
CellInformationIEs  PRESENCE    mandatory }
}

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

Neighbouring-GSM-CellInformationItem ::= SEQUENCE {
    cGI                                     CGI,
    cellIndividualOffset                    CellIndividualOffset    OPTIONAL,
    bSIC                                    BSIC,
    band-Indicator                          Band-Indicator,
    bCCH-ARFCN                              BCCH-ARFCN,
    iE-Extensions                           ProtocolExtensionContainer { { Neighbouring-GSM-
CellInformationItem-ExtIEs} } OPTIONAL,
    ...
}

Neighbouring-GSM-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
{ ID id-GSMCellIndividualOffset             CRITICALITY ignore          EXTENSION
GSMCellIndividualOffset     PRESENCE optional   },
    ...
}

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 shall be present if Sync Case = Case1 -- ,
    sCH-TimeSlot                    SCH-TimeSlot            OPTIONAL
    -- This IE shall be present if Sync Case = Case2 -- ,
    sCTD-Indicator          SCTD-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 ::= {
    { ID id-RestrictionStateIndicator               CRITICALITY ignore          EXTENSION
RestrictionStateIndicator       PRESENCE optional   },
    ...
}

NeighbouringTDDCellMeasurementInformation ::= SEQUENCE {
    uC-ID                               UC-ID,
    uARFCN                              UARFCN,
    cellParameterID                     CellParameterID,
    timeSlot                            TimeSlot                    OPTIONAL,
    midambleShiftAndBurstType           MidambleShiftAndBurstType   OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { {
NeighbouringTDDCellMeasurementInformationItem-ExtIEs} } OPTIONAL,
    ...
}
```

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

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

Neighbouring-LCR-TDD-CellInformationItem ::= SEQUENCE {
    c-ID                            C-ID,
    uARFCNforNt                     UARFCN,
    frameOffset                     FrameOffset         OPTIONAL,
    cellParameterID                 CellParameterID,
    sCTD-Indicator          SCTD-Indicator,
    cellIndividualOffset            CellIndividualOffset    OPTIONAL,
    dPCHConstantValue               DPCHConstantValue   OPTIONAL,
    pCCPCH-Power                    PCCPCH-Power            OPTIONAL,
    restrictionStateIndicator       RestrictionStateIndicator       OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { Neighbouring-LCR-TDD-
CellInformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

NrOfDLchannelisationcodes   ::= INTEGER (1..8)

NrOfTransportBlocks         ::= INTEGER (0..512)
```

UNCHANGED TEXT IS REMOVED

9.3.6 Constant Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes;

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

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

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

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

maxCodeNumComp-1                        INTEGER ::= 255
maxRateMatching                         INTEGER ::= 256
maxNoCodeGroups                         INTEGER ::= 256
maxNoOfDSCHs                            INTEGER ::= 10
maxNoOfDSCHsLCR                         INTEGER ::= 10
maxNoOfRB                               INTEGER ::= 32
maxNoOfUSCHs                            INTEGER ::= 10
maxNoOfUSCHsLCR                         INTEGER ::= 10
maxNoTFCIGroups                         INTEGER ::= 256
maxNrOfTFCs                             INTEGER ::= 1024
maxNrOfTFs                              INTEGER ::= 32
maxNrOfCCTrCHs                          INTEGER ::= 16
maxNrOfCCTrCHsLCR                       INTEGER ::= 16
maxNrOfDCHs                             INTEGER ::= 128
maxNrOfDL-Codes                         INTEGER ::= 8
maxNrOfDPCHs                            INTEGER ::= 240
maxNrOfDPCHsLCR                         INTEGER ::= 240
maxNrOfErrors                           INTEGER ::= 256
maxNrOfMACcshSDU-Length                 INTEGER ::= 16
maxNrOfPoints                           INTEGER ::= 15
maxNrOfRLs                              INTEGER ::= 16
maxNrOfRLSets                           INTEGER ::= maxNrOfRLs
maxNrOfRLs-1                            INTEGER ::= 15  -- maxNrOfRLs – 1
maxNrOfRLs-2                            INTEGER ::= 14  -- maxNrOfRLs – 2
maxNrOfULTs                             INTEGER ::= 15
maxNrOfULTsLCR                          INTEGER ::= 6
maxNrOfDLTs                             INTEGER ::= 15
maxNrOfDLTsLCR                          INTEGER ::= 6
maxRNCinURA-1                           INTEGER ::= 15
maxTTI-Count                            INTEGER ::= 4
maxCTFC                                 INTEGER ::= 16777215
maxNrOfNeighbouringRNCs                 INTEGER ::= 10
maxNrOfFDDNeighboursPerRNC              INTEGER ::= 256
maxNrOfGSMNeighboursPerRNC              INTEGER ::= 256
maxNrOfTDDNeighboursPerRNC              INTEGER ::= 256
maxNrOfFACHs                            INTEGER ::= 8
maxNrOfLCRTDDNeighboursPerRNC           INTEGER ::= 256
maxFACHCountPlus1                       INTEGER ::= 10
maxIBSEG                                INTEGER ::= 16
maxNrOfSCCPCHs                          INTEGER ::= 8
maxTFCI1Combs                           INTEGER ::= 512
maxTFCI2Combs                           INTEGER ::= 1024
maxTFCI2Combs-1                         INTEGER ::= 1023
maxTGPS                                 INTEGER ::= 6
maxNrOfTS                               INTEGER ::= 15
maxNrOfLevels                           INTEGER ::= 256
maxNoOfDSCHs-1                          INTEGER ::= 9
maxNrOfTsLCR                            INTEGER ::= 6
maxNoSat                                INTEGER ::= 16
maxNoGPSTypes                           INTEGER ::= 8
maxNrOfMeasNCell                        INTEGER ::= 96
maxNrOfMeasNCell-1                      INTEGER ::= 95  -- maxNrOfMeasNCell – 1

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

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

id-AllowedQueuingTime                                                    ProtocolIE-ID ::= 4
id-Allowed-Rate-Information                                              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-RL-CongestInd                                ProtocolIE-ID ::= 38
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD                         ProtocolIE-ID ::= 44
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD                         ProtocolIE-ID ::= 45
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD                      ProtocolIE-ID ::= 46
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD                             ProtocolIE-ID ::= 47
id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD                        ProtocolIE-ID ::= 48
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD                         ProtocolIE-ID ::= 49
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD                            ProtocolIE-ID ::= 50
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD                         ProtocolIE-ID ::= 51
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD                      ProtocolIE-ID ::= 52
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD                             ProtocolIE-ID ::= 53
id-FDD-DL-CodeInformation                                                ProtocolIE-ID ::= 54
id-DL-DPCH-Information-RL-ReconfPrepFDD                                  ProtocolIE-ID ::= 59
id-DL-DPCH-Information-RL-SetupRqstFDD                                   ProtocolIE-ID ::= 60
id-DL-DPCH-Information-RL-ReconfRqstFDD                                  ProtocolIE-ID ::= 61
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD                            ProtocolIE-ID ::= 62
id-DL-DPCH-InformationItem-RL-AdditionRspTDD                             ProtocolIE-ID ::= 63
id-DL-DPCH-InformationItem-RL-SetupRspTDD                                ProtocolIE-ID ::= 64
id-DLReferencePower                                                      ProtocolIE-ID ::= 67
id-DLReferencePowerList-DL-PC-Rqst                                       ProtocolIE-ID ::= 68
id-DL-ReferencePowerInformation-DL-PC-Rqst                               ProtocolIE-ID ::= 69
id-DPC-Mode                                                              ProtocolIE-ID ::= 12
id-DRXCycleLengthCoefficient                                             ProtocolIE-ID ::= 70
id-DedicatedMeasurementObjectType-DM-Rprt                                ProtocolIE-ID ::= 71
id-DedicatedMeasurementObjectType-DM-Rqst                                ProtocolIE-ID ::= 72
id-DedicatedMeasurementObjectType-DM-Rsp                                 ProtocolIE-ID ::= 73
id-DedicatedMeasurementType                                              ProtocolIE-ID ::= 74
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD                     ProtocolIE-ID ::= 82
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD                     ProtocolIE-ID ::= 83
id-Guaranteed-Rate-Information                                           ProtocolIE-ID ::= 41
id-IMSI                                                                  ProtocolIE-ID ::= 84
id-L3-Information                                                        ProtocolIE-ID ::= 85
id-AdjustmentPeriod                                                      ProtocolIE-ID ::= 90
id-MaxAdjustmentStep                                                     ProtocolIE-ID ::= 91
id-MeasurementFilterCoefficient                                          ProtocolIE-ID ::= 92
id-MessageStructure                                                      ProtocolIE-ID ::= 57
id-MeasurementID                                                         ProtocolIE-ID ::= 93
id-Neighbouring-GSM-CellInformation                                      ProtocolIE-ID ::= 13
id-Neighbouring-UMTS-CellInformationItem                                 ProtocolIE-ID ::= 95
id-PagingArea-PagingRqst                                                 ProtocolIE-ID ::= 102
id-FACH-FlowControlInformation                                           ProtocolIE-ID ::= 103
id-Permanent-NAS-UE-Identity                                             ProtocolIE-ID ::= 17
id-PowerAdjustmentType                                                   ProtocolIE-ID ::= 107
id-RANAP-RelocationInformation                                           ProtocolIE-ID ::= 109
id-RL-Information-PhyChReconfRqstFDD                                     ProtocolIE-ID ::= 110
id-RL-Information-PhyChReconfRqstTDD                                     ProtocolIE-ID ::= 111
id-RL-Information-RL-AdditionRqstFDD                                     ProtocolIE-ID ::= 112
id-RL-Information-RL-AdditionRqstTDD                                     ProtocolIE-ID ::= 113
id-RL-Information-RL-DeletionRqst                                        ProtocolIE-ID ::= 114
id-RL-Information-RL-FailureInd                                          ProtocolIE-ID ::= 115
id-RL-Information-RL-ReconfPrepFDD                                       ProtocolIE-ID ::= 116
```

```
id-RL-Information-RL-RestoreInd                                    ProtocolIE-ID ::= 117
id-RL-Information-RL-SetupRqstFDD                                  ProtocolIE-ID ::= 118
id-RL-Information-RL-SetupRqstTDD                                  ProtocolIE-ID ::= 119
id-RL-InformationItem-RL-CongestInd                                ProtocolIE-ID ::= 55
id-RL-InformationItem-DM-Rprt                                      ProtocolIE-ID ::= 120
id-RL-InformationItem-DM-Rqst                                      ProtocolIE-ID ::= 121
id-RL-InformationItem-DM-Rsp                                       ProtocolIE-ID ::= 122
id-RL-InformationItem-RL-PreemptRequiredInd                        ProtocolIE-ID ::= 2
id-RL-InformationItem-RL-SetupRqstFDD                              ProtocolIE-ID ::= 123
id-RL-InformationList-RL-CongestInd                                ProtocolIE-ID ::= 56
id-RL-InformationList-RL-AdditionRqstFDD                           ProtocolIE-ID ::= 124
id-RL-InformationList-RL-DeletionRqst                              ProtocolIE-ID ::= 125
id-RL-InformationList-RL-PreemptRequiredInd                        ProtocolIE-ID ::= 1
id-RL-InformationList-RL-ReconfPrepFDD                             ProtocolIE-ID ::= 126
id-RL-InformationResponse-RL-AdditionRspTDD                        ProtocolIE-ID ::= 127
id-RL-InformationResponse-RL-ReconfReadyTDD                        ProtocolIE-ID ::= 128
id-RL-InformationResponse-RL-SetupRspTDD                           ProtocolIE-ID ::= 129
id-RL-InformationResponseItem-RL-AdditionRspFDD                    ProtocolIE-ID ::= 130
id-RL-InformationResponseItem-RL-ReconfReadyFDD                    ProtocolIE-ID ::= 131
id-RL-InformationResponseItem-RL-ReconfRspFDD                      ProtocolIE-ID ::= 132
id-RL-InformationResponseItem-RL-SetupRspFDD                       ProtocolIE-ID ::= 133
id-RL-InformationResponseList-RL-AdditionRspFDD                    ProtocolIE-ID ::= 134
id-RL-InformationResponseList-RL-ReconfReadyFDD                    ProtocolIE-ID ::= 135
id-RL-InformationResponseList-RL-ReconfRspFDD                      ProtocolIE-ID ::= 136
id-RL-InformationResponse-RL-ReconfRspTDD                          ProtocolIE-ID ::= 28
id-RL-InformationResponseList-RL-SetupRspFDD                       ProtocolIE-ID ::= 137
id-RL-ReconfigurationFailure-RL-ReconfFail                         ProtocolIE-ID ::= 141
id-RL-Set-InformationItem-DM-Rprt                                  ProtocolIE-ID ::= 143
id-RL-Set-InformationItem-DM-Rqst                                  ProtocolIE-ID ::= 144
id-RL-Set-InformationItem-DM-Rsp                                   ProtocolIE-ID ::= 145
id-RL-Set-Information-RL-FailureInd                                ProtocolIE-ID ::= 146
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id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD                           ProtocolIE-ID ::= 76
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id-UL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD              ProtocolIE-ID ::= 100
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id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD                   ProtocolIE-ID ::= 105
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id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD                                   ProtocolIE-ID ::= 202
id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD                               ProtocolIE-ID ::= 203
id-DL-Timeslot-ISCP-LCR-Information-RL-ReconfPrepTDD                    ProtocolIE-ID ::= 204
id-DSCH-RNTI                                                            ProtocolIE-ID ::= 249
id-PDSCH-RL-ID                                                          ProtocolIE-ID ::= 323
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id-UL-Synchronisation-Parameters-LCR                                    ProtocolIE-ID ::= 464
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id-TDD-UL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD           ProtocolIE-ID ::= 482
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END
```

<<< END OF THE CORRECTED SECTION>>>

3GPP TSG-RAN3 Meeting #34
Sophia Antipolis, France, 17 – 21 February 2003

Tdoc ⌘R3-030339

CR-Form-v7

CHANGE REQUEST

⌘ **25.423** **CR** **790** ⌘ **rev** **2** ⌘ Current version: **5.4.0** ⌘

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

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

Title:	⌘	Support of Cell Individual Offset in RNSAP
Source:	⌘	RAN WG3
Work item code:	⌘	TEI
Date:	⌘	18/02/2003
Category:	⌘	**A**
Release:	⌘	Rel-5

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

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

Reason for change: ⌘

During radio link set up/addition in a DRNS, if there are GSM neighbouring cells to the cell(s) where a radio link is setup/added, the DRNC shall, if available, include *Cell Individual Offset* IE in the *Neighbouring GSM Cell Information* IE in the RADIO LINK SETUP/ADDITION RESPONSE message for each of the GSM neighbouring cells.

The value range used for Cell Individual Offset in RRC is as follows:
- Intra/Inter-frequency: -10…+10 dB
- Inter RAT/GSM: -50…+50 dB

However, RNSAP supports only a common Cell Individual Offset for Intra/Inter frequency case as well as Inter-RAT as follows:
- Intra/Inter Frequency case & Inter RAT/GSM: -10…+10 dB(in steps of 0.5 dB)

Summary of change: ⌘

RNSAP is aligned with RRC with respect to the support for Cell Individual Offset

Impact Analysis:

Impact assessment towards the previous version of the specification (same release): this CR has isolated impact on the previous version of the specification (same release) because only one function is impacted.
This CR has an impact under the protocol point of view.
The impact can be considered as isolated as it affects only one function, namely the Inter-RAT measurement event triggering.

Consequences if not approved: ⌘

If this CR is not approved, there will exist inconsistencies between RNSAP and RRC leading to undesirable behaviour in terms of Inter-RAT measurement event triggering. Further, full range of CIO for GSM supported by RRC, and is required

	by operators, cannot be used.

Clauses affected:	⌘	8.3.1.2, 8.3.2.2, 9.2.1.41c, New 9.2.1.x, 9.3.4 and 9.3.6				
		Y	**N**			
Other specs	⌘	**X**		Other core specifications	⌘	CR788 on 25.423 v 3.12.0 CR789 on 25.423 v 4.7.0
Affected:			**X**	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

How to create CRs using this form:

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

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

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

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

8.3 DCH Procedures

8.3.1 Radio Link Setup

8.3.1.1 General

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

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

8.3.1.2 Successful Operation

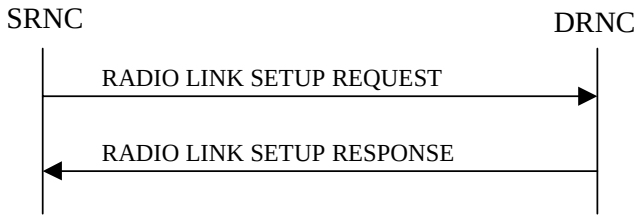

Figure 5: Radio Link Setup procedure: Successful Operation

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

Upon receipt of the RADIO LINK SETUP REQUEST message, 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.

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request for a time period not to exceed the value of the *Allowed Queuing Time* IE before starting to execute the request.

Transport Channels Handling:

DCH(s):

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

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

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

For a set of co-ordinated DCHs, the DRNS shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" for the QE in the UL data frames, ref. [4]. [FDD - If no Transport channel BER is available for the selected DCH, the DRNS shall use the Physical channel BER for the QE, ref. [4]. If all DCHs have *QE-Selector* IE set to "non-selected", the DRNS shall use the Physical channel BER for the QE, ref. [4].] [TDD - If no Transport channel BER is available for the selected DCH, the DRNS shall use 0 for the QE, ref. [4].]

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

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

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

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

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

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

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

DSCH(s):

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

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

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

[TDD - USCH(s)]:

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

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

[TDD - If the *USCH Information* IE is included in the RADIO LINK SETUP REQUEST message, the DRNS shall establish the requested USCHs, and the DRNC shall provide the *USCH Information Response* IE in the RADIO LINK SETUP RESPONSE message.]

[TDD – CCTrCH Handling]:

[TDD – If the *UL CCTrCH Information* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the new UL CCTrCH(s) according to the parameters given in the message.]

[TDD – If the *DL CCTrCH Information* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the new DL CCTrCH(s) according to the parameters given in the message.]

[TDD – If the *TPC CCTrCH List* IE is present in the RADIO LINK SETUP REQUEST message, the DRNS shall configure the identified UL CCTrCHs with TPC according to the parameters given in the message.]

HS-DSCH(s):

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

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

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

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

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

[FDD – If the *HS-SCCH Power Offset* IE is included in the *HS-DSCH Information* IE, the DRNS may use this value to determine the HS-SCCH power. If there are multiple HS-SCCHs assigned for one UE then the same power offset is applied to each of the HS-SCCH channel.]

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

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

[FDD – If RADIO LINK SETUP REQUEST message includes the *HS-DSCH Information* IE and the *PDSCH RL ID* IE indicates a Radio Link in the DRNS, then the DRNC shall include the *Measurement Power Offset* IE in the *HS-DSCH Information Response* IE in the RADIO LINK SETUP RESPONSE message.]

Physical Channels Handling:

[FDD - Compressed Mode]:

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

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

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

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

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

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

[FDD - DL Code Information]:

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

General:

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

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

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

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

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

Radio Link Handling:

Diversity Combination Control:

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

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

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

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

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

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

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

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

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

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

[FDD-Transmit Diversity]:

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

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

DL Power Control:

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

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

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

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

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

low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged.]

[1.28McpsTDD - If the *TSTD Support Indicator* IE is present, the DRNS shall apply this information when configuring the transmit diversity for the new radio link.]

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

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

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

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

[FDD – If the RADIO LINK SETUP REQUEST message includes the *DL Power Balancing Information* IE and the *Power Adjustment Type* IE is set to "Common" or "Individual", the DRNS shall activate the power balancing, if activation of power balancing by the RADIO LINK SETUP REQUEST message is supported, according to subclause 8.3.15, using the *DL Power Balancing Information* IE. If the DRNS starts the DL transmission and the activation of the power balancing at the same CFN, the initial power of the power balancing i.e. P_{init} shall be set to the power level indicated by the *Initial DL TX Power* IE (if received) or the decided DL TX power level on each DL channelisation code of a RL based on the *Primary CPICH Ec/No* IE or the *Enhanced Primary CPICH Ec/No* IE.]

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

Neighbouring Cell Handling:

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

- The DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Neighbouring FDD Cell Information* IE and/or *Neighbouring TDD Cell Information* IE in the *Neighbouring UMTS Cell Information* IE for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Frame Offset* IE, *Primary CPICH Power* IE, *Cell Individual Offset* IE, *STTD Support Indicator* IE, *Closed Loop Mode1 Support Indicator* IE, *Closed Loop Mode2 Support Indicator* IE, *Coverage Indicator* IE, *Antenna Co-location Indicator* IE and *HCS Prio* IE in the *Neighbouring FDD Cell Information* IE, and the *Frame Offset* IE, *Cell Individual Offset* IE, *DPCH Constant Value* IE, the *PCCPCH Power* IE, *Coverage Indicator* IE, *Antenna Co-location Indicator* IE and *HCS Prio* IE in the *Neighbouring TDD Cell Information* IE or the *Neighbouring TDD Cell Information LCR* IE.If the *Neighbouring TDD Cell Information* IE includes the *Sync Case* IE for the set to "Case1", the DRNC shall include the *Time Slot For SCH* IE in the *Neighbouring TDD Cell Information* IE. If the *Neighbouring TDD Cell Information* IE includes *Sync Case* IE set to "Case2", the DRNC shall include the *SCH Time Slot* IE in the *Neighbouring TDD Cell Information* IE.

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

- If the information is available, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *DPC Mode Change Support Indicator* IE for each neighbour cell in the *Neighbouring FDD Cell Information* IE

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

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

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

- If available, the DRNC shall include the *SNA Information* IE for the concerned neighbouring cells in the *Neighbouring FDD Cell Information* IE, the *Neighbouring TDD Cell Information* IE and the *Neighbouring TDD Cell Information LCR* IE.

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

When receiving the *SNA Information* IE in the RADIO LINK SETUP RESPONSE message, the SRNC should use it to restrict cell access based on SNA information. See also [40] for a broader description of the SNA access control.

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

If there are GERAN Iu-mode neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include, if available, the *GERAN Classmark* IE in the *Neighbouring GSM Cell Information* IE that is included in the RADIO LINK SETUP RESPONSE message for each of the GERAN Iu-mode neighbouring cells. Ref. [39] defines when the transmission of the *GERAN Classmark* IE will be required at the initiation of the Relocation Preparation procedure.

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

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

General:

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

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

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

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

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

If no *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message, the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *D-RNTI* IE, the *CN PS Domain Identifier* IE and/or the *CN CS Domain Identifier* IE for the CN domains (using LAC and RAC of the current cell) to which the DRNC is connected.

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

[TDD – If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *UARFCN* IE, the *Cell Parameter ID* IE and the *SCTD Indicator* IE.]

[3.84Mcps TDD - If the *D-RNTI* IE was included in the RADIO LINK SETUP REQUEST message the DRNC shall include in the RADIO LINK SETUP RESPONSE message the *Sync Case* IE and if the *Sync Case* IE is set to "Case 2", the DRNC shall also include the *SCH Time Slot* IE in the RADIO LINK SETUP RESPONSE message. If the included *Sync Case* IE is set to "Case1", the DRNC shall also include the *Time Slot For SCH* IE]

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

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

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

Depending on local configuration in the DRNS, the DRNC may include in the RADIO LINK SETUP RESPONSE message the *UTRAN Access Point Position* IE and the geographical co-ordinates of the cell, represented either by the *Cell GAI* IE or by the *Cell GA Additional Shapes* IE.

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

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

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

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

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

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

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

[FDD - Radio Link Set Handling]:

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

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the DRNS shall assign to the RL a unique value for the *RL Set ID* IE which uniquely identifies the RL as an RLSet 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 to each RL the same value for the *RL Set ID* IE which uniquely identifies these RLs as members of the same RL Set within the UE Context.]

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

Response Message:

Upon receipt of the RADIO LINK SETUP REQUEST message, the DRNS allocates the 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, for each set of co-ordinated DCHs and for each DSCH [TDD – and USCH]. This information shall be sent to the SRNC in the RADIO LINK SETUP RESPONSE message when all the RLs have been successfully established.

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

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

- [FDD – start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4].]
- [TDD – start transmission on the new RL immediately as specified in ref. [4].]

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

- if the *Delayed Activation* IE indicates "Separate Indication":
  - not start any DL transmission for the concerned RL on the Uu interface;
- if the *Delayed Activation* IE indicates "CFN":

- [FDD – start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4], however never before the CFN indicated in the *Activation CFN* IE.]

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

8.3.1.3 Unsuccessful Operation

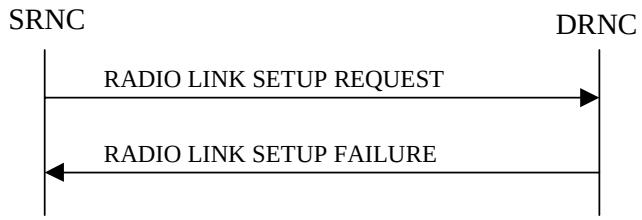

Figure 6: Radio Link Setup procedure: Unsuccessful Operation

If the establishment of at least one radio link is unsuccessful, the DRNC shall respond with a RADIO LINK SETUP FAILURE message. The DRNC shall include in the RADIO LINK SETUP FAILURE message a general *Cause* IE or a *Cause* IE for each failed radio link. The *Cause* IE indicates the reason for failure.

[FDD - 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.]

[FDD – If the RL identified by the *PDSCH RL ID* IE is a radio link in the DRNS and this RL is successfully established, then the DRNC shall allocate a DSCH-RNTI to the UE Context and include the *DSCH-RNTI* IE in the RADIO LINK SETUP FAILURE message.]

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

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

Typical cause values are:

Radio Network Layer Causes:

- [FDD - UL Scrambling Code Already in Use];
- DL Radio Resources not Available;
- UL Radio Resources not Available;
- [FDD - Combining Resources not available];
- Combining not Supported
- Requested Configuration not Supported;
- Cell not Available;
- [FDD - Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- Number of DL codes not supported;
- Number of UL codes not supported;
- Dedicated Transport Channel Type not Supported;
- DL Shared Channel Type not Supported;
- [TDD - UL Shared Channel Type not Supported];

- [FDD - UL Spreading Factor not Supported];
- [FDD - DL Spreading Factor not Supported];
- CM not Supported;
- [FDD – DPC mode change not Supported];
- Cell reserved for operator use;
- Delayed Activation not supported.

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

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

8.3.1.4 Abnormal Conditions

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

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

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

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

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

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

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

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

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

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Split Type* IE set to the value "Hard" and the *Length Of TFCI2* IE set to the value "1", "2", "5", "8", "9" or "10", then the DRNC shall reject the procedure using the RADIO LINK SETUP FAILURE message.]

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

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

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

8.3.2 Radio Link Addition

8.3.2.1 General

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

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

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

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

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

8.3.2.2 Successful Operation

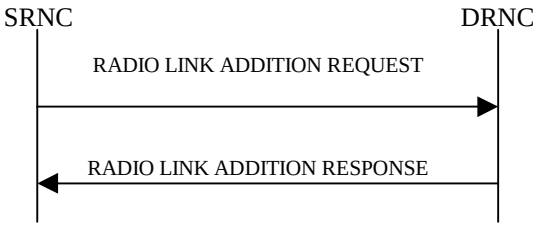

Figure 7: Radio Link Addition procedure: Successful Operation

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

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

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

Transport Channel Handling:

[TDD - The DRNC shall include the *UL/DL DPCH Information* IE within the *UL/DL CCTrCH Information* IE for each CCTrCH that requires DPCHs.]

DSCH:

[TDD - If the radio link to be added includes a DSCH, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a *DSCH Information Response* IE for each DSCH.]

[TDD - USCH:]

[TDD - If the radio link to be added includes any USCHs, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a *USCH Information Response* IE for each USCH.]

Physical Channels Handling:

[FDD-Compressed Mode]:

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

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

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

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

FDD - If the *Active Pattern Sequence Information* IE is not included, the DRNS shall not activate the ongoing compressed mode pattern in the new RLs, but the ongoing pattern in the existing RL shall be maintained.]

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

[FDD-DL Code Information]:

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

General:

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

Radio Link Handling:

Diversity Combination Control:

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

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

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

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

In the RADIO LINK ADDITION RESPONSE message, the DRNC shall indicate for each RL with the Diversity Indication in the *RL Information Response* IE whether the RL is combined or not:

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

- In the case of not combining, the DRNC shall include in the *DCH Information Response* IE in the RADIO LINK ADDITION RESPONSE message, the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH, of the RL.

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

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

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

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

[FDD-Transmit Diversity]:

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

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

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

DL Power Control:

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

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

[FDD - The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that RLS or Power Balancing is activated. No inner loop power control or power balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [10] subclause 5.2.1.2) and the power control procedure (see 8.3.7)].

[TDD – The Initial DL TX Power shall be applied until UL synchronisation is achieved on the Uu interface for that RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref. [22] subclause 4.2.3.3).].

[FDD - If the *DPC Mode* IE is present in the RADIO LINK ADDITION REQUEST message, the DRNC shall apply the DPC mode indicated in the message, and be prepared that the DPC mode may be changed

during the lifetime of the RL. If the *DPC Mode* IE is not present in the RADIO LINK ADDITION REQUEST message, DPC mode 0 shall be applied (see ref. [10]).]

UL Power Control:

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

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

The DRNC shall provide the configured *Maximum DL TX Power* IE and *Minimum DL TX Power* IE for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. The DRNS shall not transmit with a higher power than indicated by the *Maximum DL TX Power* IE or lower than indicated by the *Minimum DL TX Power* IE on any DL DPCH of the RL [FDD – except during compressed mode, when the δP_{curr}, as described in ref.[10] subclause 5.2.1.3, shall be added to the maximum DL power for the associated compressed frame.]

[FDD – If the power balancing is active with the Power Balancing Adjustment Type of the UE Context set to "Individual" in the existing RL(s) and the RADIO LINK ADDITION REQUEST message includes the *DL Reference Power* IE, the DRNS shall activate the power balancing and use the *DL Reference Power* IE for the power balancing procedure in the new RL(s), if activation of power balancing by the RADIO LINK ADDITION REQUEST message is supported, according to subclause 8.3.15. If the DRNS starts the DL transmission and the activation of the power balancing at the same CFN, the initial power of the power balancing, i.e. P_{init} shall be set to the power level which is calculated based on the *Primary CPICH Ec/No* IE or the *Enhanced Primary CPICH Ec/No* IE (if received), or to the power level which is calculated based on the power relative to the Primary CPICH power used by the existing RLs.]

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

Neighbouring Cell Handling:

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

- The DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Neighbouring FDD Cell Information* IE and/or *Neighbouring TDD Cell Information* IE in the *Neighbouring UMTS Cell Information* IE for each neighbouring FDD cell and/or TDD cell respectively. In addition, if the information is available, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Frame Offset* IE, *Primary CPICH Power* IE, *Cell Individual Offset* IE, *STTD Support Indicator* IE, *Closed Loop Mode1 Support Indicator* IE, *Closed Loop Mode2 Support Indicator* IE, *Coverage Indicator* IE, *Antenna Co-location Indicator* IE and *HCS Prio* IE in the *Neighbouring FDD Cell Information* IE, and the *Frame Offset* IE, *Cell Individual Offset* IE, *DPCH Constant Value* IE and the *PCCPCH Power* IE, *Coverage Indicator* IE, *Antenna Co-location Indicator* IE and *HCS Prio* IE in the *Neighbouring TDD Cell Information* IE. or the *Neighbouring TDD Cell Information LCR* IE.If the *Neighbouring TDD Cell Information* IE includes the *Sync Case* IE set to "Case1", the DRNC shall include the *Time SlotFor SCH* IE in the *Neighbouring TDD Cell Information* IE. If the *Neighbouring TDD Cell Information* IE includes the *Sync Case* IE set to "Case2", the DRNC shall include the *SCH Time Slot* IE in the *Neighbouring TDD Cell Information* IE.

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

- [FDD - The DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *DPC Mode Change Support Indicator* IE for each neighbour cell in the *Neighbouring FDD Cell Information* IE if this information is available.]

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

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

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

- If available, the DRNC shall include the *SNA Information* IE for the concerned neighbouring cells in the *Neighbouring FDD Cell Information* IE, the *Neighbouring TDD Cell Information* IE and the *Neighbouring TDD Cell Information LCR* IE.

If there are GSM neighbouring cells to the cell(s) in which 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 Cell Individual Offset* IE and/or the *Cell Individual Offset* IE in the *Neighbouring GSM Cell Information* IE. If the *GSM Cell Individual Offset* IE is included in the *Neighbouring GSM Cell Information* IE, then the DRNC shall include the *Cell Individual Offset* IE in the *Neighbouring GSM Cell Information IE.*, If available the DRNC shall also include the *Coverage Indicator* IE, *Antenna Co-location Indicator* IE and *HCS Prio* IE in the *Neighbouring GSM Cell Information* IE. If available, the DRNC shall also include the *SNA Information* IE for the concerned neighbouring cells in the *Neighbouring GSM Cell Information* IE.

When receiving the *SNA Information* IE in the RADIO LINK ADDITION RESPONSE message, the SRNC should use it to restrict cell access based on SNA information. See also [40] for a broader description of the SNA access control.

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

If there are GERAN Iu-mode neighbouring cells to the cell(s) where a radio link is established, the DRNC shall include, if available, the *GERAN Classmark* IE in the *Neighbouring GSM Cell Information* IE that is included in the RADIO LINK ADDITION RESPONSE message for each of the GERAN Iu-mode neighbouring cells. Ref. [39] defines when the transmission of the *GERAN Classmark* IE will be required at the initiation of the Relocation Preparation procedure.

[1.28Mcps TDD – Uplink Synchronisation Parameters LCR]:

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

General:

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

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, the DRNSshall, if supported, activate SSDT for the concerned new RLusing the indicated SSDT Cell Identity.]

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

Depending on local configuration in the DRNS, the DRNC may include in the RADIO LINK ADDITION RESPONSE message the *UTRAN Access Point Position* IE and the geographical co-ordinates of the cell, represented either by the *Cell GAI* IE or by the *Cell GA Additional Shapes* IE.

For each Radio Link established in a cell in whichat least one URA Identity is being broadcast, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message a URA Information for this cell including the *URA ID* IE, the *Multiple URAs Indicator* IE indicating whether or not multiple URA

Identities are being broadcast in the cell, and the *RNC-ID* IEsof all other RNCs that have at least one cell within the URA identified by the *URA ID* IE.

[FDD - If the UE has been allocated one or several DCH controlled by DRAC and if the DRNS supports the DRAC, the DRNC shall include in the RADIO LINK ADDITION RESPONSE message the *Secondary CCPCH Info* IE for the FACH in which the DRAC information is sent, for each Radio Link established in a cell in which DRAC is active. If the DRNS does not support DRAC, the DRNC shall not provide these IEs in the RADIO LINK ADDITION RESPONSE message.]

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

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

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

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

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

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

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

[FDD-Radio Link Set Handling]:

[FDD – For each RL not having a common generation of the TPC commands in the DL with another RL, the DRNS shall assign to the RL a unique value for the *RL Set ID* IE which uniquely identifies the RL as an 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 to each RL the same value for the *RL Set ID* IE which uniquely identifies these RLs as members of the same RL Set within the UE Context.]

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

Response message:

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

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

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

- [FDD -start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4].]
- [TDD – start transmission on the new RL immediately as specified in ref. [4].]

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

- if the *Delayed Activation* IE indicates "Separate Indication":
  - not start any DL transmission for the concerning RL on the Uu interface;
- if the *Delayed Activation* IE indicates "CFN":
  - [FDD – start transmission on the DL DPDCH(s) of the new RL as specified in ref. [4], however never before the CFN indicated in the *Activation CFN* IE.]
- [TDD – start transmission on the new RL at the CFN indicated in the *Activation CFN* IE as specified in ref. [4].]

8.3.2.3 Unsuccessful Operation

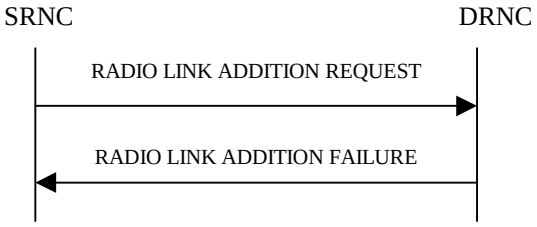

Figure 8: Radio Link Addition procedure: Unsuccessful Operation

If the establishment of at least one RL is unsuccessful, the DRNC shall respond witha RADIO LINK ADDITION FAILURE message. DRNC shall include in the RADIO LINK ADDITION FAILURE message a general *Cause* IE or a *Cause* IE for each failed radio link. The *Cause* IE indicates the reason for failure.

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

Typical cause values are:

Radio Network Layer Causes:

- DL Radio Resources not Available;
- UL Radio Resources not Available;
- Combining Resources not Available;
- Combining not Supported
- Cell not Available;
- [FDD - Requested Tx Diversity Mode not Supported];
- Power Level not Supported;
- CM not Supported;
- Reconfiguration CFN not Elapsed;

- Number of DL Codes not Supported;
- Number of UL codes not Supported;
- [FDD – DPC mode change not Supported];
- Cell reserved for operator use;
- Delayed Activation not supported.

Transport Layer Causes:

- Transport Resource Unavailable.

Miscellaneous Causes:

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

8.3.2.4 Abnormal Conditions

If the RADIO LINK ADDITION REQUEST message includes a *C-ID* IE corresponding to a cell reserved for operator use and the Permanent NAS UE Identity is not available in the DRNC for the considered UE Context, the DRNC shall reject the procedure for this particular Radio Link and send the RADIO LINK ADDITION FAILURE message.

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Transmission Gap Pattern Sequence Status* IEs in the *Active Pattern Sequence Information* IE and it does not address exactly all ongoing compressed mode patterns the DRNS shall reject the Radio Link Addition procedure and shall respond with a RADIO LINK ADDITION FAILURE message with the *Cause* IE value "Invalid CM settings".]

[FDD - If the RADIO LINK ADDITION REQUEST message is used to establish a new RL without compressed mode when compressed mode is active for the existing RL(s) (as specified in subclause 8.3.2.2), and if at least one of the new RLs is to be established in a cell that has the same UARFCN (both UL and DL) as at least one cell with an already existing RL, the DRNS shall reject the Radio Link Addition procedure and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

[FDD - If the power balancing is active with the Power Balancing Adjustment Type of the UE Context set to "Individual" in the existing RL(s) and if the *DL Reference Power* IEs are included in the *RL Information* IE but the *DL Reference Power* IE is not present for each RL in the *RL Information* IE, the DRNC shall reject the Radio Link Addition procedure and shall respond with a RADIO LINK ADDITION FAILURE message.]

[FDD - If the RADIO LINK ADDITION REQUEST message includes the *DL Reference Power* IEs in the *RL Information* IE but the power balancing is not active in the existing RL(s) or the power balancing is active with the Power Balancing Adjustment Type of the UE Context set to "Common" in the existing RL(s), the DRNC shall reject the Radio Link Addition procedure and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Power Balancing status not compatible".]

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

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

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

<<< Unchanged Text is Removed>>>

9.2.1.41C Neighbouring GSM Cell Information

The *Neighbouring GSM Cell Information* IE provides information for all GSM Cells that are a neighbouring cell to a cell in the DRNC.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
Neighbouring GSM Cell Information		*1..<maxnoofGSMneighbours>*			GLOBAL	ignore
>CGI		*1*		Cell Global Identity as defined in ref. [1].	–	
>>LAI		*1*			–	
>>>PLMN Identity	M		OCTET STRING (3)	- digits 0 to 9, two digits per octet, - each digit encoded 0000 to 1001, - 1111 used as filler - bit 4 to 1 of octet n encoding digit 2n-1 - bit 8 to 5 of octet n encoding digit 2n -The PLMN Identity consists of 3 digits from MCC followed by either -a filler plus 2 digits from MNC (in case of 2 digit MNC) or -3 digits from MNC (in case of a 3 digit MNC).	–	
>>>LAC	M		OCTET STRING (2)	0000 and FFFE not allowed	–	
>>CI	M		OCTET STRING (2)		–	
>Cell Individual Offset	O		9.2.1.7	The Cell Individual Offset to be used for UEs using DCHs. Should be ignored if the *GSM Cell Individual Offset* IE is included	–	
>BSIC		*1*		Base Station Identity Code as defined in ref. [1].	–	
>>NCC	M		BIT STRING(3)	Network Colour Code.	–	
>>BCC	M		BIT STRING(3)	Base Station Colour Code.	–	
>Band Indicator	M		ENUMERATED(DCS 1800 band, PCS 1900 band, …)	Indicates whether or not the BCCH ARFCN belongs to the 1800 band or 1900 band of GSM frequencies.	–	
>BCCH ARFCN	M		INTEGER(0..1023)	BCCH Frequency as defined in ref. [29].	–	
>Coverage Indicator	O		9.2.1.12G		YES	ignore
>Antenna Co-location Indicator	O		9.2.1.2C		YES	ignore
>HCS Prio	O		9.2.1.30N		YES	ignore
> SNA Information	O		9.2.1.52Ca		YES	ignore
>GERAN Cell Capability	O		9.2.1.30Fa		YES	ignore
>GERAN Classmark	O		9.2.1.30Fb		YES	ignore
>GSM Cell Individual Offset	O		9.2.1.x	The GSM Cell Individual Offset to be used for UEs using DCHs.	YES	ignore

Range bound	Explanation
maxnoofGSMneighbours	Maximum number of neighbouring GSM cells for one cell.

<<< Unchanged Text is Removed>>>

9.2.1.x GSM Cell Individual Offset

GSM Cell individual offset is an offset that will be applied by UE to the measurement results for GSM carrier RSSI according to [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
GSM Cell Individual Offset			INTEGER (-50,..,+50)	Unit in dB. Step size is 1 dB

<<< Unchanged Text is Removed>>>

9.3.4 Information Element Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxCodeNumComp-1,
    maxNrOfFACHs,
    maxFACHCountPlus1,
    maxIBSEG,
    maxNoOfDSCHs,
    maxNoOfDSCHs-1,
    maxNoOfUSCHs,
    maxNoTFCIGroups,
    maxNoCodeGroups,
    maxNrOfDCHs,
    maxNrOfDL-Codes,
    maxNrOfDLTs,
    maxNrOfDLTsLCR,
    maxNrOfDPCHs,
    maxNrOfDPCHsLCR,
    maxNrOfErrors,
    maxNrOfFDDNeighboursPerRNC,
    maxNrOfMACcshSDU-Length,
    maxNrOfNeighbouringRNCs,
    maxNrOfTDDNeighboursPerRNC,
    maxNrOfLCRTDDNeighboursPerRNC,
    maxNrOfTS,
    maxNrOfULTs,
    maxNrOfULTsLCR,
    maxNrOfGSMNeighboursPerRNC,
    maxRateMatching,
    maxNrOfPoints,
    maxNoOfRB,
    maxNrOfRLs,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxCTFC,
    maxRNCinURA-1,
    maxNrOfSCCPCHs,
    maxTFCI1Combs,
    maxTFCI2Combs,
    maxTFCI2Combs-1,
    maxTGPS,
    maxTTI-Count,
    maxNoGPSTypes,
    maxNoSat,
    maxNrOfSNAs,
    maxNrOfHARQProc,
    maxNrOfHSSCCHCodes,
    maxNrOfMACdFlows,
    maxNrOfMACdFlows-1,
    maxNrOfPDUIndexes,
    maxNrOfPDUIndexes-1,
    maxNrOfPrioQueues,
    maxNrOfPrioQueues-1,

    id-Allowed-Rate-Information,
    id-AntennaColocationIndicator,
    id-BindingID,
    id-Cell-Capacity-Class-Value,
    id-CellCapabilityContainer-FDD,
    id-CellCapabilityContainer-TDD,
    id-CellCapabilityContainer-TDD-LCR,
    id-CoverageIndicator,
    id-DPC-Mode-Change-SupportIndicator,
```

```
    id-DSCH-Specific-FDD-Additional-List,
    id-GERAN-Cell-Capability,
    id-GERAN-Classmark,
    id-Guaranteed-Rate-Information,
    id-HCS-Prio,
    id-Load-Value,
    id-Load-Value-IncrDecrThres,
    id-Neighbouring-GSM-CellInformation,
    id-Neighbouring-UMTS-CellInformationItem,
    id-neighbouring-LCR-TDD-CellInformation,
    id-NRT-Load-Information-Value,
    id-NRT-Load-Information-Value-IncrDecrThres,
    id-OnModification,
    id-Received-Total-Wideband-Power-Value,
    id-Received-Total-Wideband-Power-Value-IncrDecrThres,
    id-RT-Load-Value,
    id-RT-Load-Value-IncrDecrThres,
    id-SFNSFNMeasurementThresholdInformation,
    id-SNA-Information,
    id-TrafficClass,
    id-Transmitted-Carrier-Power-Value,
    id-Transmitted-Carrier-Power-Value-IncrDecrThres,
    id-TUTRANGPSMeasurementThresholdInformation,
    id-UL-Timeslot-ISCP-Value,
    id-UL-Timeslot-ISCP-Value-IncrDecrThres,
    maxNrOfLevels,
    maxNrOfMeasNCell,
    maxNrOfMeasNCell-1,
    id-MessageStructure,
    id-EnhancedDSCHPC,
    id-RestrictionStateIndicator,
    id-Rx-Timing-Deviation-Value-LCR,
    id-TransportLayerAddress,
    id-TypeOfError,
    id-Angle-Of-Arrival-Value-LCR,
    id-IPDL-TDD-ParametersLCR,
    id-DSCH-InitialWindowSize,
    id-GSMCellIndividualOffset
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;

UNCHANGED TEXT IS REMOVED

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

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

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

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

GA-CellAdditionalShapes ::= CHOICE {
    pointWithUncertainty                            GA-PointWithUnCertainty,
    pointWithUncertaintyEllipse                     GA-PointWithUnCertaintyEllipse,
    pointWithAltitude                               GA-PointWithAltitude,
    pointWithAltitudeAndUncertaintyEllipsoid        GA-PointWithAltitudeAndUncertaintyEllipsoid,
    ellipsoidArc                                    GA-EllipsoidArc,
    ...
```

```
    }

GA-AltitudeAndDirection ::= SEQUENCE {
    directionOfAltitude     ENUMERATED {height, depth},
    altitude                INTEGER (0..32767),
    ...
}

GA-EllipsoidArc ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    innerRadius                 INTEGER (0..65535),
    uncertaintyRadius           INTEGER (0..127),
    offsetAngle                 INTEGER (0..179),
    includedAngle               INTEGER (0..179),
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-EllipsoidArc-ExtIEs} }
OPTIONAL,
    ...
}

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

GA-PointWithAltitude ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    altitudeAndDirection        GA-AltitudeAndDirection,
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithAltitude-ExtIEs} }
OPTIONAL,
    ...
}

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

GA-PointWithAltitudeAndUncertaintyEllipsoid ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    altitudeAndDirection        GA-AltitudeAndDirection,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    uncertaintyAltitude         INTEGER (0..127),
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-
PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs} } OPTIONAL,
    ...
}

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

GA-PointWithUnCertaintyEllipse ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithUnCertaintyEllipse-
ExtIEs} } OPTIONAL,
    ...
}

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

GA-UncertaintyEllipse ::= SEQUENCE {
    uncertaintySemi-major       INTEGER (0..127),
    uncertaintySemi-minor       INTEGER (0..127),
    orientationOfMajorAxis      INTEGER (0..179),
    ...
}

GA-PointWithUnCertainty ::=SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    uncertaintyCode         INTEGER (0..127),
    iE-Extensions           ProtocolExtensionContainer { {GA-PointWithUnCertainty-ExtIEs} }
OPTIONAL,
    ...
}
```

```
GA-PointWithUnCertainty-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 ::= {
    ...
}

GERAN-Cell-Capability ::=   BIT STRING (SIZE (16))
-- First bit:  A/Gb mode --
-- Second bit: Iu mode   --
-- Note: undefined bits are considered as a spare bit and spare bits shall be set to 0 by the
transmitter and shall be ignored by the receiver. --

GERAN-Classmark ::=         OCTET STRING
    -- GERAN Classmark as defined in (38) --

GPS-Almanac ::= SEQUENCE {
    wn_a-alm                BIT STRING (SIZE (8)),
    satellite-Almanac-Information       SEQUENCE (SIZE (1..maxNoSat)) OF
        SEQUENCE {
            dATA-ID             DATA-ID,
            sAT-ID              SAT-ID,
            gps-e-alm           BIT STRING (SIZE (16)),
            gps-toa-alm         BIT STRING (SIZE (8)),
            gps-delta-I-alm     BIT STRING (SIZE (16)),
            omegadot-alm        BIT STRING (SIZE (16)),
            svhealth-alm        BIT STRING (SIZE (8)),
            gps-a-sqrt-alm      BIT STRING (SIZE (24)),
            omegazero-alm       BIT STRING (SIZE (24)),
            m-zero-alm          BIT STRING (SIZE (24)),
            gps-omega-alm       BIT STRING (SIZE (24)),
            gps-af-zero-alm     BIT STRING (SIZE (11)),
            gps-af-one-alm      BIT STRING (SIZE (11)),
            iE-Extensions       ProtocolExtensionContainer { { Satellite-Almanac-Information-
ExtIEs} }       OPTIONAL,
            ...
        },
    sVGlobalHealth-alm      BIT STRING (SIZE (364))     OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { GPS-Almanac-ExtIEs} }        OPTIONAL,
    ...
}

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

GPS-Almanac-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPSInformation ::= SEQUENCE (SIZE (1..maxNoGPSTypes)) OF
    SEQUENCE {
        gPSInformationItem      ENUMERATED {
            gPS-NavigationModel-and-TimeRecovery,
            gPS-Ionospheric-Model,
            gPS-UTC-Model,
            gPS-Almanac,
            gPS-RealTime-Integrity,
            ...
```

```
        },
        iE-Extensions           ProtocolExtensionContainer { { GPSInformation-ExtIEs} }
    OPTIONAL,
        ...
    }
-- This IE shall be present if the Information Type IE indicates 'GPS Information'

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

GPS-Ionospheric-Model ::= SEQUENCE {
    alpha-zero-ionos        BIT STRING (SIZE (8)),
    alpha-one-ionos         BIT STRING (SIZE (8)),
    alpha-two-ionos         BIT STRING (SIZE (8)),
    alpha-three-ionos       BIT STRING (SIZE (8)),
    beta-zero-ionos         BIT STRING (SIZE (8)),
    beta-one-ionos          BIT STRING (SIZE (8)),
    beta-two-ionos          BIT STRING (SIZE (8)),
    beta-three-ionos        BIT STRING (SIZE (8)),
    iE-Extensions           ProtocolExtensionContainer { { GPS-Ionospheric-Model-ExtIEs} }
    OPTIONAL,
    ...
}

GPS-Ionospheric-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-NavigationModel-and-TimeRecovery ::= SEQUENCE (SIZE (1..maxNoSat)) OF
    SEQUENCE {
        tx-tow-nav                      INTEGER (0..1048575),
        sAT-ID                          SAT-ID,
        tlm-message-nav                 BIT STRING (SIZE (14)),
        tlm-revd-c-nav                  BIT STRING (SIZE (2)),
        ho-word-nav                     BIT STRING (SIZE (22)),
        w-n-nav                         BIT STRING (SIZE (10)),
        ca-or-p-on-l2-nav               BIT STRING (SIZE (2)),
        user-range-accuracy-index-nav   BIT STRING (SIZE (4)),
        sv-health-nav                   BIT STRING (SIZE (6)),
        iodc-nav                        BIT STRING (SIZE (10)),
        l2-p-dataflag-nav               BIT STRING (SIZE (1)),
        sf1-reserved-nav                BIT STRING (SIZE (87)),
        t-gd-nav                        BIT STRING (SIZE (8)),
        t-oc-nav                        BIT STRING (SIZE (16)),
        a-f-2-nav                       BIT STRING (SIZE (8)),
        a-f-1-nav                       BIT STRING (SIZE (16)),
        a-f-zero-nav                    BIT STRING (SIZE (22)),
        c-rs-nav                        BIT STRING (SIZE (16)),
        delta-n-nav                     BIT STRING (SIZE (16)),
        m-zero-nav                      BIT STRING (SIZE (32)),
        c-uc-nav                        BIT STRING (SIZE (16)),
        gps-e-nav                       BIT STRING (SIZE (32)),
        c-us-nav                        BIT STRING (SIZE (16)),
        a-sqrt-nav                      BIT STRING (SIZE (32)),
        t-oe-nav                        BIT STRING (SIZE (16)),
        fit-interval-flag-nav           BIT STRING (SIZE (1)),
        aodo-nav                        BIT STRING (SIZE (5)),
        c-ic-nav                        BIT STRING (SIZE (16)),
        omega-zero-nav                  BIT STRING (SIZE (32)),
        c-is-nav                        BIT STRING (SIZE (16)),
        i-zero-nav                      BIT STRING (SIZE (32)),
        c-rc-nav                        BIT STRING (SIZE (16)),
        gps-omega-nav                   BIT STRING (SIZE (32)),
        omegadot-nav                    BIT STRING (SIZE (24)),
        idot-nav                        BIT STRING (SIZE (14)),
        spare-zero-fill                 BIT STRING (SIZE (20)),
        iE-Extensions                   ProtocolExtensionContainer { { GPS-NavigationModel-and-
TimeRecoveryItem-ExtIEs} }      OPTIONAL,
        ...
    }

GPS-NavigationModel-and-TimeRecoveryItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-RealTime-Integrity ::= CHOICE {
    badSatellites               BadSatellites,
    noBadSatellite              NULL
```

```
}

GPS-RX-POS ::= SEQUENCE {
    geographicalCoordinate      GeographicalCoordinate,
    altitudeAndDirection        GA-AltitudeAndDirection,
    iE-Extensions               ProtocolExtensionContainer { { GPS-RX-POS-ExtIEs} } OPTIONAL,
    ...
}

GPS-RX-POS-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GPS-Status-Health ::= ENUMERATED {
   udre-1-0,
   udre-0-75,
   udre-0-5,
   udre-0-3,
   udre-0-1,
   no-data,
   invalid-data
}

GPSTOW ::= INTEGER (0..604799)

GPS-UTC-Model ::= SEQUENCE {
    a-one-utc               BIT STRING (SIZE (24)),
    a-zero-utc              BIT STRING (SIZE (32)),
    t-ot-utc                BIT STRING (SIZE (8)),
    delta-t-ls-utc          BIT STRING (SIZE (8)),
    w-n-t-utc               BIT STRING (SIZE (8)),
    w-n-lsf-utc             BIT STRING (SIZE (8)),
    dn-utc                  BIT STRING (SIZE (8)),
    delta-t-lsf-utc         BIT STRING (SIZE (8)),
    iE-Extensions           ProtocolExtensionContainer { { GPS-UTC-Model-ExtIEs} }      OPTIONAL,
    ...
}

GPS-UTC-Model-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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)
-- "1": TFI 0, "2": TFI 1, "3": TFI 2, ...
GSMCellIndividualOffset ::= INTEGER (-50..50)

UNCHANGED TEXT IS REMOVED
-- N

Nack-Power-Offset ::= INTEGER (0..8,...)
-- According to mapping in ref. [21] subclause 4.2.1

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 ::= {
    { ID id-neighbouring-LCR-TDD-CellInformation            CRITICALITY  ignore     EXTENSION
    Neighbouring-LCR-TDD-CellInformation            PRESENCE optional },
    ...
}

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 ::= {
    { ID id-RestrictionStateIndicator               CRITICALITY ignore          EXTENSION
RestrictionStateIndicator       PRESENCE optional   }|
    { ID id-DPC-Mode-Change-SupportIndicator    CRITICALITY ignore      EXTENSION   DPC-Mode-
Change-SupportIndicator     PRESENCE optional }|
    { ID id-CoverageIndicator               CRITICALITY ignore          EXTENSION
CoverageIndicator                   PRESENCE optional   }|
    { ID id-AntennaColocationIndicator      CRITICALITY ignore          EXTENSION
AntennaColocationIndicator      PRESENCE optional   }|
    { ID id-HCS-Prio                        CRITICALITY ignore          EXTENSION HCS-Prio
                    PRESENCE optional   }|
    { ID id-CellCapabilityContainer-FDD         CRITICALITY ignore      EXTENSION
    CellCapabilityContainer-FDD             PRESENCE optional }|
    { ID id-SNA-Information                 CRITICALITY ignore          EXTENSION SNA-Information
            PRESENCE optional },
    ...
}

NeighbouringFDDCellMeasurementInformation ::= SEQUENCE {
    uC-ID                               UC-ID,
    uARFCN                              UARFCN,
    primaryScramblingCode               PrimaryScramblingCode,
    iE-Extensions                       ProtocolExtensionContainer { {
NeighbouringFDDCellMeasurementInformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

Neighbouring-GSM-CellInformation ::= ProtocolIE-Single-Container {{ Neighbouring-GSM-
CellInformationIE }}

Neighbouring-GSM-CellInformationIE RNSAP-PROTOCOL-IES ::= {
    { ID id-Neighbouring-GSM-CellInformation    CRITICALITY ignore  TYPE    Neighbouring-GSM-
CellInformationIEs  PRESENCE    mandatory }
}

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

Neighbouring-GSM-CellInformationItem ::= SEQUENCE {
    cGI                                 CGI,
    cellIndividualOffset                CellIndividualOffset    OPTIONAL,
    bSIC                                BSIC,
    band-Indicator                      Band-Indicator,
```

```
    bCCH-ARFCN                          BCCH-ARFCN,
    iE-Extensions                       ProtocolExtensionContainer { { Neighbouring-GSM-
CellInformationItem-ExtIEs} } OPTIONAL,
    ...
}

Neighbouring-GSM-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-CoverageIndicator               CRITICALITY ignore          EXTENSION
CoverageIndicator                   PRESENCE optional   } |
    { ID id-AntennaColocationIndicator      CRITICALITY ignore          EXTENSION
AntennaColocationIndicator      PRESENCE optional   } |
    { ID id-HCS-Prio                        CRITICALITY ignore          EXTENSION HCS-Prio
                        PRESENCE optional   } |
    { ID id-SNA-Information                  CRITICALITY ignore          EXTENSION SNA-Information
                        PRESENCE optional   } |
    { ID id-GERAN-Cell-Capability           CRITICALITY ignore          EXTENSION GERAN-Cell-
Capability              PRESENCE optional   } |
    { ID id-GERAN-Classmark                 CRITICALITY ignore          EXTENSION GERAN-Classmark
                        PRESENCE optional   }|
    { ID id-GSMCellIndividualOffset             CRITICALITY ignore          EXTENSION
GSMCellIndividualOffset     PRESENCE optional   },

    ...
}

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 shall be present if Sync Case = Case1 -- ,
    sCH-TimeSlot                    SCH-TimeSlot            OPTIONAL
    -- This IE shall be present if Sync Case = Case2 -- ,
    sCTD-Indicator          SCTD-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 ::= {
    { ID id-RestrictionStateIndicator               CRITICALITY ignore          EXTENSION
RestrictionStateIndicator       PRESENCE optional   }|
    { ID id-CoverageIndicator               CRITICALITY ignore          EXTENSION
CoverageIndicator                   PRESENCE optional   }|
    { ID id-AntennaColocationIndicator      CRITICALITY ignore          EXTENSION
AntennaColocationIndicator      PRESENCE optional   }|
    { ID id-HCS-Prio                        CRITICALITY ignore          EXTENSION HCS-Prio
                        PRESENCE optional   }|
    { ID id-CellCapabilityContainer-TDD             CRITICALITY ignore  EXTENSION
    CellCapabilityContainer-TDD         PRESENCE optional }|
    { ID id-SNA-Information                         CRITICALITY ignore  EXTENSION SNA-Information
                        PRESENCE optional   },
    ...
}

NeighbouringTDDCellMeasurementInformation ::= SEQUENCE {
    uC-ID                               UC-ID,
    uARFCN                              UARFCN,
    cellParameterID                     CellParameterID,
    timeSlot                            TimeSlot                    OPTIONAL,
    midambleShiftAndBurstType           MidambleShiftAndBurstType   OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { {
NeighbouringTDDCellMeasurementInformationItem-ExtIEs} } OPTIONAL,
    ...
}

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

NeighbouringTDDCellMeasurementInformationLCR ::= SEQUENCE {
```

```
    uC-ID                           UC-ID,
    uARFCN                          UARFCN,
    cellParameterID                 CellParameterID,
    timeSlotLCR                     TimeSlotLCR                 OPTIONAL,
    midambleShiftLCR                MidambleShiftLCR            OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { {
NeighbouringTDDCellMeasurementInformationLCRItem-ExtIEs} } OPTIONAL,
    ...
}

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

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

Neighbouring-LCR-TDD-CellInformationItem ::= SEQUENCE {
    c-ID                        C-ID,
    uARFCNforNt                 UARFCN,
    frameOffset                 FrameOffset         OPTIONAL,
    cellParameterID             CellParameterID,
    sCTD-Indicator          SCTD-Indicator,
    cellIndividualOffset        CellIndividualOffset    OPTIONAL,
    dPCHConstantValue           DPCHConstantValue   OPTIONAL,
    pCCPCH-Power                PCCPCH-Power            OPTIONAL,
    restrictionStateIndicator   RestrictionStateIndicator       OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { { Neighbouring-LCR-TDD-
CellInformationItem-ExtIEs} } OPTIONAL,
    ...
}

Neighbouring-LCR-TDD-CellInformationItem-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    { ID id-CellCapabilityContainer-TDD-LCR CRITICALITY ignore  EXTENSION
    CellCapabilityContainer-TDD-LCR     PRESENCE optional }|
    { ID id-SNA-Information                 CRITICALITY ignore  EXTENSION   SNA-Information
                        PRESENCE optional },
    ...
}

NrOfDLchannelisationcodes   ::= INTEGER (1..8)

NrOfTransportBlocks         ::= INTEGER (0..512)

NRT-Load-Information-Value-IncrDecrThres ::= INTEGER(0..3)

NRT-Load-Information-Value ::= INTEGER(0..3)

NRTLoadInformationValue ::= SEQUENCE {
        uplinkNRTLoadInformationValue       INTEGER(0..3),
        downlinkNRTLoadInformationValue     INTEGER(0..3)
}
```

UNCHANGED TEXT IS REMOVED

9.3.6 Constant Definitions

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes;

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

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

id-commonTransportChannelResourcesInitialisation            ProcedureCode ::= 0
id-commonTransportChannelResourcesRelease                   ProcedureCode ::= 1
id-compressedModeCommand                                    ProcedureCode ::= 2
id-downlinkPowerControl                                     ProcedureCode ::= 3
id-downlinkPowerTimeslotControl                             ProcedureCode ::= 4
id-downlinkSignallingTransfer                               ProcedureCode ::= 5
id-errorIndication                                          ProcedureCode ::= 6
id-dedicatedMeasurementFailure                              ProcedureCode ::= 7
id-dedicatedMeasurementInitiation                           ProcedureCode ::= 8
id-dedicatedMeasurementReporting                            ProcedureCode ::= 9
id-dedicatedMeasurementTermination                          ProcedureCode ::= 10
id-paging                                                   ProcedureCode ::= 11
id-physicalChannelReconfiguration                           ProcedureCode ::= 12
id-privateMessage                                           ProcedureCode ::= 13
id-radioLinkAddition                                        ProcedureCode ::= 14
id-radioLinkCongestion                                      ProcedureCode ::= 34
id-radioLinkDeletion                                        ProcedureCode ::= 15
id-radioLinkFailure                                         ProcedureCode ::= 16
id-radioLinkPreemption                                      ProcedureCode ::= 17
id-radioLinkRestoration                                     ProcedureCode ::= 18
id-radioLinkSetup                                           ProcedureCode ::= 19
id-relocationCommit                                         ProcedureCode ::= 20
id-synchronisedRadioLinkReconfigurationCancellation         ProcedureCode ::= 21
id-synchronisedRadioLinkReconfigurationCommit               ProcedureCode ::= 22
id-synchronisedRadioLinkReconfigurationPreparation          ProcedureCode ::= 23
id-unSynchronisedRadioLinkReconfiguration                   ProcedureCode ::= 24
id-uplinkSignallingTransfer                                 ProcedureCode ::= 25
id-commonMeasurementFailure                                 ProcedureCode ::= 26
id-commonMeasurementInitiation                              ProcedureCode ::= 27
id-commonMeasurementReporting                               ProcedureCode ::= 28
id-commonMeasurementTermination                             ProcedureCode ::= 29
id-informationExchangeFailure                               ProcedureCode ::= 30
id-informationExchangeInitiation                            ProcedureCode ::= 31
id-informationReporting                                     ProcedureCode ::= 32
id-informationExchangeTermination                           ProcedureCode ::= 33
id-reset                                                    ProcedureCode ::= 35
id-radioLinkActivation                                      ProcedureCode ::= 36
id-gERANuplinkSignallingTransfer                            ProcedureCode ::= 37
id-radioLinkParameterUpdate                                 ProcedureCode ::= 38

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

maxCodeNumComp-1                        INTEGER ::= 255
maxRateMatching                         INTEGER ::= 256
maxNoCodeGroups                         INTEGER ::= 256
maxNoOfDSCHs                            INTEGER ::= 10
maxNoOfDSCHsLCR                         INTEGER ::= 10
maxNoOfRB                               INTEGER ::= 32
maxNoOfUSCHs                            INTEGER ::= 10
maxNoOfUSCHsLCR                         INTEGER ::= 10
maxNoTFCIGroups                         INTEGER ::= 256
maxNrOfTFCs                             INTEGER ::= 1024
maxNrOfTFs                              INTEGER ::= 32
maxNrOfCCTrCHs                          INTEGER ::= 16
maxNrOfCCTrCHsLCR                       INTEGER ::= 16
maxNrOfDCHs                             INTEGER ::= 128
maxNrOfDL-Codes                         INTEGER ::= 8
maxNrOfDPCHs                            INTEGER ::= 240
maxNrOfDPCHsLCR                         INTEGER ::= 240
maxNrOfErrors                           INTEGER ::= 256
maxNrOfMACcshSDU-Length                 INTEGER ::= 16
maxNrOfPoints                           INTEGER ::= 15
maxNrOfRLs                              INTEGER ::= 16
maxNrOfRLSets                           INTEGER ::= maxNrOfRLs
maxNrOfRLSets-1                         INTEGER ::= 15  -- maxNrOfRLSets - 1
maxNrOfRLs-1                            INTEGER ::= 15  -- maxNrOfRLs – 1
maxNrOfRLs-2                            INTEGER ::= 14  -- maxNrOfRLs – 2
maxNrOfULTs                             INTEGER ::= 15
maxNrOfULTsLCR                          INTEGER ::= 6
maxNrOfDLTs                             INTEGER ::= 15
maxNrOfDLTsLCR                          INTEGER ::= 6
```

```
maxRNCinURA-1                           INTEGER ::= 15
maxTTI-Count                            INTEGER ::= 4
maxCTFC                                 INTEGER ::= 16777215
maxNrOfNeighbouringRNCs                 INTEGER ::= 10
maxNrOfFDDNeighboursPerRNC              INTEGER ::= 256
maxNrOfGSMNeighboursPerRNC              INTEGER ::= 256
maxNrOfTDDNeighboursPerRNC              INTEGER ::= 256
maxNrOfFACHs                            INTEGER ::= 8
maxNrOfLCRTDDNeighboursPerRNC           INTEGER ::= 256
maxFACHCountPlus1                       INTEGER ::= 10
maxIBSEG                                INTEGER ::= 16
maxNrOfSCCPCHs                          INTEGER ::= 8
maxTFCI1Combs                           INTEGER ::= 512
maxTFCI2Combs                           INTEGER ::= 1024
maxTFCI2Combs-1                         INTEGER ::= 1023
maxTGPS                                 INTEGER ::= 6
maxNrOfTS                               INTEGER ::= 15
maxNrOfLevels                           INTEGER ::= 256
maxNoOfDSCHs-1                          INTEGER ::= 9
maxNrOfTsLCR                            INTEGER ::= 6
maxNoSat                                INTEGER ::= 16
maxNoGPSTypes                           INTEGER ::= 8
maxNrOfMeasNCell                        INTEGER ::= 96
maxNrOfMeasNCell-1                      INTEGER ::= 95  -- maxNrOfMeasNCell – 1
maxResetContext                         INTEGER ::= 250
maxNrOfHARQProc                         INTEGER ::= 8
maxNrOfHSSCCHCodes                      INTEGER ::= 4
maxNrOfMACdFlows                        INTEGER ::= 8
maxNrOfMACdFlows-1                      INTEGER ::= 7   -- maxNrOfMACdFlows - 1
maxNrOfPDUIndexes                       INTEGER ::= 8
maxNrOfPDUIndexes-1                     INTEGER ::= 7   -- maxNrOfPDUIndexes - 1
maxNrOfPrioQueues                       INTEGER ::= 8
maxNrOfPrioQueues-1                     INTEGER ::= 7   -- maxNrOfPrioQueues - 1
maxNrOfSNAs                             INTEGER ::= 65535

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

id-AllowedQueuingTime                                                   ProtocolIE-ID ::= 4
id-Allowed-Rate-Information                                             ProtocolIE-ID ::= 42
id-AntennaColocationIndicator                                           ProtocolIE-ID ::= 309
id-BindingID                                                            ProtocolIE-ID ::= 5
id-C-ID                                                                 ProtocolIE-ID ::= 6
id-C-RNTI                                                               ProtocolIE-ID ::= 7
id-Cell-Capacity-Class-Value                                            ProtocolIE-ID ::= 303
id-CFN                                                                  ProtocolIE-ID ::= 8
id-CN-CS-DomainIdentifier                                               ProtocolIE-ID ::= 9
id-CN-PS-DomainIdentifier                                               ProtocolIE-ID ::= 10
id-Cause                                                                ProtocolIE-ID ::= 11
id-CoverageIndicator                                                    ProtocolIE-ID ::= 310
id-CriticalityDiagnostics                                               ProtocolIE-ID ::= 20
id-ContextInfoItem-Reset                                                ProtocolIE-ID ::= 211
id-D-RNTI                                                               ProtocolIE-ID ::= 21
id-D-RNTI-ReleaseIndication                                             ProtocolIE-ID ::= 22
id-DCHs-to-Add-FDD                                                      ProtocolIE-ID ::= 26
id-DCHs-to-Add-TDD                                                      ProtocolIE-ID ::= 27
id-DCH-DeleteList-RL-ReconfPrepFDD                                      ProtocolIE-ID ::= 30
id-DCH-DeleteList-RL-ReconfPrepTDD                                      ProtocolIE-ID ::= 31
id-DCH-DeleteList-RL-ReconfRqstFDD                                      ProtocolIE-ID ::= 32
id-DCH-DeleteList-RL-ReconfRqstTDD                                      ProtocolIE-ID ::= 33
id-DCH-FDD-Information                                                  ProtocolIE-ID ::= 34
id-DCH-TDD-Information                                                  ProtocolIE-ID ::= 35
id-FDD-DCHs-to-Modify                                                   ProtocolIE-ID ::= 39
id-TDD-DCHs-to-Modify                                                   ProtocolIE-ID ::= 40
id-DCH-InformationResponse                                              ProtocolIE-ID ::= 43
id-DCH-Rate-InformationItem-RL-CongestInd                               ProtocolIE-ID ::= 38
id-DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD                        ProtocolIE-ID ::= 44
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD                        ProtocolIE-ID ::= 45
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD                     ProtocolIE-ID ::= 46
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD                            ProtocolIE-ID ::= 47
id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD                       ProtocolIE-ID ::= 48
id-DL-CCTrCH-InformationListIE-RL-AdditionRspTDD                        ProtocolIE-ID ::= 49
id-DL-CCTrCH-InformationListIE-RL-SetupRspTDD                           ProtocolIE-ID ::= 50
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD                        ProtocolIE-ID ::= 51
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD                     ProtocolIE-ID ::= 52
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD                            ProtocolIE-ID ::= 53
```

```
id-FDD-DL-CodeInformation                                        ProtocolIE-ID ::= 54
id-DL-DPCH-Information-RL-ReconfPrepFDD                          ProtocolIE-ID ::= 59
id-DL-DPCH-Information-RL-SetupRqstFDD                           ProtocolIE-ID ::= 60
id-DL-DPCH-Information-RL-ReconfRqstFDD                          ProtocolIE-ID ::= 61
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD                    ProtocolIE-ID ::= 62
id-DL-DPCH-InformationItem-RL-AdditionRspTDD                     ProtocolIE-ID ::= 63
id-DL-DPCH-InformationItem-RL-SetupRspTDD                        ProtocolIE-ID ::= 64
id-DL-DPCH-TimingAdjustment                                      ProtocolIE-ID ::= 278
id-DLReferencePower                                              ProtocolIE-ID ::= 67
id-DLReferencePowerList-DL-PC-Rqst                               ProtocolIE-ID ::= 68
id-DL-ReferencePowerInformation-DL-PC-Rqst                       ProtocolIE-ID ::= 69
id-DPC-Mode                                                      ProtocolIE-ID ::= 12
id-DRXCycleLengthCoefficient                                     ProtocolIE-ID ::= 70
id-DedicatedMeasurementObjectType-DM-Fail-Ind                    ProtocolIE-ID ::= 470
id-DedicatedMeasurementObjectType-DM-Fail                        ProtocolIE-ID ::= 471
id-DedicatedMeasurementObjectType-DM-Rprt                        ProtocolIE-ID ::= 71
id-DedicatedMeasurementObjectType-DM-Rqst                        ProtocolIE-ID ::= 72
id-DedicatedMeasurementObjectType-DM-Rsp                         ProtocolIE-ID ::= 73
id-DedicatedMeasurementType                                      ProtocolIE-ID ::= 74
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspFDD             ProtocolIE-ID ::= 82
id-FACH-InfoForUESelectedS-CCPCH-CTCH-ResourceRspTDD             ProtocolIE-ID ::= 83
id-Guaranteed-Rate-Information                                   ProtocolIE-ID ::= 41
id-IMSI                                                          ProtocolIE-ID ::= 84
id-HCS-Prio                                                      ProtocolIE-ID ::= 311
id-L3-Information                                                ProtocolIE-ID ::= 85
id-AdjustmentPeriod                                              ProtocolIE-ID ::= 90
id-MaxAdjustmentStep                                             ProtocolIE-ID ::= 91
id-MeasurementFilterCoefficient                                  ProtocolIE-ID ::= 92
id-MessageStructure                                              ProtocolIE-ID ::= 57
id-MeasurementID                                                 ProtocolIE-ID ::= 93
id-Neighbouring-GSM-CellInformation                              ProtocolIE-ID ::= 13
id-Neighbouring-UMTS-CellInformationItem                         ProtocolIE-ID ::= 95
id-NRT-Load-Information-Value                                    ProtocolIE-ID ::= 305
id-NRT-Load-Information-Value-IncrDecrThres                      ProtocolIE-ID ::= 306
id-PagingArea-PagingRqst                                         ProtocolIE-ID ::= 102
id-FACH-FlowControlInformation                                   ProtocolIE-ID ::= 103
id-PartialReportingIndicator                                     ProtocolIE-ID ::= 472
id-Permanent-NAS-UE-Identity                                     ProtocolIE-ID ::= 17
id-PowerAdjustmentType                                           ProtocolIE-ID ::= 107
id-RANAP-RelocationInformation                                   ProtocolIE-ID ::= 109
id-RL-Information-PhyChReconfRqstFDD                             ProtocolIE-ID ::= 110
id-RL-Information-PhyChReconfRqstTDD                             ProtocolIE-ID ::= 111
id-RL-Information-RL-AdditionRqstFDD                             ProtocolIE-ID ::= 112
id-RL-Information-RL-AdditionRqstTDD                             ProtocolIE-ID ::= 113
id-RL-Information-RL-DeletionRqst                                ProtocolIE-ID ::= 114
id-RL-Information-RL-FailureInd                                  ProtocolIE-ID ::= 115
id-RL-Information-RL-ReconfPrepFDD                               ProtocolIE-ID ::= 116
id-RL-Information-RL-RestoreInd                                  ProtocolIE-ID ::= 117
id-RL-Information-RL-SetupRqstFDD                                ProtocolIE-ID ::= 118
id-RL-Information-RL-SetupRqstTDD                                ProtocolIE-ID ::= 119
id-RL-InformationItem-RL-CongestInd                              ProtocolIE-ID ::= 55
id-RL-InformationItem-DM-Rprt                                    ProtocolIE-ID ::= 120
id-RL-InformationItem-DM-Rqst                                    ProtocolIE-ID ::= 121
id-RL-InformationItem-DM-Rsp                                     ProtocolIE-ID ::= 122
id-RL-InformationItem-RL-PreemptRequiredInd                      ProtocolIE-ID ::= 2
id-RL-InformationItem-RL-SetupRqstFDD                            ProtocolIE-ID ::= 123
id-RL-InformationList-RL-CongestInd                              ProtocolIE-ID ::= 56
id-RL-InformationList-RL-AdditionRqstFDD                         ProtocolIE-ID ::= 124
id-RL-InformationList-RL-DeletionRqst                            ProtocolIE-ID ::= 125
id-RL-InformationList-RL-PreemptRequiredInd                      ProtocolIE-ID ::= 1
id-RL-InformationList-RL-ReconfPrepFDD                           ProtocolIE-ID ::= 126
id-RL-InformationResponse-RL-AdditionRspTDD                      ProtocolIE-ID ::= 127
id-RL-InformationResponse-RL-ReconfReadyTDD                      ProtocolIE-ID ::= 128
id-RL-InformationResponse-RL-SetupRspTDD                         ProtocolIE-ID ::= 129
id-RL-InformationResponseItem-RL-AdditionRspFDD                  ProtocolIE-ID ::= 130
id-RL-InformationResponseItem-RL-ReconfReadyFDD                  ProtocolIE-ID ::= 131
id-RL-InformationResponseItem-RL-ReconfRspFDD                    ProtocolIE-ID ::= 132
id-RL-InformationResponseItem-RL-SetupRspFDD                     ProtocolIE-ID ::= 133
id-RL-InformationResponseList-RL-AdditionRspFDD                  ProtocolIE-ID ::= 134
id-RL-InformationResponseList-RL-ReconfReadyFDD                  ProtocolIE-ID ::= 135
id-RL-InformationResponseList-RL-ReconfRspFDD                    ProtocolIE-ID ::= 136
id-RL-InformationResponse-RL-ReconfRspTDD                        ProtocolIE-ID ::= 28
id-RL-InformationResponseList-RL-SetupRspFDD                     ProtocolIE-ID ::= 137
id-RL-ReconfigurationFailure-RL-ReconfFail                       ProtocolIE-ID ::= 141
id-RL-Set-InformationItem-DM-Rprt                                ProtocolIE-ID ::= 143
id-RL-Set-InformationItem-DM-Rqst                                ProtocolIE-ID ::= 144
id-RL-Set-InformationItem-DM-Rsp                                 ProtocolIE-ID ::= 145
id-RL-Set-Information-RL-FailureInd                              ProtocolIE-ID ::= 146
id-RL-Set-Information-RL-RestoreInd                              ProtocolIE-ID ::= 147
```

```
id-RL-Set-Successful-InformationItem-DM-Fail                                ProtocolIE-ID ::= 473
id-RL-Set-Unsuccessful-InformationItem-DM-Fail                              ProtocolIE-ID ::= 474
id-RL-Set-Unsuccessful-InformationItem-DM-Fail-Ind                          ProtocolIE-ID ::= 475
id-RL-Successful-InformationItem-DM-Fail                                    ProtocolIE-ID ::= 476
id-RL-Unsuccessful-InformationItem-DM-Fail                                  ProtocolIE-ID ::= 477
id-RL-Unsuccessful-InformationItem-DM-Fail-Ind                              ProtocolIE-ID ::= 478
id-ReportCharacteristics                                                    ProtocolIE-ID ::= 152
id-Reporting-Object-RL-FailureInd                                           ProtocolIE-ID ::= 153
id-Reporing-Object-RL-RestoreInd                                            ProtocolIE-ID ::= 154
id-RT-Load-Value                                                            ProtocolIE-ID ::= 307
id-RT-Load-Value-IncrDecrThres                                              ProtocolIE-ID ::= 308
id-S-RNTI                                                                   ProtocolIE-ID ::= 155
id-ResetIndicator                                                           ProtocolIE-ID ::= 244
id-RNC-ID                                                                   ProtocolIE-ID ::= 245
id-SAI                                                                      ProtocolIE-ID ::= 156
id-SRNC-ID                                                                  ProtocolIE-ID ::= 157
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD                   ProtocolIE-ID ::= 159
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD                      ProtocolIE-ID ::= 160
id-TransportBearerID                                                        ProtocolIE-ID ::= 163
id-TransportBearerRequestIndicator                                          ProtocolIE-ID ::= 164
id-TransportLayerAddress                                                    ProtocolIE-ID ::= 165
id-TypeOfError                                                              ProtocolIE-ID ::= 140
id-UC-ID                                                                    ProtocolIE-ID ::= 166
id-UL-CCTrCH-AddInformation-RL-ReconfPrepTDD                                ProtocolIE-ID ::= 167
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD                            ProtocolIE-ID ::= 169
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD                                ProtocolIE-ID ::= 171
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD                                ProtocolIE-ID ::= 172
id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD                           ProtocolIE-ID ::= 173
id-UL-CCTrCH-InformationListIE-RL-AdditionRspTDD                            ProtocolIE-ID ::= 174
id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD                            ProtocolIE-ID ::= 175
id-UL-CCTrCH-InformationListIE-RL-SetupRspTDD                               ProtocolIE-ID ::= 176
id-UL-DPCH-Information-RL-ReconfPrepFDD                                     ProtocolIE-ID ::= 177
id-UL-DPCH-Information-RL-ReconfRqstFDD                                     ProtocolIE-ID ::= 178
id-UL-DPCH-Information-RL-SetupRqstFDD                                      ProtocolIE-ID ::= 179
id-UL-DPCH-InformationItem-PhyChReconfRqstTDD                               ProtocolIE-ID ::= 180
id-UL-DPCH-InformationItem-RL-AdditionRspTDD                                ProtocolIE-ID ::= 181
id-UL-DPCH-InformationItem-RL-SetupRspTDD                                   ProtocolIE-ID ::= 182
id-UL-DPCH-InformationAddListIE-RL-ReconfReadyTDD                           ProtocolIE-ID ::= 183
id-UL-SIRTarget                                                             ProtocolIE-ID ::= 184
id-URA-Information                                                          ProtocolIE-ID ::= 185
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD                 ProtocolIE-ID ::= 188
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD                    ProtocolIE-ID ::= 189
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD                    ProtocolIE-ID ::= 190
id-Active-Pattern-Sequence-Information                                      ProtocolIE-ID ::= 193
id-AdjustmentRatio                                                          ProtocolIE-ID ::= 194
id-CauseLevel-RL-AdditionFailureFDD                                         ProtocolIE-ID ::= 197
id-CauseLevel-RL-AdditionFailureTDD                                         ProtocolIE-ID ::= 198
id-CauseLevel-RL-ReconfFailure                                              ProtocolIE-ID ::= 199
id-CauseLevel-RL-SetupFailureFDD                                            ProtocolIE-ID ::= 200
id-CauseLevel-RL-SetupFailureTDD                                            ProtocolIE-ID ::= 201
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD                         ProtocolIE-ID ::= 205
id-DL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD                         ProtocolIE-ID ::= 206
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD                         ProtocolIE-ID ::= 207
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD                         ProtocolIE-ID ::= 208
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD                         ProtocolIE-ID ::= 209
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD                         ProtocolIE-ID ::= 210
id-DL-DPCH-InformationAddListIE-RL-ReconfReadyTDD                           ProtocolIE-ID ::= 212
id-DL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD                        ProtocolIE-ID ::= 213
id-DL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD                        ProtocolIE-ID ::= 214
id-DSCHs-to-Add-TDD                                                         ProtocolIE-ID ::= 215
id-DSCHs-to-Add-FDD                                                         ProtocolIE-ID ::= 216
id-DSCH-DeleteList-RL-ReconfPrepTDD                                         ProtocolIE-ID ::= 217
id-DSCH-Delete-RL-ReconfPrepFDD                                             ProtocolIE-ID ::= 218
id-DSCH-FDD-Information                                                     ProtocolIE-ID ::= 219
id-DSCH-InformationListIE-RL-AdditionRspTDD                                 ProtocolIE-ID ::= 220
id-DSCH-InformationListIEs-RL-SetupRspTDD                                   ProtocolIE-ID ::= 221
id-DSCH-TDD-Information                                                     ProtocolIE-ID ::= 222
id-DSCH-FDD-InformationResponse                                             ProtocolIE-ID ::= 223
id-DSCH-Information-RL-SetupRqstFDD                                         ProtocolIE-ID ::= 226
id-DSCH-ModifyList-RL-ReconfPrepTDD                                         ProtocolIE-ID ::= 227
id-DSCH-Modify-RL-ReconfPrepFDD                                             ProtocolIE-ID ::= 228
id-DSCH-Specific-FDD-Additional-List                                        ProtocolIE-ID ::= 324
id-DSCHsToBeAddedOrModified-FDD                                             ProtocolIE-ID ::= 229
id-DSCHToBeAddedOrModifiedList-RL-ReconfReadyTDD                            ProtocolIE-ID ::= 230
id-EnhancedDSCHPC                                                           ProtocolIE-ID ::= 29
id-EnhancedDSCHPCIndicator                                                  ProtocolIE-ID ::= 225
id-GA-Cell                                                                  ProtocolIE-ID ::= 232
id-GA-CellAdditionalShapes                                                  ProtocolIE-ID ::= 3
id-SSDT-CellIDforEDSCHPC                                                    ProtocolIE-ID ::= 246
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id-Transmission-Gap-Pattern-Sequence-Information                    ProtocolIE-ID ::= 255
id-UL-CCTrCH-DeleteInformation-RL-ReconfPrepTDD                     ProtocolIE-ID ::= 256
id-UL-CCTrCH-ModifyInformation-RL-ReconfPrepTDD                     ProtocolIE-ID ::= 257
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD                 ProtocolIE-ID ::= 258
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 259
id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD                 ProtocolIE-ID ::= 260
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD                 ProtocolIE-ID ::= 261
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD                 ProtocolIE-ID ::= 262
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD                 ProtocolIE-ID ::= 263
id-UL-DPCH-InformationDeleteListIE-RL-ReconfReadyTDD                ProtocolIE-ID ::= 264
id-UL-DPCH-InformationModifyListIE-RL-ReconfReadyTDD                ProtocolIE-ID ::= 265
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureTDD         ProtocolIE-ID ::= 266
id-USCHs-to-Add                                                     ProtocolIE-ID ::= 267
id-USCH-DeleteList-RL-ReconfPrepTDD                                 ProtocolIE-ID ::= 268
id-USCH-InformationListIE-RL-AdditionRspTDD                         ProtocolIE-ID ::= 269
id-USCH-InformationListIEs-RL-SetupRspTDD                           ProtocolIE-ID ::= 270
id-USCH-Information                                                 ProtocolIE-ID ::= 271
id-USCH-ModifyList-RL-ReconfPrepTDD                                 ProtocolIE-ID ::= 272
id-USCHToBeAddedOrModifiedList-RL-ReconfReadyTDD                    ProtocolIE-ID ::= 273
id-DL-Physical-Channel-Information-RL-SetupRqstTDD                  ProtocolIE-ID ::= 274
id-UL-Physical-Channel-Information-RL-SetupRqstTDD                  ProtocolIE-ID ::= 275
id-ClosedLoopMode1-SupportIndicator                                 ProtocolIE-ID ::= 276
id-ClosedLoopMode2-SupportIndicator                                 ProtocolIE-ID ::= 277
id-STTD-SupportIndicator                                            ProtocolIE-ID ::= 279
id-CFNReportingIndicator                                            ProtocolIE-ID ::= 14
id-CNOriginatedPage-PagingRqst                                      ProtocolIE-ID ::= 23
id-InnerLoopDLPCStatus                                              ProtocolIE-ID ::= 24
id-PropagationDelay                                                 ProtocolIE-ID ::= 25
id-RxTimingDeviationForTA                                           ProtocolIE-ID ::= 36
id-timeSlot-ISCP                                                    ProtocolIE-ID ::= 37
id-CCTrCH-InformationItem-RL-FailureInd                             ProtocolIE-ID ::= 15
id-CCTrCH-InformationItem-RL-RestoreInd                             ProtocolIE-ID ::= 16
id-CommonMeasurementAccuracy                                        ProtocolIE-ID ::= 280
id-CommonMeasurementObjectType-CM-Rprt                              ProtocolIE-ID ::= 281
id-CommonMeasurementObjectType-CM-Rqst                              ProtocolIE-ID ::= 282
id-CommonMeasurementObjectType-CM-Rsp                               ProtocolIE-ID ::= 283
id-CommonMeasurementType                                            ProtocolIE-ID ::= 284
id-CongestionCause                                                  ProtocolIE-ID ::= 18
id-SFN                                                              ProtocolIE-ID ::= 285
id-SFNReportingIndicator                                            ProtocolIE-ID ::= 286
id-InformationExchangeID                                            ProtocolIE-ID ::= 287
id-InformationExchangeObjectType-InfEx-Rprt                         ProtocolIE-ID ::= 288
id-InformationExchangeObjectType-InfEx-Rqst                         ProtocolIE-ID ::= 289
id-InformationExchangeObjectType-InfEx-Rsp                          ProtocolIE-ID ::= 290
id-InformationReportCharacteristics                                 ProtocolIE-ID ::= 291
id-InformationType                                                  ProtocolIE-ID ::= 292
id-neighbouring-LCR-TDD-CellInformation                             ProtocolIE-ID ::= 58
id-DL-Timeslot-ISCP-LCR-Information-RL-SetupRqstTDD                 ProtocolIE-ID ::= 65
id-RL-LCR-InformationResponse-RL-SetupRspTDD                        ProtocolIE-ID ::= 66
id-UL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD                   ProtocolIE-ID ::= 75
id-UL-DPCH-LCR-InformationItem-RL-SetupRspTDD                       ProtocolIE-ID ::= 76
id-DL-CCTrCH-LCR-InformationListIE-RL-SetupRspTDD                   ProtocolIE-ID ::= 77
id-DL-DPCH-LCR-InformationItem-RL-SetupRspTDD                       ProtocolIE-ID ::= 78
id-DSCH-LCR-InformationListIEs-RL-SetupRspTDD                       ProtocolIE-ID ::= 79
id-USCH-LCR-InformationListIEs-RL-SetupRspTDD                       ProtocolIE-ID ::= 80
id-DL-Timeslot-ISCP-LCR-Information-RL-AdditionRqstTDD              ProtocolIE-ID ::= 81
id-RL-LCR-InformationResponse-RL-AdditionRspTDD                     ProtocolIE-ID ::= 86
id-UL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD                ProtocolIE-ID ::= 87
id-UL-DPCH-LCR-InformationItem-RL-AdditionRspTDD                    ProtocolIE-ID ::= 88
id-DL-CCTrCH-LCR-InformationListIE-RL-AdditionRspTDD                ProtocolIE-ID ::= 89
id-DL-DPCH-LCR-InformationItem-RL-AdditionRspTDD                    ProtocolIE-ID ::= 94
id-DSCH-LCR-InformationListIEs-RL-AdditionRspTDD                    ProtocolIE-ID ::= 96
id-USCH-LCR-InformationListIEs-RL-AdditionRspTDD                    ProtocolIE-ID ::= 97
id-UL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD               ProtocolIE-ID ::= 98
id-UL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD          ProtocolIE-ID ::= 100
id-DL-DPCH-LCR-InformationAddListIE-RL-ReconfReadyTDD               ProtocolIE-ID ::= 101
id-DL-Timeslot-LCR-InformationModifyList-RL-ReconfReadyTDD          ProtocolIE-ID ::= 104
id-UL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD               ProtocolIE-ID ::= 105
id-DL-Timeslot-LCR-InformationList-PhyChReconfRqstTDD               ProtocolIE-ID ::= 106
id-timeSlot-ISCP-LCR-List-DL-PC-Rqst-TDD                            ProtocolIE-ID ::= 138
id-TSTD-Support-Indicator-RL-SetupRqstTDD                           ProtocolIE-ID ::= 139
id-RestrictionStateIndicator                                        ProtocolIE-ID ::= 142
id-Load-Value                                                       ProtocolIE-ID ::= 233
id-Load-Value-IncrDecrThres                                         ProtocolIE-ID ::= 234
id-OnModification                                                   ProtocolIE-ID ::= 235
id-Received-Total-Wideband-Power-Value                              ProtocolIE-ID ::= 236
id-Received-Total-Wideband-Power-Value-IncrDecrThres                ProtocolIE-ID ::= 237
id-SFNSFNMeasurementThresholdInformation                            ProtocolIE-ID ::= 238
id-Transmitted-Carrier-Power-Value                                  ProtocolIE-ID ::= 239
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id-Transmitted-Carrier-Power-Value-IncrDecrThres                    ProtocolIE-ID ::= 240
id-TUTRANGPSMeasurementThresholdInformation                         ProtocolIE-ID ::= 241
id-UL-Timeslot-ISCP-Value                                           ProtocolIE-ID ::= 242
id-UL-Timeslot-ISCP-Value-IncrDecrThres                             ProtocolIE-ID ::= 243
id-Rx-Timing-Deviation-Value-LCR                                    ProtocolIE-ID ::= 293
id-DPC-Mode–Change-SupportIndicator                                 ProtocolIE-ID ::= 19
id-SplitType                                                        ProtocolIE-ID ::= 247
id-LengthOfTFCI2                                                    ProtocolIE-ID ::= 295
id-PrimaryCCPCH-RSCP-RL-ReconfPrepTDD                               ProtocolIE-ID ::= 202
id-DL-TimeSlot-ISCP-Info-RL-ReconfPrepTDD                           ProtocolIE-ID ::= 203
id-DL-Timeslot-ISCP-LCR-Information-RL-ReconfPrepTDD                ProtocolIE-ID ::= 204
id-DSCH-RNTI                                                        ProtocolIE-ID ::= 249
id-DL-PowerBalancing-Information                                    ProtocolIE-ID ::= 296
id-DL-PowerBalancing-ActivationIndicator                            ProtocolIE-ID ::= 297
id-DL-PowerBalancing-UpdatedIndicator                               ProtocolIE-ID ::= 298
id-DL-ReferencePowerInformation                                     ProtocolIE-ID ::= 299
id-Enhanced-PrimaryCPICH-EcNo                                       ProtocolIE-ID ::= 224
id-IPDL-TDD-ParametersLCR                                           ProtocolIE-ID ::= 252
id-CellCapabilityContainer-FDD                                      ProtocolIE-ID ::= 300
id-CellCapabilityContainer-TDD                                      ProtocolIE-ID ::= 301
id-CellCapabilityContainer-TDD-LCR                                  ProtocolIE-ID ::= 302
id-RL-Specific-DCH-Info                                             ProtocolIE-ID ::= 317
id-RL-ReconfigurationRequestFDD-RL-InformationList                  ProtocolIE-ID ::= 318
id-RL-ReconfigurationRequestFDD-RL-Information-IEs                  ProtocolIE-ID ::= 319
id-RL-ReconfigurationReadyTDD-RL-Information                        ProtocolIE-ID ::= 320
id-RL-ReconfigurationRequestTDD-RL-Information                      ProtocolIE-ID ::= 321
id-CommonTransportChannelResourcesInitialisationNotRequired         ProtocolIE-ID ::= 250
id-DelayedActivation                                                ProtocolIE-ID ::= 312
id-DelayedActivationList-RL-ActivationCmdFDD                        ProtocolIE-ID ::= 313
id-DelayedActivationInformation-RL-ActivationCmdFDD                 ProtocolIE-ID ::= 314
id-DelayedActivationList-RL-ActivationCmdTDD                        ProtocolIE-ID ::= 315
id-DelayedActivationInformation-RL-ActivationCmdTDD                 ProtocolIE-ID ::= 316
id-neighbouringTDDCellMeasurementInformationLCR                     ProtocolIE-ID ::= 251
id-UL-SIR-Target-CCTrCH-InformationItem-RL-SetupRspTDD              ProtocolIE-ID ::= 150
id-UL-SIR-Target-CCTrCH-LCR-InformationItem-RL-SetupRspTDD          ProtocolIE-ID ::= 151
id-PrimCCPCH-RSCP-DL-PC-RqstTDD                                     ProtocolIE-ID ::= 451
id-HSDSCH-FDD-Information                                           ProtocolIE-ID ::= 452
id-HSDSCH-FDD-Information-Response                                  ProtocolIE-ID ::= 453
id-HSDSCH-FDD-Information-to-Add                                    ProtocolIE-ID ::= 454
id-HSDSCH-FDD-Information-to-Delete                                 ProtocolIE-ID ::= 455
id-HSDSCH-FDD-Update-Information                                    ProtocolIE-ID ::= 466
id-HSDSCH-Information-to-Modify                                     ProtocolIE-ID ::= 456
id-HSDSCH-RNTI                                                      ProtocolIE-ID ::= 457
id-HSDSCH-TDD-Information                                           ProtocolIE-ID ::= 458
id-HSDSCH-TDD-Information-Response                                  ProtocolIE-ID ::= 459
id-HSDSCH-TDD-Information-Response-LCR                              ProtocolIE-ID ::= 460
id-HSDSCH-TDD-Information-to-Add                                    ProtocolIE-ID ::= 461
id-HSDSCH-TDD-Information-to-Delete                                 ProtocolIE-ID ::= 462
id-HSDSCH-TDD-Update-Information                                    ProtocolIE-ID ::= 467
id-HSPDSCH-RL-ID                                                    ProtocolIE-ID ::= 463
id-Angle-Of-Arrival-Value-LCR                                       ProtocolIE-ID ::= 148
id-TrafficClass                                                     ProtocolIE-ID ::= 158
id-TFCI-PC-SupportIndicator                                         ProtocolIE-ID ::= 248
id-Qth-Parameter                                                    ProtocolIE-ID ::= 253
id-PDSCH-RL-ID                                                      ProtocolIE-ID ::= 323
id-TimeSlot-RL-SetupRspTDD                                          ProtocolIE-ID ::= 325
id-GERAN-Cell-Capability                                            ProtocolIE-ID ::= 468
id-GERAN-Classmark                                                  ProtocolIE-ID ::= 469
id-DSCH-InitialWindowSize                                           ProtocolIE-ID ::= 480
id-UL-Synchronisation-Parameters-LCR                                ProtocolIE-ID ::= 464
id-SNA-Information                                                  ProtocolIE-ID ::= 479
id-MAChs-ResetIndicator                                             ProtocolIE-ID ::= 465
id-TDD-DL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD       ProtocolIE-ID ::= 481
id-TDD-UL-DPCH-TimeSlotFormatModifyItem-LCR-RL-ReconfReadyTDD       ProtocolIE-ID ::= 482
id-GSMCellIndividualOffset                                          ProtocolIE-ID ::= 514

END
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<<< END OF THE CORRECTED SECTION>>>