

**TSG-RAN Meeting #7  
Madrid, Spain, 13 - 15 March 2000**

**TSGRP#7(00)0101**

**Title: Agreed CRs to TS 25.423**

**Source: TSG-RAN WG3**

**Agenda item: 6.4.3**

| Tdoc_Num  | Specification | CR_Num | Revision_Num | CR_Subject   | CR_Category | WG_Status | Cur_Ver_Num | New_Ver_Num |
|-----------|---------------|--------|--------------|--|-------------|-----------|-------------|-------------|
| R3-000965 | 25.423        | 016    | 2            | Rearrangement of Neighbouring Cell Information group               | F           | agreed    | 3.0.0       | 3.1.0       |
| R3-000729 | 25.423        | 007    | 3            | Addition of measurement threshold information elements.            | F           | agreed    | 3.0.0       | 3.1.0       |
| R3-000731 | 25.423        | 026    | 1            | Clarification on criticality modelling                             | F           | agreed    | 3.0.0       | 3.1.0       |
| R3-000734 | 25.423        | 032    | 1            | Introduction of 'Repetition Number' into 'Criticality Diagnostics' | F           | agreed    | 3.0.0       | 3.1.0       |
| R3-000975 | 25.423        | 056    | 3            | CR to 25.423: Refinement of Tabular and ASN.1 in RNSAP             | F           | agreed    | 3.0.0       | 3.1.0       |
| R3-000751 | 25.423        | 020    | 1            | Introduction of RLS in RNSAP                                       | F           | agreed    | 3.0.0       | 3.1.0       |
| R3-000754 | 25.423        | 022    | 1            | Restriction to allowed procedure                                   | F           | agreed    | 3.0.0       | 3.1.0       |

|           |        |     |   |  |   |        |       |       |
|-----------|--------|-----|---|--|---|--------|-------|-------|
|           |        |     |   | parallelism  |   |        |       |       |
| R3-000756 | 25.423 | 025 | 1 | Inclusion of Beta C/D TFCS   | F | agreed | 3.0.0 | 3.1.0 |
| R3-000867 | 25.423 | 031 | 1 | Criticality assignment for RNSAP                                       | C | agreed | 3.0.0 | 3.1.0 |
| R3-000757 | 25.423 | 036 | 1 | UL Interference for TDD  | F | agreed | 3.0.0 | 3.1.0 |
| R3-000942 | 25.423 | 048 | 2 | Additional IEs to Neighbouring Cell Information regarding Tx Diversity | F | agreed | 3.0.0 | 3.1.0 |
| R3-000949 | 25.423 | 047 | 1 | A new IE for "RL information" regarding Transmit Diversity (RNSAP)     | F | agreed | 3.0.0 | 3.1.0 |
| R3-000934 | 25.423 | 002 | 3 | Addition of IEs required by the DRAC procedure in RNSAP messages       | F | agreed | 3.0.0 | 3.1.0 |
| R3-000777 | 25.423 | 042 | 1 | Clarification on the definition of the parameter                       | F | agreed | 3.0.0 | 3.1.0 |
| R3-000774 | 25.423 | 041 | 1 | Definition of the DL Power IE  | F | agreed | 3.0.0 | 3.1.0 |
| R3-000770 | 25.423 | 054 | 1 | Modification to "TGD" unit and range (RNSAP)                           | F | agreed | 3.0.0 | 3.1.0 |
| R3-000940 | 25.423 | 018 | 1 | Change of definition of QE   | F | agreed | 3.0.0 | 3.1.0 |

|  |                              |                                     |                          |  |   |
|--|------------------------------|-------------------------------------|--------------------------|--|---|
| <b>CHANGE REQUEST</b>  |                              |                                     |                          | Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. |   |
|  | <b>25.423</b>                | <b>CR</b>                           | <b>16r2</b>              | Current Version:   | <b>3.0.0</b>  |
| GSM (AA.BB) or 3G (AA.BBB) specification number ↑                        |                              |                                     |                          | ↑ CR number as allocated by MCC support team   |   |
| For submission to: TSG RAN #7<br>list expected approval meeting # here ↑ | for approval for information | <input checked="" type="checkbox"/> | <input type="checkbox"/> | strategic non-strategic  | <input type="checkbox"/><br><input type="checkbox"/> (for SMG use only) |

Form: CR cover sheet, version 2 for 3GPP and SMG

The latest version of this form is available from:  
<ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:** (U)SIM  ME  UTRAN / Radio  Core Network   
(at least one should be marked with an X)

**Source:** RAN3 **Date:** 29 February 2000

**Subject:** Rearrangement of Neighbouring Cell Information group

**Work item:**

|                  |  |                 |  |
|------------------|--|-----------------|--|
| <b>Category:</b> | F Correction <input type="checkbox"/><br>A Corresponds to a correction in an earlier release <input type="checkbox"/><br>B Addition of feature <input type="checkbox"/><br>C Functional modification of feature <input checked="" type="checkbox"/><br>D Editorial modification <input type="checkbox"/> | <b>Release:</b> | Phase 2 <input type="checkbox"/><br>Release 96 <input type="checkbox"/><br>Release 97 <input type="checkbox"/><br>Release 98 <input type="checkbox"/><br>Release 99 <input checked="" type="checkbox"/><br>Release 00 <input type="checkbox"/> |
|------------------|--|-----------------|--|

*(only one category shall be marked with an X)*

**Reason for change:** Currently the Neighbouring Cell Information contains some redundant contents. This CR proposes to rearrange the Neighbouring Cell Information group in order to reduce the number of octet occupied by this group.

**Clauses affected:** 9.1.4 RADIO LINK SETUP RESPONSE  
9.1.5 RADIO LINK SETUP FAILURE  
9.1.7 RADIO LINK ADDITION RESPONSE  
9.1.8 RADIO LINK ADDITION FAILURE

**Other specs affected:**

|                               |                          |                |  |
|-------------------------------|--------------------------|----------------|--|
| Other 3G core specifications  | <input type="checkbox"/> | → List of CRs: |  |
| Other GSM core specifications | <input type="checkbox"/> | → List of CRs: |  |
| MS test specifications        | <input type="checkbox"/> | → List of CRs: |  |
| BSS test specifications       | <input type="checkbox"/> | → List of CRs: |  |
| O&M specifications            | <input type="checkbox"/> | → List of CRs: |  |

**Other comments:**

## 9.1.4 RADIO LINK SETUP RESPONSE

## 9.1.4.1 FDD Message

| IE/Group Name                                   | Presence     | Range  | IE type and reference | Semantics description   |
|---|--------------|--|-----------------------|---|
| Message Type                                    | M            |  |                       |   |
| Transaction ID                                  | M            |  |                       |   |
| D-RNTI  | O            |  |                       |   |
| CN PS Domain Identifier                         | O            |  |                       |   |
| CN CS Domain Identifier                         | O            |  |                       |   |
| <b>RL Information Response</b>                  |              | 1..<maxnoofRLs>                                  |                       |   |
| RL ID   | M            |  |                       |   |
| SAI   | M            |  |                       |   |
| UL Interference Level                           | M            |  |                       |   |
| <b>DL Code Information</b>                      |              | 1..<maxnoofDLCodes>                              |                       |   |
| DL Scrambling Code                              | M            |  |                       |   |
| FDD DL Channelisation Code Number               | M            |  |                       |   |
| Diversity Indication                            | C-NotFirstRL |  |                       |   |
| CHOICE <i>diversity Indication Combining</i>    |              |  |                       |   |
| RL ID<br><i>Non Combining or IE not present</i> | M            |  |                       | Reference RL ID for the combining "IE not present" is equivalent to "First RL". |
| <b>DCH Information Response</b>                 |              | 0..<maxnoofDCHs>                                 |                       | Only one DCH per set of co-ordinated DCHs shall be included                     |
| DCH ID  | M            |  |                       |   |
| Binding ID                                      | M            |  |                       |   |
| Transport Layer Address                         | M            |  |                       |   |
| SSDT Support Indicator                          | M            |  |                       |   |
| Maximum Uplink Eb/No                            | M            |  | Uplink Eb/No          |   |
| Minimum Uplink Eb/No                            | M            |  | Uplink Eb/No          |   |
| <b>Neighbouring FDD-Cell Information</b>        |              | 0..<maxnoofneighbouringRNCsmaxnoofFDDneighbours> |                       |   |
| RNCUC-Id  | M            |  |                       |   |
| CN PS Domain Identifier                         | O            |  |                       |   |
| CN CS Domain Identifier                         | O            |  |                       |   |
| <b>Per FDD Cell Information</b>                 |              | 10..<maxnoofFDDneighbours>                       |                       |   |
| C-Id  | M            |  |                       |   |
| UARFCN  | M            |  |                       |   |
| Frame Offset                                    | O            |  |                       |   |
| Primary Scrambling Code                         | M            |  |                       |   |
| Primary CPICH Power                             | O            |  |                       |   |
| <b>Neighbouring TDD-Cell Information</b>        | 0            | 0..<maxnoofneighbouringRNCsmaxnoofTDDneighbours> |                       |   |
| RNCUC-Id  | M            |  |                       |   |
| CN PS Domain Identifier                         | 0            |  |                       |   |
| CN CS Domain Identifier                         | 0            |  |                       |   |
| <b>Per TDD Cell Information</b>                 |              | 10..<maxnoofTDDneighbours>                       |                       |   |
| C-Id  | M            |  |                       |   |
| UARFCN  | M            |  |                       |   |
| Frame Offset                                    | O            |  |                       |   |
| Cell Parameter ID                               | M            |  |                       |   |
| Sync Case                                       | M            |  |                       |   |
| Time Slot                                       | C-Case1      |  |                       |   |
| PSCH Time Slot                                  | C-Case2&3    |  |                       |   |
| Uplink Eb/No Target                             | O            |  | Uplink Eb/No          |   |
| Downlink Eb/No Target                           | O            |  |                       |   |
| Criticality Diagnostics                         | O            |  |                       |   |

| Condition  | Explanation  |
|------------|--|
| IfComb     | This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.     |
| IfNotComb  | This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B. |
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information                   |
| Case1      | This IE is present only if Sync Case = Case1.  |
| Case2&3    | This IE is present only if Sync Case = Case2 or Case3.                                       |

| Range bound                             | Explanation   |
|---|---|
| MaxnoofRLs                              | Maximum no. of RLs for one UE.                        |
| MaxnoofDCHs                             | Maximum no. of DCHs for one UE.                       |
| <a href="#">MaxnoofneighbouringRNCs</a> | <a href="#">Maximum number of neighbouring RNCs</a>   |
| MaxnoofFDDneighbours                    | Maximum number of neighbouring FDD cell for one cell. |
| MaxnoofTDDneighbours                    | Maximum number of neighbouring TDD cell for one cell. |

## 9.1.4.2 TDD Message

| IE/Group Name                            | Presence | Range  | IE type and reference | Semantics description  |
|--|----------|--|-----------------------|--|
| Message Type                             | M        |  |                       |  |
| Transaction ID                           | M        |  |                       |  |
| D-RNTI                                   | O        |  |                       |  |
| CN PS Domain Identifier                  | O        |  |                       |  |
| CN CS Domain Identifier                  | O        |  |                       |  |
| <b>RL Information Response</b>           |          | 1  |                       |  |
| RL ID                                    | M        |  |                       |  |
| SAI                                      | M        |  |                       |  |
| UL Interference Level                    | M        |  |                       |  |
| Maximum Uplink Eb/No                     | M        |  | Uplink Eb/No          |  |
| Minimum Uplink Eb/No                     | M        |  | Uplink Eb/No          |  |
| Uplink Eb/No Target                      | O        |  | Uplink Eb/No          |  |
| Downlink Eb/No Target                    | O        |  |                       |  |
| <b>UL CTrCH Information</b>              |          | 1..<maxnoofCCTrCHs>                              |                       |  |
| CCTrCH ID                                | M        |  |                       |  |
| <b>UL DPCH Information</b>               |          | 1..<MaxnoofDPCHs>                                |                       |  |
| DPCH ID                                  | M        |  |                       |  |
| TDD Channelisation Code                  | M        |  |                       |  |
| Burst Type                               | M        |  |                       |  |
| Midamble Shift                           | M        |  |                       |  |
| Time Slot                                | M        |  |                       |  |
| TDD Physical Channel Offset              | M        |  |                       |  |
| Repetition Period                        | M        |  |                       |  |
| Repetition Length                        | M        |  |                       |  |
| TFCI Presence                            | M        |  |                       |  |
| <b>DL CTrCH Information</b>              |          | 1..<maxnoofCCTrCHs>                              |                       |  |
| CCTrCH ID                                | M        |  |                       |  |
| <b>DL DPCH Information</b>               |          | 1..<MaxnoofDPCHs>                                |                       |  |
| DPCH ID                                  | M        |  |                       |  |
| TDD Channelisation Code                  | M        |  |                       |  |
| Burst Type                               | M        |  |                       |  |
| Midamble Shift                           | M        |  |                       |  |
| Time Slot                                | M        |  |                       |  |
| TDD Physical Channel Offset              | M        |  |                       |  |
| Repetition Period                        | M        |  |                       |  |
| Repetition Length                        | M        |  |                       |  |
| TFCI Presence                            | M        |  |                       |  |
| <b>DCH Information Response</b>          |          | 1..<maxnoofDCHs>                                 |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                   | M        |  |                       |  |
| Binding ID                               | M        |  |                       |  |
| Transport Layer Address                  | M        |  |                       |  |
| <b>Neighbouring FDD Cell Information</b> | O        | 0..<maxnoofneighbouringRNCsmaxnoofFDDneighbours> |                       |  |
| RNC-Id                                   | M        |  |                       |  |
| CN PS Domain Identifier                  | O        |  |                       |  |
| CN CS Domain Identifier                  | O        |  |                       |  |
| <b>Per FDD Cell Information</b>          |          | 0+0..<maxnoofFDDneighbours>                      |                       |  |
| C-Id                                     | M        |  |                       |  |
| UARFCN                                   | M        |  |                       |  |
| Frame Offset                             | O        |  |                       |  |
| Primary Scrambling Code                  | M        |  |                       |  |
| Primary CPICH Power                      | O        |  |                       |  |
| <b>Neighbouring TDD Cell Information</b> | O        | 0..<maxnoofneighbouringRNCsmaxnoofTDDneighbours> |                       |  |
| RNC-Id                                   | M        |  |                       |  |
| CN PS Domain Identifier                  | O        |  |                       |  |

|                                 |           |   |  |  |
|---------------------------------|-----------|---|--|--|
| <u>CN-CS Domain Identifier</u>  | O         |   |  |  |
| <u>Per TDD Cell Information</u> |           | <u>0-10.&lt;maxnoofTDDn<br/>eighbours&gt;</u> |  |  |
| <u>C-Id</u>                     | M         |   |  |  |
| <u>UARFCN</u>                   | M         |   |  |  |
| <u>Frame Offset</u>             | O         |   |  |  |
| <u>Cell Parameter ID</u>        | M         |   |  |  |
| <u>Sync Case</u>                | M         |   |  |  |
| <u>Time Slot</u>                | C-Case1   |   |  |  |
| <u>PSCH Time Slot</u>           | C-Case2&3 |   |  |  |
| Criticality Diagnostics         | O         |   |  |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range bound                    | Explanation  |
|--------------------------------|--|
| MaxnoofDPCHs                   | Maximum no. of DPCHs for one CCTrCH.                 |
| MaxnoofDCHs                    | Maximum no. of DCHs for one UE.                      |
| <u>MaxnoofneighbouringRNCs</u> | <u>Maximum number of neighbouring RNCs</u>           |
| MaxnoofFDDneighbours           | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours           | Maximum number of neighbouring TDD cell for one cell |
| MaxnoofCCTrCHs                 | Maximum no. of CCTrCH for one UE.                    |

## 9.1.5 RADIO LINK SETUP FAILURE

## 9.1.5.1 FDD Message

| IE/Group Name                                | Presence  | Range                        | IE type and reference | Semantics description  |
|--|-----------|------------------------------|-----------------------|--|
| Message Type                                 | M         |                              |                       |  |
| Transaction ID                               | M         |                              |                       |  |
| D-RNTI                                       | O         |                              |                       |  |
| CN PS Domain Identifier                      | O         |                              |                       |  |
| CN CS Domain Identifier                      | O         |                              |                       |  |
| <b>Unsuccessful RL Information Response</b>  |           | 1...<maxnoofRLs>             |                       |  |
| RL ID  | M         |                              |                       |  |
| Cause  | M         |                              |                       |  |
| <b>Successful RL Information Response</b>    |           | 0..<maxnoofRLs-1>            |                       |  |
| RL ID  | M         |                              |                       |  |
| SAI  | M         |                              |                       |  |
| UL Interference Level                        | M         |                              |                       |  |
| <b>DL Code Information</b>                   |           | 1..<br><maxnoofDLCodes       |                       |  |
| DL Scrambling Code                           | M         |                              |                       |  |
| FDD DL Channelisation Code Number            | M         |                              |                       |  |
| Diversity Indication                         | M         |                              |                       |  |
| CHOICE <i>diversity Indication Combining</i> |           |                              |                       |  |
| RL ID  | M         |                              |                       | Reference RL ID for the combining                            |
| <i>Non Combining or IE not present</i>       |           |                              |                       | "IE not present" is equivalent to "First RL".                |
| <b>DCH Information Response</b>              |           | 0..<maxnoofDCHs>             |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                       | M         |                              |                       |  |
| Binding ID                                   | M         |                              |                       |  |
| Transport Layer Address                      | M         |                              |                       |  |
| SSDT Support Indicator                       | M         |                              |                       |  |
| <b>Neighbouring FDD Cell Information</b>     | O         | 0..<maxnoofneighbouringRNCs> |                       |  |
| RNCUC-Id                                     | M         |                              |                       |  |
| CN PS Domain Identifier                      | O         |                              |                       |  |
| CN CS Domain Identifier                      | O         |                              |                       |  |
| <b>Per FDD Cell Information</b>              |           | ±0..<maxnoofFDDneighbours>   |                       |  |
| C-Id   | M         |                              |                       |  |
| UARFCN                                       | M         |                              |                       |  |
| Frame Offset                                 | O         |                              |                       |  |
| Primary Scrambling Code                      | M         |                              |                       |  |
| Primary CPICH Power                          | O         |                              |                       |  |
| <b>Neighbouring TDD Cell Information</b>     | O         | 0..<maxnoofneighbouringRNCs> |                       |  |
| RNCUC-Id                                     | M         |                              |                       |  |
| CN PS Domain Identifier                      | O         |                              |                       |  |
| CN CS Domain Identifier                      | O         |                              |                       |  |
| <b>Per TDD Cell Information</b>              |           | ±0..<maxnoofTDDneighbours>   |                       |  |
| C-Id   | M         |                              |                       |  |
| UARFCN                                       | M         |                              |                       |  |
| Frame Offset                                 | O         |                              |                       |  |
| Cell Parameter ID                            | M         |                              |                       |  |
| Sync Case                                    | M         |                              |                       |  |
| Time Slot                                    | C-Case3   |                              |                       |  |
| PSCH Time Slot                               | C-Case2&3 |                              |                       |  |
| Uplink Eb/No Target                          | O         |                              | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                         | M         |                              | Uplink Eb/No          |  |
| Minimum Uplink Eb/No                         | M         |                              | Uplink Eb/No          |  |
| Downlink Eb/No Target                        | O         |                              |                       |  |
| Criticality Diagnostics                      | O         |                              |                       |  |



| Condition  | Explanation  |
|------------|--|
| IfComb     | This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.     |
| IfNotComb  | This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B. |
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information                   |
| Case1      | This IE is present only if Sync Case = Case1.  |
| Case2&3    | This IE is present only if Sync Case = Case2 or Case3.                                       |

| Range bound                             | Explanation  |
|---|--|
| MaxnoofRLs                              | Maximum no. of RLs for one UE.                       |
| MaxnoofDCHs                             | Maximum no. of DCHs for one UE.                      |
| <a href="#">MaxnoofneighbouringRNCs</a> | <a href="#">Maximum number of neighbouring RNCs</a>  |
| MaxnoofFDDneighbours                    | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours                    | Maximum number of neighbouring TDD cell for one cell |

## 9.1.5.2 TDD Message

| IE/Group Name                               | Presence | Range | IE type and reference | Semantics description |
|---|----------|-------|-----------------------|-----------------------|
| Message Type                                | M        |       |                       |                       |
| Transaction ID                              | M        |       |                       |                       |
| <b>Unsuccessful RL Information Response</b> |          | 1     |                       |                       |
| RL ID                                       | M        |       |                       |                       |
| Cause                                       | M        |       |                       |                       |
| Criticality Diagnostics                     | O        |       |                       |                       |

## 9.1.7 RADIO LINK ADDITION RESPONSE

## 9.1.7.1 FDD Message

| IE/Group Name                            | Presence      | Range  | IE type and reference | Semantics description  |
|--|---------------|--|-----------------------|--|
| Message Type                             | M             |  |                       |  |
| Transaction ID                           | M             |  |                       |  |
| <b>RL Information Response</b>           |               | 1..<maxnoofRLs-1>  |                       |  |
| RL ID                                    | M             |  |                       |  |
| SAI                                      | M             |  |                       |  |
| UL Interference Level                    | M             |  |                       |  |
| <b>DL Code Information</b>               |               | 1..<maxnoofDLCode<br>s>                                  |                       |  |
| DL Scrambling Code                       | M             |  |                       |  |
| DL Channelisation Code                   | M             |  |                       |  |
| Diversity Indication                     | M             |  |                       |  |
| CHOICE <i>diversity indication</i>       |               |  |                       |  |
| <i>Combining</i>                         |               |  |                       |  |
| RL ID                                    | M             |  |                       | Reference RL-Id  |
| <i>Non combining</i>                     |               |  |                       |  |
| <b>DCH Information Response</b>          |               | 1..<maxnoofDCHs>   |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                   | M             |  |                       |  |
| Binding ID                               | M             |  |                       |  |
| Transport Layer Address                  | M             |  |                       |  |
| SSDT Support Indicator                   | M             |  |                       |  |
| Minimum Uplink Eb/No                     | M             |  | Uplink<br>Eb/No       |  |
| Maximum Uplink Eb/No                     | M             |  | Uplink<br>Eb/No       |  |
| <b>Neighbouring FDD-Cell Information</b> |               | 0..<maxnoofneighbo<br>uringRNCsmaxnoof<br>FDDNeighbours> |                       |  |
| RNCUC-Id                                 | M             |  |                       |  |
| CN PS Domain Identifier                  | O             |  |                       |  |
| CN CS Domain Identifier                  | O             |  |                       |  |
| <b>Per FDD Cell Information</b>          |               | 10..<maxnoofFDDne<br>ighbours>                           |                       |  |
| C-Id                                     | M             |  |                       |  |
| UARFCN                                   | M             |  |                       |  |
| Frame Offset                             | O             |  |                       |  |
| Primary Scrambling Code                  | M             |  |                       |  |
| Primary CPICH Power                      | O             |  |                       |  |
| <b>Neighbouring TDD-Cell Information</b> |               | 0..<maxnoofneighbo<br>uringRNCsmaxnoof<br>TDDNeighbours> |                       |  |
| RNCUC-Id                                 | M             |  |                       |  |
| CN PS Domain Identifier                  | O             |  |                       |  |
| CN CS Domain Identifier                  | O             |  |                       |  |
| <b>Per TDD Cell Information</b>          |               | 10..<maxnoofTDDne<br>ighbours>                           |                       |  |
| C-Id                                     | M             |  |                       |  |
| UARFCN                                   | M             |  |                       |  |
| Frame Offset                             | O             |  |                       |  |
| Cell Parameter ID                        | M             |  |                       |  |
| Sync Case                                | M             |  |                       |  |
| Time Slot                                | C-Case1       |  |                       |  |
| PSCH Time Slot                           | C-<br>Case2&3 |  |                       |  |
| Criticality Diagnostics                  | O             |  |                       |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range bound                             | Explanation  |
|---|--|
| MaxnoofDCHs                             | Maximum number of dedicated channels on one RL       |
| MaxnoofRLs                              | Maximum number of radio links for one UE             |
| <a href="#">MaxnoofneighbouringRNCs</a> | <a href="#">Maximum number of neighbouring RNCs</a>  |
| MaxnoofFDDneighbours                    | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours                    | Maximum number of neighbouring TDD cell for one cell |
| MaxnoofDLCodes                          | Maximum number of DL code information                |

## 9.1.7.2 TDD Message

| IE/Group Name                            | Presence | Range  | IE type and reference | Semantics description  |
|--|----------|--|-----------------------|--|
| Message Type                             | M        |  |                       |  |
| Transaction ID                           | M        |  |                       |  |
| <b>RL Information Response</b>           |          | 1  |                       |  |
| RL ID                                    | M        |  |                       |  |
| SAI                                      | M        |  |                       |  |
| UL Interference Level                    | M        |  |                       |  |
| <b>UL CCTrCH Information</b>             |          | 1..<maxnoof CCTrCHs>                                   |                       |  |
| CCTrCH ID                                | M        |  |                       |  |
| <b>UL DPCH Information</b>               |          | 1..<maxnoOfDPCHs >                                     |                       |  |
| DPCH ID                                  | M        |  |                       |  |
| TDD Channelisation Code                  | M        |  |                       |  |
| Burst Type                               | M        |  |                       |  |
| Midamble Shift                           | M        |  |                       |  |
| Time Slot                                | M        |  |                       |  |
| TDD Physical Channel Offset              | M        |  |                       |  |
| Repetition Period                        | M        |  |                       |  |
| Repetition Length                        | M        |  |                       |  |
| TFCI Presence                            | M        |  |                       |  |
| <b>DL CCTrCH Information</b>             |          | 1..<maxnoof CCTrCHs>                                   |                       |  |
| CCTrCH ID                                | M        |  |                       |  |
| <b>DL DPCH information</b>               |          | 1..<maxnoOfDPCHs >                                     |                       |  |
| DPCH ID                                  | M        |  |                       |  |
| TDD Channelisation Code                  | M        |  |                       |  |
| Burst Type                               | M        |  |                       |  |
| Midamble Shift                           | M        |  |                       |  |
| Time Slot                                | M        |  |                       |  |
| TDD Physical Channel Offset              | M        |  |                       |  |
| Repetition Period                        | M        |  |                       |  |
| Repetition Length                        | M        |  |                       |  |
| TFCI Presence                            | M        |  |                       |  |
| Diversity Indication                     | M        |  |                       |  |
| CHOICE <i>diversity indication</i>       |          |  |                       |  |
| <i>Combining</i>                         |          |  |                       |  |
| RL ID                                    | M        |  |                       | Reference RL   |
| <i>Non combining</i>                     |          |  |                       |  |
| <b>DCH Information Response</b>          |          | 1..<maxnoofDCHs>                                       |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                   | M        |  |                       |  |
| Binding ID                               | M        |  |                       |  |
| Transport Layer Address                  | M        |  |                       |  |
| Minimum Uplink Eb/No                     | M        |  | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                     | M        |  | Uplink Eb/No          |  |
| <b>Neighbouring FDD Cell Information</b> |          | 0..<maxnoofneighbouringRNCs>0..<maxnoofFDDNeighbours > |                       |  |
| RNCUC-Id                                 | M        |  |                       |  |
| CN PS Domain Identifier                  | O        |  |                       |  |
| CN CS Domain Identifier                  | O        |  |                       |  |
| <b>Per FDD Cell Information</b>          |          | 10..<maxnoofFDDneighbours>                             |                       |  |
| C-Id                                     | M        |  |                       |  |
| UARFCN                                   | M        |  |                       |  |
| Frame Offset                             | O        |  |                       |  |
| Primary Scrambling Code                  | M        |  |                       |  |
| Primary CPICH Power                      | O        |  |                       |  |
| <b>Neighbouring TDD Cell Information</b> |          | 0..<maxnoofneighbouringRNCs>0..<maxnoofTDDNeighbours > |                       |  |
| RNCUC-Id                                 | M        |  |                       |  |

|                                 |           |  |   |  |
|---------------------------------|-----------|--|---|--|
| —CN-PS-Domain-Identifier        | O         |  |   |  |
| —CN-CS-Domain-Identifier        | O         |  |   |  |
| <b>Per TDD Cell Information</b> |           |  | <u>10..&lt;maxnoofTDDneighbours&gt;</u> |  |
| <u>C-Id</u>                     | M         |  |   |  |
| UARFCN                          | M         |  |   |  |
| Frame Offset                    | O         |  |   |  |
| Cell Parameter ID               | M         |  |   |  |
| Sync Case                       | M         |  |   |  |
| Time Slot                       | C-Case1   |  |   |  |
| PSCH Time Slot                  | C-Case2&3 |  |   |  |
| Criticality Diagnostics         | O         |  |   |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1           |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range Bound                    | Explanation  |
|--------------------------------|--|
| MaxnoofDCHs                    | Maximum number of dedicated channels on one RL       |
| <u>MaxnoofneighbouringRNCs</u> | <u>Maximum number of neighbouring RNCs</u>           |
| MaxnoofFDDneighbours           | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours           | Maximum number of neighbouring TDD cell for one cell |
| MaxnoofDLCodes                 | Maximum number of DL code information                |
| MaxnoOfDPCHs                   | Maximum number of DPCH in one CCTrCH                 |
| MaxnoofCCTrCHs                 | no. of CCTrCH for one UE.                            |

## 9.1.8 RADIO LINK ADDITION FAILURE

## 9.1.8.1 FDD Message

| IE/Group Name                               | Presence  | Range   | IE type and reference | Semantics description  |
|---|-----------|---|-----------------------|--|
| Message Type                                | M         |   |                       |  |
| Transaction ID                              | M         |   |                       |  |
| <b>Unsuccessful RL Information Response</b> |           | 1..<maxnoofRLs-1>                                     |                       |  |
| RL ID                                       | M         |   |                       |  |
| Cause                                       | M         |   |                       |  |
| <b>Successful RL Information Response</b>   |           | 1..<maxnoofRLs-2>                                     |                       |  |
| RL ID                                       | M         |   |                       |  |
| SAI   | M         |   |                       |  |
| UL Interference Level                       | M         |   |                       |  |
| <b>DL Code Information</b>                  |           | 1..<maxnoofDLCode s>                                  |                       |  |
| DL scrambling code                          | M         |   |                       |  |
| DL channelisation code                      | M         |   |                       |  |
| Diversity Indication                        | M         |   |                       |  |
| CHOICE <i>diversity indication</i>          |           |   |                       |  |
| <i>Combining</i>                            |           |   |                       |  |
| RL ID                                       | M         |   |                       | Reference RL-Id  |
| <i>Non combining</i>                        |           |   |                       |  |
| <b>DCH Information Response</b>             |           | 1..<maxnoofDCHs>                                      |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                      | M         |   |                       |  |
| Binding ID                                  | M         |   |                       |  |
| Transport Layer Address                     | M         |   |                       |  |
| SSDT Support Indicator                      | M         |   |                       |  |
| Minimum Uplink Eb/No                        | M         |   | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                        | M         |   | Uplink Eb/No          |  |
| <b>Neighbouring FDD Cell Information</b>    |           | 0..<maxnoofneighbouringRNCs>0..<maxnoofFDDNeighbours> |                       |  |
| RNC-Id                                      | M         |   |                       |  |
| CN PS Domain Identifier                     | O         |   |                       |  |
| CN CS Domain Identifier                     | O         |   |                       |  |
| <b>Per FDD Cell Information</b>             |           | 10..<maxnoofFDDneighbouring>                          |                       |  |
| C-Id  | M         |   |                       |  |
| UARFCN                                      | M         |   |                       |  |
| Frame Offset                                | O         |   |                       |  |
| Primary Scrambling Code                     | M         |   |                       |  |
| Primary CPICH Power                         | O         |   |                       |  |
| <b>Neighbouring TDD Cell Information</b>    |           | 0..<maxnoofneighbouringRNCs>0..<maxnoofTDDNeighbours> |                       |  |
| RNC-Id                                      | M         |   |                       |  |
| CN PS Domain Identifier                     | O         |   |                       |  |
| CN CS Domain Identifier                     | O         |   |                       |  |
| <b>Per TDD Cell Information</b>             |           | 01..<maxnoofTDDneighbouring>                          |                       |  |
| C-Id  | M         |   |                       |  |
| UARFCN                                      | M         |   |                       |  |
| Frame Offset                                | O         |   |                       |  |
| Cell Parameter ID                           | M         |   |                       |  |
| Sync Case                                   | M         |   |                       |  |
| Time Slot                                   | C-Case1   |   |                       |  |
| PSCH Time Slot                              | C-Case2&3 |   |                       |  |
| Criticality Diagnostics                     | O         |   |                       |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range bound                             | Explanation  |
|---|--|
| MaxnoofDCHs                             | Maximum number of dedicated channels on one RL       |
| MaxnoofRLs                              | Maximum number of radio links for one UE             |
| <a href="#">MaxnoofneighbouringRNCs</a> | <a href="#">Maximum number of neighbouring RNCs</a>  |
| MaxnoofFDDneighbours                    | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours                    | Maximum number of neighbouring TDD cell for one cell |
| MaxnoofDLCodes                          | Maximum number of DL code information                |

## 9.1.8.2 TDD Message

| IE/Group Name                               | Presence | Range | IE type and reference | Semantics description |
|---|----------|-------|-----------------------|-----------------------|
| Message Type                                | M        |       |                       |                       |
| Transaction ID                              | M        |       |                       |                       |
| <b>Unsuccessful RL Information Response</b> |          | 1     |                       |                       |
| RL ID                                       | M        |       |                       |                       |
| Cause                                       | M        |       |                       |                       |
| Criticality Diagnostics                     | O        |       |                       |                       |

9.3.3 PDU Definitions to be corrected!!

```

.....
maxNoOfDL-Codes,
maxNrOfCCTrCHs,
maxNrOfDCHs,
maxNrOfDL-Codes,
maxNrOfDPCHs,
maxNrOfFACH-FD-Size,
maxNrOfFDD-Neighbours,
maxNrOfMACcSDU-Length,
maxNrOfTDD-Neighbours,
maxNrOfRLs,
maxNrOfSCCPCHs,
maxRNCinURA,
maxnoofneighbouringRNCs
maxnoofFDDneighboursperRNC
maxnoofTDDneighboursperRNC

FROM RNSAP-Constants;

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

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

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    optional { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
    optional } |
    { ID id-CN-PS-DomainIdentifier          CRITICALITY ignore TYPE CN-PS-DomainIdentifier
    PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier          CRITICALITY ignore TYPE CN-CS-DomainIdentifier
    PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-SetupRspFDD
    CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD
    PRESENCE mandatory } |
    { ID id-UL-EbNoTarget                   CRITICALITY ignore TYPE UL-EbNoTarget                   PRESENCE
    optional } |
    { ID id-DL-EbNoTarget                   CRITICALITY ignore TYPE DL-EbNoTarget                   PRESENCE
    optional } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList { {RL-
InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-SetupRspFDD
    CRITICALITY ignore TYPE RL-InformationResponseItem-RL-SetupRspFDD
    PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID                                RL-ID,
    sAI                                    SAI,
    ul-InterferenceLevel                  ScaledUL-InterferenceLevel,
    dl-CodeInformation                    DL-CodeInformationList-RL-SetupRspFDD,
    sSDT-SupportIndicator                  SSdT-SupportIndicator,
    maxUL-EbNo                            UL-EbNo,
    minUL-EbNo                            UL-EbNo,
    neighbouringFDD-CellInformation        NeighbouringFDD-CellInformationList-RL-SetupRsp
OPTIONAL,
    neighbouringTDD-CellInformation        NeighbouringTDD-CellInformationList-RL-SetupRsp
OPTIONAL,
    iE-Extensions                          ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```



```

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-SetupRspFDD

DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication        CHOICE {
        combining                SEQUENCE {
            rL-ID                RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dch-InformationResponse-RL-SetupRspFDD DCH-InformationResponseList-RL-SetupRspFDD
        }
    },
    OPTIONAL
}
-- This IE is present only if the RL is not the first on in the RL Information -- ,
iE-Extensions                ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
...
}

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

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupRspFDD

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

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

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfFDD-Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-SetupRsp

NeighbouringFDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    rNC-IDuE-ID                RNC-IDG-ID,
    cN-PS-DomainIdentifier          CN-PS-DomainIdentifier          OPTIONAL,
    cN-CS-DomainIdentifier          CN-CS-DomainIdentifier          OPTIONAL,
    per-FDD-Cell-Information    Per-FDD-Cell-Information,
    uARFCN                    UARFCN,
    frameOffset                FrameOffset                OPTIONAL,
    primaryScramblingCode      PrimaryScramblingCode,
    primaryCPICH-Power        PrimaryCPICH-Power        OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Per-FDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofFDDneighboursperRNC)) OF
SEQUENCE {
    c-Id                C-Id,
    uARFCN              UARFCN,
    frameOffset        FrameOffset                OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power        OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { { Per-FDD-Cell-Information -
ExtIEs} } OPTIONAL,
    ...
}

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

```

```
NeighbouringTDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs+..maxNrOfTDD-Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-SetupRsp
```

```
NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
  rNC-IDe-ID RNC-IDe-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  per-TDD-Cell-Information Per-TDD-Cell-Information,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  cellParameterID CellParameterID,
  syncCase SyncCase,
  timeSlot TimeSlot OPTIONAL,
  -- This IE is present only if SyncCase is Case1 --,
  pSCH-TimeSlot PSCH-TimeSlot OPTIONAL,
  -- This IE is present only if pSCH-PCPCH-Allocation = Case3 --,
  ul-EbNo UL-EbNo OPTIONAL,
  dl-EbNo DL-EbNo OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
  ...
}
```

```
NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
Per-TDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofTDDneighboursperRNC)) OF
SEQUENCE {
  c-Id C-Id,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  cellParameterID CellParameterID,
  syncCase SyncCase,
  timeSlot TimeSlot OPTIONAL,
  -- This IE is present only if SyncCase is Case1 -- ,
  pSCH-TimeSlot PSCH-TimeSlot OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { Per-TDD-Cell-Information -
ExtIEs} } OPTIONAL,
  ...
}
```

```
Per-TDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****
```

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

```
RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE
optional } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier
PRESENCE optional } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier
PRESENCE optional } |
  { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-
RL-SetupRspTDD PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
  ...
}
```

```
RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
  rL-ID RL-ID,
  sAI SAI,
  ul-InterferenceLevel ScaledUL-InterferenceLevel,
```

```

maxUL-EbNo          UL-EbNo,
minUL-EbNo          UL-EbNo,
ul-EbNoTarget       UL-EbNo          OPTIONAL,
dl-EbNoTarget       DL-EbNo          OPTIONAL,
ul-CCTrCHInformation      UL-CCTrCHInformationList-RL-SetupRspTDD,
dl-CCTrCHInformation      DL-CCTrCHInformationList-RL-SetupRspTDD,
dCH-InformationResponse  DCH-InformationResponseList-RL-SetupRspTDD,
neighbouringFDD-CellInformation      NeighbouringFDD-CellInformationList-RL-SetupRsp
OPTIONAL,
-- refer to "NeighbouringFDD-CellInformationList-RL-SetupRsp" in the "RL Seup Response FDD"
neighbouringTDD-CellInformation      NeighbouringTDD-CellInformationList-RL-SetupRsp
OPTIONAL,
-- refer to "NeighbouringFDD-CellInformationList-RL-SetupRsp" in the "RL Seup Response FDD"
iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponse-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    ul-DPCH-Information      UL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions          ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationItem-RL-SetupRspTDD

-- **NOTE: UL-DPCH-InformationItem-RL-SetupRspTDD and DL-DPCH-InformationItem-RL-SetupRspTDD
-- are currently similar. Combine them? **
UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID          DPCH-ID,
    tDD-ChannelisationCode      TDD-ChannelisationCode,
    burstType          BurstType,
    midambleShift      MidambleShift,
    timeSlot          TimeSlot,
    tDD-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
    repetitionPeriod      RepetitionPeriod,
    repetitionLength      RepetitionLength,
    tFCI-Presence          TFCI-Presence,
    iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCHInformationItem-RL-SetupRspTDD

DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    dl-DPCH-Information      DL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions          ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-
InformationItem-RL-SetupRspTDD

```

```

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    burstType              BurstType,
    midambleShift          MidambleShift,
    timeSlot               TimeSlot,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod       RepetitionPeriod,
    repetitionLength       RepetitionLength,
    tFCI-Presence          TFCI-Presence,
    iE-Extensions         ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupRspTDD

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

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

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

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

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

RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
mandatory } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier
PRESENCE mandatory } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier
PRESENCE mandatory } |
    { ID id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
SetupFailureFDD                CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-
SetupFailureFDD                PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
SetupFailureFDD                CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-
SetupFailureFDD                PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
SetupFailureFDD                CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureFDD                PRESENCE mandatory },
    ...
}

```

```

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-
SetupFailureFDD
      PRESENCE mandatory },
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    SAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-SetupFailureFDD,
    ssdt-SupportIndicator SSdt-SupportIndicator,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupFailureFDD
OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupFailureFDD
OPTIONAL,
    ul-EbNoTarget        UL-EbNo,
    maxUL-EbNo           UL-EbNo,
    minUL-EbNo           UL-EbNo,
    dl-EbNoTarget        DL-EbNo,
    iE-Extensions        ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-
RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}
-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-SetupFailureFDD

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    dl-ScramblingCode    DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication CHOICE {
        combining        SEQUENCE {
            rL-ID        RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-SetupFailureFDD DCH-InformationResponseList-RL-
SetupFailureFDD OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions        ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

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

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupFailureFDD

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

```

```

}

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

NeighbouringFDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    rNC-IDuC-ID RNC-IDC-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    per-FDD-Cell-Information Per-FDD-Cell-Information,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Per-FDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofFDDneighboursperRNC)) OF
    SEQUENCE {
        c-Id C-Id,
        uARFCN UARFCN,
        frameOffset FrameOffset OPTIONAL,
        primaryScramblingCode PrimaryScramblingCode,
        primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
        iE-Extensions ProtocolExtensionContainer { { Per-FDD-Cell-Information -
ExtIEs} } OPTIONAL,
        ...
    }

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

NeighbouringTDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfTDD-Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    rNC-IDuC-ID RNC-IDC-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    per-TDD-Cell-Information Per-TDD-Cell-Information,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    cellParameterID CellParameterID,
    syncCase SyncCase,
    timeSlot TimeSlot,
    pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 --,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Per-TDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofTDDneighboursperRNC)) OF
    SEQUENCE {
        c-Id C-Id,
        uARFCN UARFCN,
        frameOffset FrameOffset OPTIONAL,
        cellParameterID CellParameterID,
        syncCase SyncCase,
        timeSlot TimeSlot OPTIONAL,
        -- This IE is present only if SyncCase is Case1 --,
        pSCH-TimeSlot PSCH-TimeSlot OPTIONAL,
    }

```

```

iE-Extensions
ExtIEs} } OPTIONAL,
}
}
}
Per-TDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

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

```

-----partly omitted-----

```

-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

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

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
optional } |
    { ID id-RL-InformationResponseList-RL-AdditionRspFDD
CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= RL-IE-ContainerList { {RL-
InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-AdditionRspFDD
CRITICALITY ignore TYPE RL-InformationResponseItem-RL-AdditionRspFDD
PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                SAI,
    ul-InterferenceLevel                ScaledUL-InterferenceLevel,
    dl-CodeInformation                DL-CodeInformationList-RL-AdditionRspFDD,
    sSDT-SupportIndicator                SSdT-SupportIndicator,
    maxUL-EbNo                UL-EbNo,
    minUL-EbNo                UL-EbNo,
    neighbouringFDD-CellInformation                NeighbouringFDD-CellInformationList-RL-SetupRsp
OPTIONAL,
    neighbouringTDD-CellInformation                NeighbouringTDD-CellInformationList-RL-SetupRsp
OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-AdditionRspFDD

DL-CodeInformationItem-RL-AdditionRspFDD ::= SEQUENCE {

```

```

dl-ScramblingCode          DL-ScramblingCode,
fDD-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
-- ** NOTE: How many alternatives are there, 2 or 3? **
diversityIndication        CHOICE {
    combining                SEQUENCE {
        rL-ID                RL-ID
    },
    nonCombiningOrIENotPresent  SEQUENCE {
        dCH-InformationResponse-RL-AdditionRspFDD  DCH-InformationResponseList-RL-
AdditionRspFDD  OPTIONAL
    }
}
-- This IE is present only if the RL is not the first on in the RL Information -- ,
iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
...
}

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

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionRspFDD

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

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

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-AdditionRsp

NeighbouringFDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {

    rNC-IDuE-ID              RNC-IDuE-ID,
    CN-PS-DomainIdentifier   CN-PS-DomainIdentifier   OPTIONAL,
    CN-CS-DomainIdentifier   CN-CS-DomainIdentifier   OPTIONAL,
    per-FDD-Cell-Information Per-FDD-Cell-Information,
    uARFCN                   UARFCN,
    frameOffset              FrameOffset              OPTIONAL,
    primaryScramblingCode    PrimaryScramblingCode,
    primaryCPICH-Power       PrimaryCPICH-Power       OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...

}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}


Per-FDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofFDDneighboursperRNC)) OF
SEQUENCE {
    c-Id                    C-Id,
    uARFCN                  UARFCN,
    frameOffset             FrameOffset              OPTIONAL,
    primaryScramblingCode   PrimaryScramblingCode,
    primaryCPICH-Power      PrimaryCPICH-Power       OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { Per-FDD-Cell-Information -
ExtIEs} } OPTIONAL,
    ...
}

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


NeighbouringTDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfTDD-Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-AdditionRsp

NeighbouringTDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {

```



```

rNC-IDuC-ID          RNC-IDC-ID,
CN-PS-DomainIdentifier CN-PS-DomainIdentifier    OPTIONAL,
CN-CS-DomainIdentifier CN-CS-DomainIdentifier    OPTIONAL,
per-TDD-Cell-Information Per-TDD-Cell-Information,
uARFCN              UARFCN,
frameOffset         FrameOffset                  OPTIONAL,
cellParameterID    CellParameterID,
syncCase           SyncCase,
timeSlot           TimeSlot,
pSCH-TimeSlot      PSCH-TimeSlot                OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 --,
iE-Extensions      ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Per-TDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofTDDneighboursperRNC)) OF
SEQUENCE {
c-Id              C-Id,
uARFCN           UARFCN,
frameOffset      FrameOffset    OPTIONAL,
cellParameterID CellParameterID,
syncCase        SyncCase,
timeSlot        TimeSlot        OPTIONAL,
-- This IE is present only if SyncCase is Case1 --,
pSCH-TimeSlot    PSCH-TimeSlot  OPTIONAL,
iE-Extensions    ProtocolExtensionContainer { { Per-TDD-Cell-Information -
ExtIEs} } OPTIONAL,
...
}

Per-TDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

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

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE
optional } |
{ ID id-RL-InformationResponse-RL-AdditionRspTDD
CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD
PRESENCE mandatory } |
{ ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
rL-ID              RL-ID,
sAI                SAI,
ul-InterferenceLevel ScaledUL-InterferenceLevel,
ul-CCTrCHInformation UL-CCTrCHInformationList-RL-AdditionRspTDD,
dl-CCTrCHInformation DL-CCTrCHInformationList-RL-AdditionRspTDD,
diversityIndication CHOICE {
combining          SEQUENCE {
rL-ID              RL-ID
},
nonCombiningOrIENotPresent SEQUENCE {
dCH-InformationResponse-RL-AdditionRspFDD
DCH-InformationResponseList-RL-
AdditionRspFDD OPTIONAL
}
}
}

```

```

    }
  }
  maxUL-EbNo          UL-EbNo,
  minUL-EbNo          UL-EbNo,
  neighbouringFDD-CellInformation      NeighbouringFDD-CellInformationList-RL-AdditionRspTDD
  OPTIONAL,
  neighbouringTDD-CellInformation      NeighbouringTDD-CellInformationList-RL-AdditionRspTDD
  OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponse-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-AdditionRspTDD

UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  ul-DPCH-Information      UL-DPCH-InformationList-RL-AdditionRspTDD,
  iE-Extensions          ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationItem-RL-AdditionRspTDD

UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  dPCH-ID          DPCH-ID,
  tDD-ChannelisationCode      TDD-ChannelisationCode,
  burstType          BurstType,
  midambleShift          MidambleShift,
  timeSlot          TimeSlot,
  offset          Offset,
  tDD-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
  repetitionPeriod      RepetitionPeriod,
  repetitionLength      RepetitionLength,
  tFCI-Presence          TFCI-Presence,
  iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCHInformationItem-RL-AdditionRspTDD

DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  dl-DPCH-Information      DL-DPCH-InformationList-RL-AdditionRspTDD,
  iE-Extensions          ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-
InformationItem-RL-AdditionRspTDD

DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  dPCH-ID          DPCH-ID,
  tDD-ChannelisationCode      TDD-ChannelisationCode,
  burstType          BurstType,
  midambleShift          MidambleShift,
  timeSlot          TimeSlot,

```

```

tDD-PhysicalChannelOffset          TDD-PhysicalChannelOffset,
repetitionPeriod                   RepetitionPeriod,
repetitionLength                   RepetitionLength,
tFCI-Presence                      TFCI-Presence,
iE-Extensions                      ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringFDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOFDD-Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
rNC-IDuE-ID                        RNC-IDC-ID,
cN-PS-DomainIdentifier              CN-PS-DomainIdentifier      OPTIONAL,
cN-CS-DomainIdentifier              CN-CS-DomainIdentifier      OPTIONAL,
per-FDD-Cell-Information            Per-FDD-Cell-Information,
uARFCN                             UARFCN,
frameOffset                         FrameOffset                OPTIONAL,
primaryScramblingCode              PrimaryScramblingCode,
primaryCPICH-Power                 PrimaryCPICH-Power        OPTIONAL,
iE-Extensions                      ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Per-FDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofFDDneighboursperRNC)) OF
SEQUENCE {
c-Id                                C-Id,
uARFCN                             UARFCN,
frameOffset                         FrameOffset                OPTIONAL,
primaryScramblingCode              PrimaryScramblingCode,
primaryCPICH-Power                 PrimaryCPICH-Power        OPTIONAL,
iE-Extensions                      ProtocolExtensionContainer { { Per-FDD-Cell-Information -
ExtIEs} } OPTIONAL,
...
}

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

NeighbouringTDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOFDD-Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
rNC-IDuE-ID                        RNC-IDC-ID,
cN-PS-DomainIdentifier              CN-PS-DomainIdentifier      OPTIONAL,
cN-CS-DomainIdentifier              CN-CS-DomainIdentifier      OPTIONAL,
per-TDD-Cell-Information            Per-TDD-Cell-Information,
uARFCN                             UARFCN,
frameOffset                         FrameOffset                OPTIONAL,
cellParameterID                    CellParameterID,
syncCase                            SyncCase,
timeSlot                            TimeSlot,
pSCH TimeSlot                       PSCH TimeSlot            OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 --,
iE-Extensions                      ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Per-TDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofTDDneighboursperRNC)) OF
SEQUENCE {
c-Id                                C-Id,
uARFCN                             UARFCN,
frameOffset                         FrameOffset                OPTIONAL,
cellParameterID                    CellParameterID,
syncCase                            SyncCase,
timeSlot                            TimeSlot                OPTIONAL,

```

```

-- This IE is present only if SyncCase is Case1 -- ,
pSCH-TimeSlot PSCH-TimeSlot OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { Per-TDD-Cell-Information -
ExtIEs} } OPTIONAL,
...
}

Per-TDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

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

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
AdditionFailureFDD
        PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
AdditionFailureFDD
        CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-
        PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics
        PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList {
{UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
AdditionFailureFDD
        CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
        PRESENCE mandatory },
    ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID RL-ID,
    cause Cause,
    iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
AdditionFailureFDD
        CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-
        PRESENCE mandatory },
    ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID RL-ID,
    sAI SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation DL-CodeInformationList-RL-AdditionFailureFDD,
}

```

```

sSDT-SupportIndicator          SSdT-SupportIndicator,
maxUL-EbNo                     UL-EbNo,
minUL-EbNo                     UL-EbNo,
neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-
AdditionFailureFDD OPTIONAL,
neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-
AdditionFailureFDD OPTIONAL,
iE-Extensions                  ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-
RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-AdditionFailureFDD

DL-CodeInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
dl-ScramblingCode             DL-ScramblingCode,
dl-ChannelisationCode         DL-ChannelisationCode,
diversityIndication           CHOICE {
    combining                  SEQUENCE {
        rL-ID                  RL-ID
    },
    nonCombiningOrIENotPresent SEQUENCE {
        dCH-InformationResponse-RL-AdditionFailureFDD DCH-InformationResponseList-RL-
AdditionFailureFDD OPTIONAL
    }
},
-- This IE is present only if the RL is not the first on in the RL Information -- ,
iE-Extensions                 ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

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

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionFailureFDD

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

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

NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfFDD-Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
rNC-IDuE-ID                RNC-IDC-ID,
cN-PS-DomainIdentifier         CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier         CN-CS-DomainIdentifier OPTIONAL,
per-FDD-Cell-Information   Per-FDD-Cell-Information,
uARFCN                     UARFCN,
frameOffset                FrameOffset OPTIONAL,
primaryScramblingCode      PrimaryScramblingCode,
cPICH Power                CPICH Power OPTIONAL,
iE-Extensions                 ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Per-FDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofFDDneighboursperRNC)) OF
SEQUENCE {

```

```

c-Id C-Id,
uARFCN UARFCN,
frameOffset FrameOffset OPTIONAL,
primaryScramblingCode PrimaryScramblingCode,
primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { Per-FDD-Cell-Information -
ExtIEs} } OPTIONAL,
...
}

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

```

```

NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE
(0..maxnoofneighbouringRNCs1..maxNrOfTDD-Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD

```

```

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
rNC-IDuE-ID RNC-IDC-ID,
cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
per-TDD-Cell-Information Per-TDD-Cell-Information,
uARFCN UARFCN,
frameOffset FrameOffset OPTIONAL,
cellParameterID CellParameterID,
syncCase SyncCase,
timeSlot TimeSlot,
pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
-- This IE is present only if pSCH PCPCH Allocation = Case3 --,
iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

```

```

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

Per-TDD-Cell-Information ::= SEQUENCE ( SIZE (1..maxnoofTDDneighboursperRNC)) OF
SEQUENCE {
c-Id C-Id,
uARFCN UARFCN,
frameOffset FrameOffset OPTIONAL,
cellParameterID CellParameterID,
syncCase SyncCase,
timeSlot TimeSlot OPTIONAL,
-- This IE is present only if SyncCase is Case1 --,
pSCH-TimeSlot PSCH-TimeSlot OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { Per-TDD-Cell-Information -
ExtIEs} } OPTIONAL,
...
}

Per-TDD-Cell-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

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

```

### 9.3.6 Constant Definitions

```

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

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

maxRateMatching INTEGER ::= 10

```

|                                   |                           |
|-----------------------------------|---------------------------|
| maxNrOfTFCs                       | INTEGER ::= 10            |
| maxNrOfTFs                        | INTEGER ::= 10            |
| maxNoOfDL-Codes                   | INTEGER ::= 10            |
| maxNrOfCCTrCHs                    | INTEGER ::= 10            |
| maxNrOfDCHs                       | INTEGER ::= 10            |
| maxNrOfDL-Codes                   | INTEGER ::= 10            |
| maxNrOfDPCHs                      | INTEGER ::= 10            |
| maxNrOfErrors                     | INTEGER ::= 10            |
| maxNrOfFACH-FD-Size               | INTEGER ::= 10            |
| <del>maxNrOfFDD-Neighbours</del>  | <del>INTEGER ::= 10</del> |
| maxNrOfMACcSDU-Length             | INTEGER ::= 10            |
| <del>maxNrOfTDD-Neighbours</del>  | <del>INTEGER ::= 10</del> |
| maxNrOfRLs                        | INTEGER ::= 10            |
| maxNrOfSCCPCHs                    | INTEGER ::= 10            |
| maxRNCinURA                       | INTEGER ::= 10            |
| maxTTI-Count                      | INTEGER ::= 10            |
| <u>maxnoofneighbouringRNCs</u>    | <u>INTEGER ::= 10</u>     |
| <u>maxnoofFDDneighboursperRNC</u> | <u>INTEGER ::= 10</u>     |
| <u>maxnoofTDDneighboursperRNC</u> | <u>INTEGER ::= 10</u>     |

## CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

**25.423 CR 007r3**

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**

list expected approval meeting # here

↑

for approval   
for information

strategic   
non-strategic

(for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:**

(at least one should be marked with an X)

(U)SIM

ME

UTRAN / Radio

Core Network

**Source:**

RAN-WG3 , RAN-WG3

**Date:**

Feb 2000

**Subject:**

Addition of measurement threshold information elements.

**Work item:**

**Category:**

(only one category shall be marked with an X)

F Correction

A Corresponds to a correction in an earlier release

B Addition of feature

C Functional modification of feature

D Editorial modification

**Release:**

Phase 2

Release 96

Release 97

Release 98

Release 99

Release 00

**Reason for change:**

CR 7 R3:

Update to reflect inclusion of both CR7.R1 and CR7.R2 changes. All changes on CR7 are marked with green.

CR 7 R1:

The first revision of this CR left an error concerning the ranges of the increase/decrease thresholds: for measurements with a range not starting at 0, the absolute threshold and increase/decrease thresholds can not use the same type. This CR attempt to solve this problem. All changes made in revision 2 of the CR are indicated in green. Input for the ranges is mainly based on 25.215 v.3.1.0. In addition, extension capabilities are introduced where considered necessary.

CR 7:

TSG RAN WG1 recently took a decision on the ranges and resolution on the different L1 measurements. This allows for further progress on the measurement thresholds in 25.423.

As different measurements with different units are handled with the same procedures, there is a need to introduce a special mechanism for ensuring that different thresholds in the measurement requests are transferred in a correct way.

As reporting event A, B, E and F use absolute thresholds and C and D uses relative, there is also a need to handle the thresholds for them separately.

Finally we have discovered some minor typos in the measurement concept, which also are proposed to be corrected.

**Clauses affected:**

9.2.1.17; 9.2.1.38; 9.3.4

**Other specs affected:**

Other 3G core specifications

→ List of CRs:

Other GSM core

→ List of CRs:



specifications  
MS test specifications  
BSS test specifications  
O&M specifications

|  |                |
|--|----------------|
|  | → List of CRs: |
|  | → List of CRs: |
|  | → List of CRs: |



**Other comments:**



help.doc

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

## 9.2.1.17 Dedicated Measurement Value

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

| IE/Group Name                      | Presence                                  | Range | IE Type and Reference                                    | Semantics Description  |
|------------------------------------|---|-------|--|--|
| <b>Dedicated measurement Value</b> |   |       |  |  |
| SIR value                          | $\ominus$<br><u>C</u><br><u>MeasValue</u> |       | Enumerated(-10..20),<br>step 0.1<br>dBINTEGER<br>(0..63) | According to mapping in 25.215/25.225  |
| SIR error Value                    | <u>C</u><br><u>MeasValue</u><br>$\ominus$ |       | Enumerated(-10..10),<br>step 0.1<br>dBINTEGER<br>(0..12) | SIR_Error=SIR-SIR_Target<br>0: < -31.0 dB<br>1: -31.0dB ≤ SIR_Error < 30.5dB<br>2: -30.5dB ≤ SIR_Error < 30.0dB<br>3: 30.0dB ≤ SIR_Error < 30.5dB<br>4: 30.5dB ≤ SIR_Error < 31.0dB<br>5: 31.0dB ≤ SIR_Error < 31.5dB<br>6: 31.5dB ≤ SIR_Error < 32.0dB<br>7: 32.0dB ≤ SIR_Error < 32.5dB<br>8: 32.5dB ≤ SIR_Error < 33.0dB<br>9: 33.0dB ≤ SIR_Error < 33.5dB<br>10: 33.5dB ≤ SIR_Error < 34.0dB<br>11: 34.0dB ≤ SIR_Error < 34.5dB<br>12: 34.5dB ≤ SIR_Error < 35.0dB<br>Value=(SIR_Error+31)*2<br>If SIRerror<=-10, SIR error Value shall be set to -10<br>If SIRerror=>10, SIR error Value shall be set to 10 |
| Transmitted Code Power Value       | <u>C</u><br><u>MeasValue</u><br>$\ominus$ |       | Enumerated(-35..15),<br>step 0.1<br>dBINTEGER<br>(0..12) | Relative to CPICH According to mapping in 25.215/25.225  |
| RSCP                               | <u>C</u><br><u>MeasValue</u><br>$\ominus$ |       | INTEGER(0..81)TBD  | According to mapping in 25.225 (TDD only)-   |

<Editors Note: Some adjustment of the ranges for these measurements might be needed as they await a decision on range for this measurement in TSG RAN WG1>

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

### 9.2.1.38 Report Characteristics

The report characteristics, defines how the reporting shall be performed.

| IE/Group Name                                   | Presence     | Range | IE Type and Reference   | Semantics Description  |
|---|--------------|-------|---|--|
| <b>Report characteristics</b>                   |              |       |   |  |
| Report characteristics type                     |              |       | ENUMERATED(On Demand, Periodic, Event A, Event B, Event C, Event D, Event E, Event F) |  |
| <b>..Periodic Report Information</b>            | C – Periodic |       |   |  |
| Report Periodicity                              | M            |       | ENUMERATED (10ms...1min) step 10ms, (1min...1hr) step 1min                            | The frequency with which the Node B shall send measurement reports. First working assumption!    |
| <b>..Event A</b>                                | C – Event A  |       |   |  |
| Measurement Threshold                           | M            |       | <b>TBD</b>  | The threshold for which the Node B shall trigger a measurement report.                           |
| Measurement Hysteresis Time                     | O            |       | ENUMERATED (10ms...1min) step 10ms,...  |  |
| <b>Event B</b>                                  | C – Event B  |       |   |  |
| Measurement Threshold                           | M            |       | <b>TBD</b>  | The threshold for which the Node B shall trigger a measurement report.                           |
| Measurement Hysteresis Time                     | O            |       | ENUMERATED (10ms...1min) step 10ms,...  |  |
| <b>Event C</b>                                  | C – Event C  |       |   |  |
| Measurement Increase/ <u>Decrease</u> Threshold | M            |       | <b>TBD</b>  |  |
| Measurement Change Time                         | M            |       | ENUMERATED (10ms...1min) step 10ms,...  | The time the measurement entity shall rise on (in ms), in order to trigger a measurement report. |
| <b>Event D</b>                                  | C – Event D  |       |   |  |
| Measurement <u>Increase/Decrease</u> Threshold  | M            |       | <b>TBD</b>  |  |
| Measurement Change Time                         | M            |       | ENUMERATED (10ms...1min) step 10ms,...  | The time the measurement entity shall fall (in ms), in order to trigger a measurement report.    |
| <b>Event E</b>                                  | C – Event E  |       |   |  |
| Measurement Threshold 1                         | M            |       | <b>TBD</b> <u>Measurement Threshold</u>   |  |

|                             |             |  |  |   |
|-----------------------------|-------------|--|--|---|
| Measurement Threshold 2     | O           |  | <del>TBD</del> Measurement Threshold                       |   |
| Measurement Hysteresis Time | O           |  | ENUMERATED (10ms...1min) step 10ms,...                     | The hysteresis time in ms   |
| Report Periodicity          | O           |  | ENUMERATED (10ms...1min) step 10ms, (1min...1hr) step 1min | The frequency with which the Node B shall send measurement reports. |
| <b>Event F</b>              | C – Event F |  |  |   |
| Measurement Threshold 1     | M           |  | <del>TBD</del> Measurement Threshold                       |   |
| Measurement Threshold 2     | O           |  | <del>TBD</del> Measurement Threshold                       |   |
| Measurement Hysteresis Time | O           |  | ENUMERATED (10ms...1min) step 10ms,...                     | The hysteresis time in ms   |
| Report Periodicity          | O           |  | ENUMERATED (10ms...1min) step 10ms, (1min...1hr) step 1min | The frequency with which the Node B shall send measurement reports. |

~~Editors note: Encoding of threshold TBD.~~

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

### 9.2.1.X Measurement Threshold (new section)

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

| <u>Information Element / Group Name</u> | <u>Presence</u>      | <u>Range</u> | <u>IE Type and Reference</u> | <u>Semantics Description</u>   |
|---|----------------------|--------------|------------------------------|--|
| <u>SIR</u>                              | <u>C = Threshold</u> |              | <u>INTEGER(0..63)</u>        | According to mapping in 25.215/25.225  |
| <u>SIR Error</u>                        | <u>C = Threshold</u> |              | <u>INTEGER(0..127)</u>       | $SIR\_Error = SIR - SIR\_target$<br>0: $< -31.0\text{ dB}$<br>1: $-31.0\text{ dB} \leq SIR\_Error < 30.5\text{ dB}$<br>2: $-30.5\text{ dB} \leq SIR\_Error < 30.0\text{ dB}$<br>...<br>62: $-0.5\text{ dB} \leq SIR\_Error < 0\text{ dB}$<br>63: $0\text{ dB} \leq SIR\_Error < 0.5\text{ dB}$<br>...<br>124: $30.5\text{ dB} \leq SIR\_Error < 31\text{ dB}$<br>125: $\geq 31\text{ dB}$<br>$Value = (SIR\_Error + 31) / 2$ |
| <u>Transmitted Code Power</u>           | <u>C = Threshold</u> |              | <u>INTEGER(0..127)</u>       | According to mapping in 25.215/25.225  |
| <u>RSCP</u>                             | <u>C = Threshold</u> |              | <u>INTEGER(0..81)</u>        | According to mapping in 25.225 (TDD only)  |

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

**9.2.1.X Measurement Increase/Decrease Threshold** (new section)

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

| <u>Information Element / Group Name</u> | <u>Presence</u>      | <u>Range</u> | <u>IE Type and Reference</u> | <u>Semantics Description</u>   |
|---|----------------------|--------------|------------------------------|--|
| <u>SIR</u>                              | <u>C = Threshold</u> |              | <u>INTEGER(0..6)</u>         | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>62: 31dB                             |
| <u>SIR Error</u>                        | <u>C = Threshold</u> |              | <u>INTEGER(0..124)</u>       | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>124: 62 dB<br>Value=(SIR_Error*31)/2 |
| <u>Transmitted Code Power</u>           | <u>C = Threshold</u> |              | <u>INTEGER(0..12)</u>        | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>112: 56 dB                           |
| <u>RSCP</u>                             | <u>C = Threshold</u> |              | <u>INTEGER(0..8)</u>         | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>80: 40dB                             |

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

### 9.3.4 Information Element Definitions

```

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

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxTTI-Count
FROM RNSAP-Constants

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

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

AllocationRetentionPriority ::= FrameHandlingPriority

AllowedQueuingTime ::= INTEGER (0..60)
-- seconds

-- B

-- ** NOTE: Size in tabular 1..4,... **
BindingID ::= OCTET STRING (SIZE (1..MAX))

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

BurstType ::= ENUMERATED {

```



```

    type1 (1),
    type2 (2)
}

-- C

Cause ::= CHOICE {
    radioNetwork          CauseRadioNetwork,
    transmissionNetwork  CauseTransmissionNetwork,
    protocol              CauseProtocol,
    misc                  CauseMisc,
    ...
}

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

CauseProtocol ::= ENUMERATED {
    transaction-not-allowed,
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    unspecified,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    measurement-not-supported-for-the-object,
    macrodiversity-combining-not-possible,
    reconfiguration-not-allowed,
    Synchronisation-failure,
    unspecified,
    ...
}

CauseTransmissionNetwork ::= ENUMERATED {
    transmission-link-failure,
    transmission-port-not-available,
    unspecified,
    ...
}

```

```

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

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

CellParameterID ::= INTEGER (0..127)

CFN ::= INTEGER (0..255)

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

-- ** TODO **
ChipOffset ::= INTEGER

CodingRate ::= ENUMERATED {
    half,
    third--,
-- ...
}

CompressedModeMethod ::= ENUMERATED {
    none,
    puncturing,
    sF2,
    gating
}

CPICH-EcIo ::= INTEGER

CRC-Size ::= INTEGER (0| 8| 12| 16| 24)

CriticalityDiagnostics ::= SEQUENCE {
    procedureCode ProcedureCode OPTIONAL,
    triggeringMessage TriggeringMessage OPTIONAL,
    criticalityResponse Criticality OPTIONAL,
    transactionID TransactionID OPTIONAL,
    iEsCriticalityResponses CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

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

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
SEQUENCE {
    criticalityResponse Criticality,

```

```

        iE-ID          ProtocolIE-ID,
        iE-Extensions  ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
        ...
    }

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

-- ** TODO **
CTFC ::= INTEGER
-- See formula (must be resolved)

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

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

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

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

-- **TODO**
CPICH-Power ::= INTEGER

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

-- D
DCH-CombinationInd ::= INTEGER (0..255)

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

DedicatedMeasurementObjectType ::= ENUMERATED {
    rL,
    all-rL,
    ...
}

-- ** OR:
-- DedicatedMeasurementObjectType ::= INTEGER {
--    rL(0),

```

```

-- allRL(1)
-- } (0..255)
-- **

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rSCP,
    ...
}
-- timeslotTSCP is used by TDD only


** OR+
DedicatedMeasurementType ::= INTEGER {
    sIR(0),
    sIR-Error(1),
    transmittedCodePower(2),
    rSCP(3)
} (0..255)
**


-- ** NOTE: Extensibility added **
-- **TODO**

DedicatedMeasurementValue ::= SEQUENCE-CHOICE {
    sIR-Value SealedSIR-Value OPTIONAL,
    sIR-ErrorValue SealedSIR-ErrorValue OPTIONAL,
    transmittedCodePowerValue SealedTransmittedCodePowerValue OPTIONAL, Relative to CPICH
    rSCP RSCP-Value TDD OPTIONAL, -- TDD only
    iE-Extensions ProtocolExtensionContainer { {DedicatedMeasurementValue-ExtIEs} } OPTIONAL,
    ...
}

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

-- ** TODO **
DiversityControlField ::= INTEGER

-- ** TODO **
DiversityMode ::= INTEGER

-- ** TODO **
DL-ChannelisationCode ::= INTEGER

-- ** TODO **
DL-DPCCH-SlotFormat ::= INTEGER

-- ** TODO **
DL-DPCH-SlotNumber ::= INTEGER

```

```

DL-EbNo                ::= ScaledUL-EbNo

DL-EbNoTarget          ::= ScaledUL-EbNo

-- ** TODO **
DL-Power               ::= INTEGER

D-RNTI                 ::= INTEGER (0..1048576)
-- ** OR:
-- D-RNTI               ::= BIT STRING (SIZE (20))
-- **

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

-- ** TODO **
DL-ScramblingCode      ::= INTEGER

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

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

-- **TODO**
DRX-Parameter          ::= TBD

-- **TODO**
DSCH-TransportFormatCombinationSet ::= INTEGER

-- **TODO**
DSCH-TFS               ::= INTEGER

-- **TODO**
D-FieldLength          ::= INTEGER

-- E

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

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

```

```

EventB ::= SEQUENCE {
    measurementTreshhold      MeasurementThreshold,
    measurementHysteresisTime  ScaledMeasurementHysteresisTime  OPTIONAL,
    iE-Extensions             ProtocolExtensionContainer { {EventB-ExtIEs} } OPTIONAL,
    ...
}

EventC ::= SEQUENCE {
    measurementIncreaseDecreaseThreshold  MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime                 ScaledMeasurementChangeTime,
    ...
}

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

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

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

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

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

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

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

```

```

-- F
FACH-DataFrameSize      ::= INTEGER (1..5000)
-- Size of data frame in number of bits

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

-- ** TODO **
FACH-InfoForOptionalS-CCPCH ::= INTEGER

-- ** TODO **
FACH-InfoForS-CCPCH-CoupledToPRACH ::= INTEGER

-- ** TODO **
FDD-DL-ChannelisationCodeNumber ::= INTEGER

-- ** TODO **
FDD-FL-ChannelisationCodeNumber ::= INTEGER

-- ** TODO **
FDD-S-CCPCH-Offset      ::= INTEGER

FACH-PriorityIndicator  ::= INTEGER { lowest(0), highest(15) } (0..15)
FrameHandlingPriority    ::= INTEGER { lowest(0), highest(15) } (0..15)
FrameOffset              ::= INTEGER (0..255)
-- Frames

-- G
GapPositionMode ::= ENUMERATED {
    fixed,
    flexible
}
GapPeriod        ::= INTEGER (0..255)

-- H
-- I

-- **TODO**
InitialDL-TX-Power ::= INTEGER

-- J
-- K
-- L

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

```

```

-- ** TODO **
L3-Information          ::= INTEGER

-- M

-- ** TODO **
MaxNrOfUL-DPCHs        ::= INTEGER

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

-- **TODO**
MACd-MACsh-TransportFormatSet ::= INTEGER

-- **NOTE: extensibility**
MeasurementCharacteristics ::= SEQUENCE {
    measurementFrequency    TBD,
    averagingDuration       TBD,
    IE-Extensions           ProtocolExtensionContainer { {MeasurementCharacteristics-ExtIEs} } OPTIONAL,
    ...
}

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

-- ** TODO **
MeanBitRate             ::= INTEGER

MeasurementID           ::= INTEGER (0..1048576)
-- **OR:
-- MeasurementID        ::= BIT STRING (SIZE (20))
-- **

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

-- ** TODO **
MCC-Digit               ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008

-- ** TODO **
MNC-Digit               ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008

ScaledMeasurementChangeTime ::= INTEGER (1..1000)
-- MeasurementChangeTime = ScaledMeasurementChangeTime * 10
-- Units is ms

```

```

| --- ** TODO **

```



```

MeasurementDecreaseThreshold ::= INTEGER

ScaledMeasurementHysteresisTime ::= INTEGER (1..1000)
-- MeasurementHysteresisTime = ScaledMeasurementHysteresisTime * 10
-- Unit is ms

-- ** TODO **
MeasurementIncreaseDecreaseThreshold ::= INTEGERCHOICE {
    sir SIR-Value-IncrDecrThresh,
    sir-error SIR-ErrorValue-IncrDecrThresh,
    transmitted-code-power TransmittedCodePowerValue-IncrDecrThresh,
    rscp RSCP-Value-IncrDecrThresh,
    ...
}

-- ** TODO **
MeasurementThreshold ::= INTEGERCHOICE {
    sir SIR-Value,
    sir-error SIR-ErrorValue,
    transmitted-code-power TransmittedCodePowerValue,
    rscp RSCP-Value,
    ...
}

MidambleShift ::= INTEGER (0..15)

MinUL-ChannelisationCodeLength ::= INTEGER

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- N
NrOfTransportBlocks ::= INTEGER (0..4095)

-- O
Offset ::= INTEGER (0..63)

-- P
PD ::= INTEGER (0..2047, ...)

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-not-included,
    crc-included--,
    ...
}

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

```

```

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

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

-- ** TODO **
PilotBitsUsedIndicator ::= INTEGER

-- ** TODO **
PLMN-ID ::= SEQUENCE {
    mCC-digit      MCC-Digit,
    iE-Extensions ProtocolExtensionContainer { {PLMN-ID-ExtIEs} } OPTIONAL,
    mNC-digit      MNC-Digit
}
-- FFS

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

PowerControlMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

PowerOffset ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

-- ** TODO **
PrimaryCPICH-Power ::= INTEGER

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

-- ** TODO **
PrimaryCCPCH-RSCP ::= INTEGER

PrimaryScramblingCode ::= ScramblingCode

PropagationDelay ::= INTEGER (0..255)

SyncCase ::= ENUMERATED {
    case1,

```

```

    case2,
    case3--,
-- ...
}

-- ** TODO **
PSCH-CCPCH-TimeSlot      ::= TimeSlot

-- ** TODO **
PSCH-PCCPCH-TimeSlot    ::= TimeSlot

-- ** TODO **
P-CPICH-Power           ::= INTEGER

PunctureLimit           ::= INTEGER (0..100)
-- Unit is %

-- Q
-- R

-- ** TODO **
RAC                      ::= INTEGER

-- ** TODO **
-- OCTET STRING?
RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute    ::= INTEGER (1..maxRateMatching)

RepetitionLength         ::= INTEGER (1..63)

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

-- This is changed from the tabular format because it seems that
-- this is what is wanted.
ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF--,

```

```

-- ...
}

-- Changed
ReportPeriodicity ::= CHOICE {
    msec          INTEGER (1..1000),
    min           INTEGER (1..60)
}

RLC-Mode ::= ENUMERATED {
    acknowledged-mode,
    unacknowledged-mode,
    transparent-mode
}

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

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

-- According mapping in 25.225
RSCP-Value    ::= INTEGER (0..81)

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

-- S

-- Changed BIT STRING -> OCTET STRING
SAC           ::= OCTET STRING (SIZE (2))

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

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

-- ** TODO **
ScramblingCode          ::= INTEGER

ScramblingCodeChange ::= ENUMERATED {
    no-code-change,
    code-change
}

ScaledSIR-ErrorValue    ::= INTEGER (0..100)

SIR-ErrorValue-IncrDecrThres ::= INTEGER (0..144)

-- ScaledSIR-ErrorValue = (SIR-Error+31)*2_SIR-ErrorValue * 10

```

```

-- If SIR-ErrorValue <= -10 ScaledSIR-ErrorValue shall be set to -100
-- If SIR-ErrorValue >= 10 ScaledSIR-ErrorValue shall be set to 100
-- SIR-ErrorValue step 0.1 dB

```

```

-- According to mapping in 25.215/25.225
ScaledSIR-Value ::= INTEGER (-1000..63200)

```

```

SIR-Value-IncrDecrThree := INTEGER (0..62)
ScaledSIR-Value = SIR-Value * 10
-- SIR-Value step 0.1 dB

```

```

ScaledTransmittedCodePowerValue ::= INTEGER (-350..150)
ScaledTransmittedCodePowerValue = TransmittedCodePowerValue * 10
-- TransmittedCodePowerValue step 0.1 dB

```

```

-- ** TODO **
SharedChannelType ::= INTEGER

-- ** TODO **
SecondaryCCPCH-SlotFormat ::= INTEGER

```

```

SN ::= TimeSlot

```

```

SpreadingFactorOfChannelisationCode ::= ENUMERATED {
    v256,
    v128,
    v64,
    v32,
    v16,
    v8,
    v4,
    v2,
    v1
}

```

```

-- Changed
S-FieldLength ::= INTEGER (1..2)

```

```

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

```

```

-- ** TODO **
SRNC-ID ::= INTEGER

```

```

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

```

```

}

SSDT-CellID-Length ::= ENUMERATED {
    short,
    medium,
    long
}

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

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

-- T

-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)

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

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

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

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

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

```

```

ToAWS                ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}

TGD                ::= INTEGER (0..255)

TGL                ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
    -- ...
}

TransportBearerID    ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize  ::= INTEGER (1..5000)
-- Unit is bits

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

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

TransportFormatSet ::= SEQUENCE {
    dynamicParts             TransportFormatSet-DynamicPartList,
    semi-staticPart         TransportFormatSet-Semi-staticPart,
    iE-Extensions           ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

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

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEQUENCE {
        nrOfTransportBlocks    NrOfTransportBlocks,

```

```

transportBlockSize      TransportBlockSize      OPTIONAL
-- This IE is only present if nrOfTransportBlocks is greater than 0 --,
mode                    TransportFormatSet-ModeDP,
iE-Extensions          ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-ExtIEs} } OPTIONAL,
...
}

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

TransportFormatSet-ModeDP ::= CHOICE {
tdd                    TransmissionTimeIntervallList,
-- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
...
}

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

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

-- According to mapping in 25.215/25.225
TransmittedCodePowerValue ::= INTEGER (0..12)
TransmittedCodePowerValue-IncrDecrThres ::= INTEGER (0..12)

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

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

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

```



```

}

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

-- TransportLayerAddress          ::= BIT STRING (1..160, ...)
TransportLayerAddress            ::= OCTET STRING (SIZE (1..20, ...))

-- U

UARFCN                          ::= INTEGER (0..698, ...)

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

UL-DeltaEbNo                    ::= INTEGER (-60..100)

UL-DeltaEbNoAfter               ::= INTEGER (-60..100)

-- ** TODO **
UL-EbNo                         ::= INTEGER

-- ** TODO **
UL-EbNoTarget                   ::= INTEGER

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

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

```

## CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

**25.423 CR 026r1**

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**  
*list expected approval meeting # here*  
↑

for approval   
for information

Strategic   
non-strategic  *(for SMG use only)*

Form: CR cover sheet, version 2 for 3GPP and SMG    The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:**    (U)SIM     ME     UTRAN / Radio     Core Network   
*(at least one should be marked with an X)*

**Source:**    RAN-WG3 and RAN-WG3    **Date:**    28<sup>th</sup> Feb. – 3<sup>rd</sup> March 2000

**Subject:**    Clarification of Criticality Modelling and Protocol Error Handling

**Work item:**

|                  |  |                 |  |
|------------------|--|-----------------|--|
| <b>Category:</b> | F Correction <input checked="" type="checkbox"/><br>A Corresponds to a correction in an earlier release <input type="checkbox"/><br>B Addition of feature <input type="checkbox"/><br>C Functional modification of feature <input type="checkbox"/><br>D Editorial modification <input type="checkbox"/> | <b>Release:</b> | Phase 2 <input type="checkbox"/><br>Release 96 <input type="checkbox"/><br>Release 97 <input type="checkbox"/><br>Release 98 <input type="checkbox"/><br>Release 99 <input checked="" type="checkbox"/><br>Release 00 <input type="checkbox"/> |
|------------------|--|-----------------|--|

*(only one category shall be marked with an X)*

**Reason for change:**

In the current RNSAP specification the description of the handling of IEs/IE groups with Criticality Information is a bit ambiguous. It is specified that if an IE with Criticality Information is received but not understood then it shall be ignored/rejected. However, it is not as clear that this is the case for an entire IE group. It is further more not clear what happens if one out of several repetitions of an IE/IE group is not understood by the receiving node.

On the other hand, it is clear that the reporting of a rejected or ignored item (IE/IE group) can only be done for the item on which criticality information is defined. This means that if parts of an IE group (where the individual IEs does not have criticality information of its own) is not understood then the whole IE group is what can be indicated in the Criticality Diagnostics, not individual IEs within the IE group.

Further more, the discrimination between Transfer Syntax Errors, Abstract Syntax Errors and Semantic/Logical Errors is not clear.

This CR aims at clarifying that if an IE group with Criticality Information is received but not understood then the whole IE group (not individual IEs within the IE group) shall be ignored/rejected. The CR further more aims at clarifying that if an IE/IE group is not understood then it shall be ignored and the receiving node shall continue with the procedure ("ignore" and "ignore and notify" cases) as if the ignored IE/IE group was not received, with the exception of the reporting of Criticality Diagnostics ("ignore and notify" case). Finally, the CR improves the discrimination between Transfer Syntax Errors, Abstract Syntax Errors and Semantic/Logical Errors.

**Clauses affected:**    10

**Other specs**    Other 3G core specifications  → List of CRs:    25.413 v3.0.0 CR-025r1,  
25.433 v3.0.0 CR-041r1

**affected:**

Other GSM core specifications  
MS test specifications  
BSS test specifications  
O&M specifications

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

→ List of CRs:  
→ List of CRs:  
→ List of CRs:  
→ List of CRs:

|  |
|--|
|  |
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|  |

**Other comments:**

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

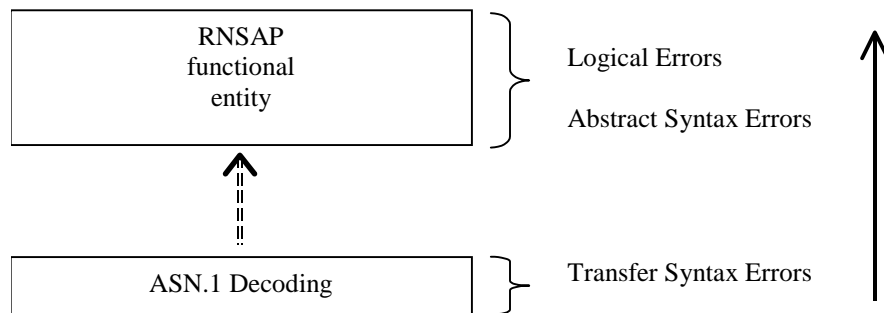
## 10 Handling of Unknown, Unforeseen and Erroneous Protocol Data

### 10.1 General

Protocol Error cases can be divided into ~~two~~three classes:

1. Transfer Syntax ~~error~~Error
2. Abstract Syntax ~~error~~Error
3. Logical Error

Protocol errors can occur in the following functions within a receiving node:



**Figure X: Protocol Errors in RNSAP.**

### 10.2 Transfer Syntax Error

A Transfer Syntax Error occurs when the receiver is not able to decode the received physical message i.e. the transfer syntax can not be opened. Transfer syntax errors are always detected in the process of ASN.1 decoding. If a Transfer Syntax Error occurs, the receiver should initiate Error Indication procedure with appropriate cause value for the Transfer Syntax protocol error.

Examples for Transfer Syntax Errors are:

- Violation of value ranges in ASN.1 definition of messages. e.g.: If an IE has a defined value range of 0 to 10 (ASN.1: INTEGER (0..10)), and 12 will be received, then this will be treated as a transfer syntax error.
- Violation in list element constraints. e.g.: If a list is defined as containing 1 to 10 elements, and 12 elements will be received, than this case will be handled as a transfer syntax error.
- Missing mandatory elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).
- Wrong order of elements in ASN.1 SEQUENCE definitions (as sent by the originator of the message).

### 10.3 Abstract Syntax Error

#### 10.3.1 General

An Abstract Syntax Error occurs when the receiving functional RNSAP entity receives IEs or IE groups that cannot be understood. The abstract syntax error also appears if the logical range of an IE is violated (e.g.: ASN.1 definition: 0 to

15, the logical range is 0 to 10 (values 11 to 15 are undefined), and 12 will be received; this case will be handled as an abstract syntax error using criticality information sent by the originator of the message)

### 10.3.2 Definition of Criticality Information

In the RANSAP messages there is criticality information set for individual IEs and/or ~~sequences of IE groups~~. This criticality information instructs the receiver how to act when receiving an IE or an IE group that is not comprehended, i.e. the entire item (IE or IE group) which is not (fully or partially) comprehended shall be treated in accordance with its own criticality information as specified in chapter 10.3.3. ~~An IE shall be regarded as not comprehended if the receiving node either cannot decode the IE or does not comprehend the function represented by the IE value. The case of the not comprehended IE is an Abstract Syntax Error.~~

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error act according to the Criticality Information for the IE/IE group ~~or sequences of IEs~~ due to which Abstract Syntax Error occurred in accordance with chapter 10.3.23.

The receiving node shall take different actions depending on the value of the Criticality Information. The three possible values of the Criticality Information for an IE/IE group are:

1. Reject IE
2. Ignore IE and Notify Sender
3. Ignore IE

## 10.3.23 Handling of the Criticality Information at Reception

### 10.3.23.1 Procedure Code

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

#### **Reject IE:**

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

#### **Ignore IE and Notify Sender:**

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

#### **Ignore IE:**

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

### 10.3.23.2 IEs other than the Procedure Code

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

#### **Reject IE:**

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

- If a *response* message is received containing one or more IEs/IE group marked with "*Reject IE that the receiving node does not comprehend*", the receiving node shall initiate local error handling.

#### Ignore IE and Notify Sender:

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

#### Ignore IE:

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

### 10.3.34 Logical Error Handling

Logical error situations occur when a message is comprehended correctly, but the information contained within the message is not valid (i.e. semantic error), or describes a procedure which is not compatible with the state of the receiver. In these conditions, the following behaviour shall be performed as defined by the class of the elementary procedure, irrespective of the criticality information of the IEs/IE groups containing the erroneous values.

#### Class 1:

Where the logical error occurs in a request message of a class 1 procedure, and the procedure has a failure message, the failure message shall be sent with an appropriate cause value. Typical cause values are:

#### Protocol Causes:

1. Semantic Error
2. Message not Compatible with Receiver State

Where the logical error is contained in a request message of a class 1 procedure, and the procedure does not have a failure message, the Error Indication procedure shall be initiated with an appropriate cause value.

Where the logical error exists in a response message of a class 1 procedure, local error handling shall be initiated.

#### Class 2:

Where the logical error occurs in a message of a class 2 procedure, the Error Indication procedure shall be initiated with an appropriate cause value.

**TSG-RAN Working Group 3 meeting #11**  
**Sophia Antipolis, France, 28 February – 3 March, 2000**

*TSGR3#(00)0734*

**Agenda Item:** 7  
**Source:** RAN-WG3  
**Title:** Introduction of 'Repetition Number' into 'Criticality Diagnostics' IE  
**Effected Specifications / Releases:** TS25.423 v3.0.0 / Release 99  
**Document for:** approval  
**Date:** 22<sup>nd</sup> February 2000

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In comparison to the original CR (R3-000535) in the indentation of the *RepetitionNumber* IE has been corrected within the Message Tabular Format.

**CHANGE REQUEST**

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

**25.423 CR 032r1**

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **RAN#7**  
list expected approval meeting # here  
↑

for approval   
for information

strategic   
non-strategic  (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:** (U)SIM  ME  UTRAN / Radio  Core Network   
(at least one should be marked with an X)

**Source:** RAN-WG3 **Date:** 28 Feb 2000

**Subject:** Introduction of 'Repetition Number' into 'Criticality Diagnostics' IE

**Work item:**

|  |   |                                     |                 |            |                                     |
|--|---|-------------------------------------|-----------------|------------|-------------------------------------|
| <b>Category:</b>   | F Correction  | <input type="checkbox"/>            | <b>Release:</b> | Phase 2    | <input type="checkbox"/>            |
| <small>(only one category shall be marked with an X)</small> | A Corresponds to a correction in an earlier release | <input type="checkbox"/>            |                 | Release 96 | <input type="checkbox"/>            |
|  | B Addition of feature                               | <input type="checkbox"/>            |                 | Release 97 | <input type="checkbox"/>            |
|  | C Functional modification of feature                | <input checked="" type="checkbox"/> |                 | Release 98 | <input type="checkbox"/>            |
|  | D Editorial modification                            | <input type="checkbox"/>            |                 | Release 99 | <input checked="" type="checkbox"/> |
|  |   |                                     |                 | Release 00 | <input type="checkbox"/>            |

**Reason for change:** If a repeated IE has criticality information applied to EACH repetition, it must be possible to report the repetition number of the not comprehended information element.

**Clauses affected:** 9.2.1.11 Criticality Diagnostics; 9.3.4 Information Element Definitions

|                              |                               |                          |                |  |
|------------------------------|-------------------------------|--------------------------|----------------|--|
| <b>Other specs affected:</b> | Other 3G core specifications  | <input type="checkbox"/> | → List of CRs: |  |
|                              | Other GSM core specifications | <input type="checkbox"/> | → List of CRs: |  |
|                              | MS test specifications        | <input type="checkbox"/> | → List of CRs: |  |
|                              | BSS test specifications       | <input type="checkbox"/> | → List of CRs: |  |
|                              | O&M specifications            | <input type="checkbox"/> | → List of CRs: |  |

**Other comments:**



help.doc

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



## 9.2.1.11 Criticality Diagnostics

| IE/Group Name                                      | Presence | Range                            | IE type and reference  | Semantics description  |
|--|----------|----------------------------------|--|--|
| <b>Criticality Diagnostics</b>                     |          |                                  |  |  |
| Procedure Code                                     | O        |                                  | INTEGER (0..255)   | Procedure code is to be used if Criticality diagnostics is part of Error Indication procedure, and not within the response message of the same operation that caused the error |
| Triggering Message                                 | O        |                                  | ENUMERATED (initiating message, successful outcome, unsuccessful outcome, outcome) | The Triggering Message is used only if the Criticality diagnostics is part of Error Indication except when the procedure code is not understood.                               |
| Criticality Response                               | O        |                                  | ENUMERATED (reject, ignore, notify)  | This Criticality response IE is used for reporting the Criticality of the Triggering message   |
| Transaction Id                                     | O        |                                  | INTEGER (0..255)   |  |
| <b>Information Element Criticality Diagnostics</b> |          | <i>1..&lt;maxnoof errors&gt;</i> |  |  |
| Criticality Response                               | M        |                                  | ENUMERATED (reject, ignore, notify)  | The Criticality response IE is used for reporting the criticality of the triggering IE. The value 'Ignore' shall never be used.  |
| IE Id  | M        |                                  | INTEGER (0..65535)   | The IE Id of the not understood IE as defined in the ASN.1 part of the specification.  |
| <u>Repetition Number</u>                           | <u>O</u> |                                  | <u>INTEGER (0..255)</u>  | <u>The repetition number of the not understood IE if applicable</u>  |

| Range bound   | Explanation  |
|---------------|--|
| maxnooferrors | Maximum no. of IE errors allowed to be reported with a single message. The value for maxnooferrors is 256. |

### 9.3.4 Information Element Definitions

```

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

```

- 
- 
- 

```

CRC-Size                ::= INTEGER (0| 8| 12| 16| 24)

CriticalityDiagnostics ::= SEQUENCE {
    procedureCode          ProcedureCode          OPTIONAL,
    triggeringMessage      TriggeringMessage      OPTIONAL,
    criticalityResponse    Criticality             OPTIONAL,
    transactionID          TransactionID          OPTIONAL,
    iEsCriticalityResponses CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

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

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        criticalityResponse    Criticality,
        iE-ID                  ProtocolIE-ID,
        repetitionNumber       RepetitionNumber    OPTIONAL,
        iE-Extensions         ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
        ...
    }

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

-- ** TODO **
CTFC                ::= INTEGER
-- See formula (must be resolved)

```

```
▪  
▪  
▪  
RepetitionLength ::= INTEGER (1..63)  
RepetitionNumber ::= INTEGER (0..255)  
RepetitionPeriod ::= ENUMERATED {  
    v1,  
    v2,  
    v4,  
    v8,  
    v16,  
    v32,  
    v64--,  
    -- ...  
}
```



## 9.1.3 RADIO LINK SETUP REQUEST

### 9.1.3.1 FDD Message

| IE/Group Name                       | Presence      | Range             | IE type and reference | Semantics description            |
|-------------------------------------|---------------|-------------------|-----------------------|----------------------------------|
| Message Type                        | M             |                   |                       |                                  |
| Transaction ID                      | M             |                   |                       |                                  |
| S-RNTI                              | M             |                   |                       |                                  |
| D-RNTI                              | O             |                   |                       |                                  |
| Allowed Queuing time                | O             |                   |                       |                                  |
| <b>UL DPCH Information</b>          |               | 1                 |                       |                                  |
| UL Scrambling Code                  | M             |                   |                       |                                  |
| Min UL Channelisation Code Length   | M             |                   |                       |                                  |
| Max Number of UL DPDCHs             | C – CodeLen   |                   |                       |                                  |
| Puncture Limit                      | M             |                   |                       | For the UL.                      |
| UL Transport Format Combination Set | M             |                   |                       |                                  |
| UL DPCH Slot Format                 | M             |                   |                       |                                  |
| UL Eb/No Target                     | O             |                   |                       |                                  |
| Diversity mode                      | M             |                   |                       |                                  |
| D Field Length                      | C-FB          |                   |                       |                                  |
| SSDT Cell ID Length                 | O             |                   |                       |                                  |
| S Field Length                      | O             |                   |                       |                                  |
| Mean Bit Rate                       | O             |                   |                       | For the UL.                      |
| <b>DL DPCH Information</b>          |               | 1                 |                       |                                  |
| Transport Format Combination Set    | M             |                   |                       |                                  |
| DL DPCH Slot Format                 | M             |                   |                       |                                  |
| TFCI Signalling Mode                | M             |                   |                       |                                  |
| TFCI Presence                       | C- SlotFormat |                   |                       |                                  |
| Multiplexing Position               | M             |                   |                       |                                  |
| <b>Power Offset Information</b>     |               | 1                 |                       |                                  |
| PO1                                 | M             |                   | Power Offset          | Power offset for the TFCI bits.  |
| PO2                                 | M             |                   | Power Offset          | Power offset for the TPC bits.   |
| PO3                                 | M             |                   | Power Offset          | Power offset for the pilot bits. |
| TPC Downlink Step Size              | M             |                   |                       |                                  |
| Mean Bit Rate                       | O             |                   |                       | For the DL.                      |
| <b>DCH Information</b>              |               | 1..<maxnoofDCHs > |                       |                                  |
| DCH ID                              | M             |                   |                       |                                  |
| DCH Combination Ind                 | O             |                   |                       |                                  |
| RLC Mode                            | M             |                   |                       |                                  |
| Transport Format Set                | M             |                   |                       | For the UL.                      |
| Transport Format Set                | M             |                   |                       | For the DL.                      |
| BLER                                | M             |                   |                       | For the UL.                      |
| BLER                                | M             |                   |                       | For the DL.                      |
| Allocation/Retention Priority       | M             |                   |                       |                                  |
| Frame Handling Priority             | M             |                   |                       |                                  |
| Payload CRC Presence Indicator      | M             |                   |                       |                                  |
| UL FP Mode                          | M             |                   |                       |                                  |
| ToAWS                               | M             |                   |                       |                                  |
| ToAWE                               | M             |                   |                       |                                  |
| <b>RL Information</b>               |               | 1...<maxnoofRLs   |                       |                                  |

|                         |                   |   |          |  |
|-------------------------|-------------------|---|----------|--|
|                         |                   | > |          |  |
| RL ID                   | M                 |   |          |  |
| C-ID                    | M                 |   |          |  |
| Frame Offset            | M                 |   |          |  |
| Chip Offset             | M                 |   |          |  |
| Propagation Delay       | O                 |   |          |  |
| Diversity Control Field | C –<br>NotFirstRL |   |          |  |
| Initial DL TX Power     | O                 |   | DL Power |  |
| Primary CPICH Ec/Io     | O                 |   |          |  |
| SSDT Cell ID            | O                 |   |          |  |

| Condition  | Explanation  |
|------------|--|
| CodeLen    | This IE is present only if "Min UL Channelisation Code len" equals to 4                    |
| FB         | This IE is present only if Feed Back mode diversity is activated.                          |
| SlotFormat | This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16. |
| NotFirstRL | This IE is present only if the RL is not the first one in the <b>RL Information</b> .      |

| Range bound | Explanation                     |
|-------------|---------------------------------|
| MaxnoofDCHs | Maximum no. of DCHs for one UE. |
| MaxnoofRLs  | Maximum no. of RLs for one UE.  |

9.1.3.2 TDD Message

| IE/Group Name                  | Presence | Range                           | IE type and reference | Semantics description               |
|--------------------------------|----------|---------------------------------|-----------------------|-------------------------------------|
| Message Type                   | M        |                                 |                       |                                     |
| Transaction ID                 | M        |                                 |                       |                                     |
| S-RNTI                         | M        |                                 |                       |                                     |
| D-RNTI                         | O        |                                 |                       |                                     |
| Allowed Queuing time           | O        |                                 |                       |                                     |
| Mean Bit Rate                  | O        |                                 |                       | For the UL.                         |
| Mean Bit Rate                  | O        |                                 |                       | For the DL.                         |
| <b>UL CTrCH Information</b>    |          | <i>1..&lt;maxnoofCTrCHs&gt;</i> |                       |                                     |
| CTrCH ID                       | M        |                                 |                       |                                     |
| TFCS                           | M        |                                 |                       | For the UL.                         |
| TFCI Coding                    | M        |                                 |                       |                                     |
| Puncture Limit                 | M        |                                 |                       |                                     |
| <b>DL CTrCH Information</b>    |          | <i>1..&lt;maxnoofCTrCHs&gt;</i> |                       |                                     |
| CTrCH ID                       | M        |                                 |                       |                                     |
| TFCS                           | M        |                                 |                       | For the DL.                         |
| TFCI Coding                    | M        |                                 |                       |                                     |
| Puncture Limit                 | M        |                                 |                       |                                     |
| <b>DCH Information</b>         |          | <i>1..&lt;maxnoofDCHs&gt;</i>   |                       |                                     |
| DCH ID                         | M        |                                 |                       |                                     |
| CTrCH ID                       | M        |                                 |                       | UL CTrCH in which the DCH is mapped |
| CTrCH ID                       | M        |                                 |                       | DL CTrCH in which the DCH is mapped |
| DCH Combination Ind            | O        |                                 |                       |                                     |
| RLC Mode                       | M        |                                 |                       |                                     |
| Transport Format Set           | M        |                                 |                       | For the UL.                         |
| Transport Format Set           | M        |                                 |                       | For the DL.                         |
| BLER                           | M        |                                 |                       | For the UL.                         |
| BLER                           | M        |                                 |                       | For the DL.                         |
| Allocation/Retention Priority  | M        |                                 |                       |                                     |
| Frame Handling Priority        | M        |                                 |                       |                                     |
| Payload CRC Presence Indicator | M        |                                 |                       |                                     |
| UL FP Mode                     | M        |                                 |                       |                                     |
| ToAWS                          | M        |                                 |                       |                                     |
| ToAWE                          | M        |                                 |                       |                                     |
| <b>RL Information</b>          |          | <i>1</i>                        |                       |                                     |
| RL ID                          | M        |                                 |                       |                                     |
| C-ID                           | M        |                                 |                       |                                     |
| Frame Offset                   | M        |                                 |                       |                                     |
| Primary CCPCH RSCP             | O        |                                 |                       |                                     |

| Range bound   | Explanation                      |
|---------------|----------------------------------|
| MaxnoofDCHs   | Maximum no. of DCHs for one UE.  |
| MaxnoofCTrCHs | Maximum no. of CTrCH for one UE. |

### 9.1.4 RADIO LINK SETUP RESPONSE

#### 9.1.4.1 FDD Message

| IE/Group Name                                | Presence     | Range                      | IE type and reference | Semantics description                                       |
|--|--------------|----------------------------|-----------------------|---|
| Message Type                                 | M            |                            |                       |   |
| Transaction ID                               | M            |                            |                       |   |
| D-RNTI                                       | O            |                            |                       |   |
| CN PS Domain Identifier                      | O            |                            |                       |   |
| CN CS Domain Identifier                      | O            |                            |                       |   |
| <b>RL Information Response</b>               |              | 1..<maxnoofRLs>            |                       |   |
| RL ID  | M            |                            |                       |   |
| SAI  | M            |                            |                       |   |
| UL Interference Level                        | M            |                            |                       |   |
| <b>DL Code Information</b>                   |              | 1..<maxnoofDLCode s        |                       |   |
| DL Scrambling Code                           | M            |                            |                       |   |
| FDD DL Channelisation Code Number            | M            |                            |                       |   |
| Diversity Indication                         | C-NotFirstRL |                            |                       |   |
| CHOICE <i>diversity Indication Combining</i> |              |                            |                       |   |
| RL ID  | M            |                            |                       | Reference RL ID for the combining                           |
| <i>Non Combining or IE not present</i>       |              |                            |                       | "IE not present" is equivalent to "First RL".               |
| <b>DCH Information Response</b>              |              | 0..<maxnoofDCHs >          |                       | Only one DCH per set of co-ordinated DCHs shall be included |
| DCH ID                                       | M            |                            |                       |   |
| Binding ID                                   | M            |                            |                       |   |
| Transport Layer Address                      | M            |                            |                       |   |
| SSDT Support Indicator                       | M            |                            |                       |   |
| Maximum Uplink Eb/No                         | M            |                            | Uplink Eb/No          |   |
| Minimum Uplink Eb/No                         | M            |                            | Uplink Eb/No          |   |
| <b>Neighbouring FDD Cell Information</b>     |              | 0..<maxnoofFDDn eighbours> |                       |   |
| UC-Id  | M            |                            |                       |   |
| CN PS Domain Identifier                      | O            |                            |                       |   |
| CN CS Domain Identifier                      | O            |                            |                       |   |
| UARFCN                                       | M            |                            |                       |   |
| Frame Offset                                 | O            |                            |                       |   |
| Primary Scrambling Code                      | M            |                            |                       |   |
| Primary CPICH Power                          | O            |                            |                       |   |
| <b>Neighbouring TDD Cell Information</b>     | O            | 0..<maxnoofTDDn eighbours> |                       |   |
| UC-Id  | M            |                            |                       |   |
| CN PS Domain Identifier                      | O            |                            |                       |   |
| CN CS Domain Identifier                      | O            |                            |                       |   |
| UARFCN                                       | M            |                            |                       |   |
| Frame Offset                                 | O            |                            |                       |   |
| Cell Parameter ID                            | M            |                            |                       |   |
| Sync Case                                    | M            |                            |                       |   |
| -Time Slot                                   | C-Case1      |                            |                       |   |
| PSCH Time Slot                               | C-Case2&3    |                            |                       |   |
| Uplink Eb/No Target                          | O            |                            | Uplink Eb/No          |   |



|                         |   |  |  |  |
|-------------------------|---|--|--|--|
| Downlink Eb/No Target   | O |  |  |  |
| Criticality Diagnostics | O |  |  |  |

| Condition  | Explanation  |
|------------|--|
| #Comb      | This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.     |
| #NotComb   | This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B. |
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information                   |
| Case1      | This IE is present only if Sync Case = Case1.  |
| Case2&3    | This IE is present only if Sync Case = Case2 or Case3.                                       |

| Range bound          | Explanation   |
|----------------------|---|
| MaxnoofRLs           | Maximum no. of RLs for one UE.                        |
| MaxnoofDCHs          | Maximum no. of DCHs for one UE.                       |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell. |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell. |

9.1.4.2 TDD Message

| IE/Group Name                            | Presence | Range                     | IE type and reference | Semantics description  |
|--|----------|---------------------------|-----------------------|--|
| Message Type                             | M        |                           |                       |  |
| Transaction ID                           | M        |                           |                       |  |
| D-RNTI                                   | O        |                           |                       |  |
| CN PS Domain Identifier                  | O        |                           |                       |  |
| CN CS Domain Identifier                  | O        |                           |                       |  |
| <b>RL Information Response</b>           |          | 1                         |                       |  |
| RL ID                                    | M        |                           |                       |  |
| SAI                                      | M        |                           |                       |  |
| UL Interference Level                    | M        |                           |                       |  |
| Maximum Uplink Eb/No                     | M        |                           | Uplink Eb/No          |  |
| Minimum Uplink Eb/No                     | M        |                           | Uplink Eb/No          |  |
| Uplink Eb/No Target                      | E        |                           | Uplink Eb/No          |  |
| Downlink Eb/No Target                    | E        |                           |                       |  |
| <b>UL CCTrCH Information</b>             |          | 1..<maxnoofCCTrCHs>       |                       |  |
| <b>CCTrCH ID</b>                         | M        |                           |                       |  |
| <b>UL DPCH Information</b>               |          | 1..<MaxnoofDPC Hs>        |                       |  |
| DPCH ID                                  | M        |                           |                       |  |
| TDD Channelisation Code                  | M        |                           |                       |  |
| Burst Type                               | M        |                           |                       |  |
| Midamble Shift                           | M        |                           |                       |  |
| Time Slot                                | M        |                           |                       |  |
| TDD Physical Channel Offset              | M        |                           |                       |  |
| Repetition Period                        | M        |                           |                       |  |
| Repetition Length                        | M        |                           |                       |  |
| TFCI Presence                            | M        |                           |                       |  |
| <b>DL CCTrCH Information</b>             |          | 1..<maxnoofCCTrCHs>       |                       |  |
| <b>CCTrCH ID</b>                         | M        |                           |                       |  |
| <b>DL DPCH Information</b>               |          | 1..<MaxnoofDPC Hs>        |                       |  |
| DPCH ID                                  | M        |                           |                       |  |
| TDD Channelisation Code                  | M        |                           |                       |  |
| Burst Type                               | M        |                           |                       |  |
| Midamble Shift                           | M        |                           |                       |  |
| Time Slot                                | M        |                           |                       |  |
| TDD Physical Channel Offset              | M        |                           |                       |  |
| Repetition Period                        | M        |                           |                       |  |
| Repetition Length                        | M        |                           |                       |  |
| TFCI Presence                            | M        |                           |                       |  |
| <b>DCH Information Response</b>          |          | 1..<maxnoofDCHs >         |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                   | M        |                           |                       |  |
| Binding ID                               | M        |                           |                       |  |
| Transport Layer Address                  | M        |                           |                       |  |
| <b>Neighbouring FDD Cell Information</b> | O        | 0..<maxnoofFDDneighbours> |                       |  |
| UC-Id                                    | M        |                           |                       |  |
| CN PS Domain Identifier                  | O        |                           |                       |  |
| CN CS Domain Identifier                  | O        |                           |                       |  |
| UARFCN                                   | M        |                           |                       |  |
| Frame Offset                             | O        |                           |                       |  |

|  |           |  |                     |  |
|--|-----------|--|---------------------|--|
| Primary Scrambling Code                  | M         |  |                     |  |
| Primary CPICH Power                      | O         |  |                     |  |
| <b>Neighbouring TDD Cell Information</b> | O         | <i>0..&lt;maxnoofTDDneighbours&gt;</i> |                     |  |
| UC-Id                                    | M         |  |                     |  |
| CN PS Domain Identifier                  | O         |  |                     |  |
| CN CS Domain Identifier                  | O         |  |                     |  |
| UARFCN                                   | M         |  |                     |  |
| Frame Offset                             | O         |  |                     |  |
| Cell Parameter ID                        | M         |  |                     |  |
| Sync Case                                | M         |  |                     |  |
| Time Slot                                | C-Case1   |  |                     |  |
| PSCH Time Slot                           | C-Case2&3 |  |                     |  |
| <u>Uplink Eb/No Target</u>               | <u>O</u>  | <u>■</u>                               | <u>Uplink Eb/No</u> |  |
| <u>Downlink Eb/No Target</u>             | <u>O</u>  | <u>■</u>                               | <u>■</u>            |  |
| Criticality Diagnostics                  | O         |  |                     |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range bound          | Explanation  |
|----------------------|--|
| MaxnoofDPCHs         | Maximum no. of DPCHs for one CCTrCH.                 |
| MaxnoofDCHs          | Maximum no. of DCHs for one UE.                      |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell |
| MaxnoofCCTrCHs       | Maximum no. of CCTrCH for one UE.                    |

## 9.1.5 RADIO LINK SETUP FAILURE

### 9.1.5.1 FDD Message

| IE/Group Name                                | Presence | Range                      | IE type and reference | Semantics description  |
|--|----------|----------------------------|-----------------------|--|
| Message Type                                 | M        |                            |                       |  |
| Transaction ID                               | M        |                            |                       |  |
| D-RNTI                                       | O        |                            |                       |  |
| CN PS Domain Identifier                      | O        |                            |                       |  |
| CN CS Domain Identifier                      | O        |                            |                       |  |
| <b>Unsuccessful RL Information Response</b>  |          | 1...<maxnoofRLs>           |                       |  |
| RL ID  | M        |                            |                       |  |
| Cause  | M        |                            |                       |  |
| <b>Successful RL Information Response</b>    |          | 0..<maxnoofRLs-1>          |                       |  |
| RL ID  | M        |                            |                       |  |
| SAI  | M        |                            |                       |  |
| UL Interference Level                        | M        |                            |                       |  |
| <b>DL Code Information</b>                   |          | 1..<maxnoofDLCode s        |                       |  |
| DL Scrambling Code                           | M        |                            |                       |  |
| FDD DL Channelisation Code Number            | M        |                            |                       |  |
| Diversity Indication                         | M        |                            |                       |  |
| CHOICE <i>diversity Indication Combining</i> |          |                            |                       |  |
| RL ID  | M        |                            |                       | Reference RL ID for the combining                            |
| <i>Non Combining or IE not present</i>       |          |                            |                       | "IE not present" is equivalent to "First RL".                |
| <b>DCH Information Response</b>              |          | 0..<maxnoofDCHs >          |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                       | M        |                            |                       |  |
| Binding ID                                   | M        |                            |                       |  |
| Transport Layer Address                      | M        |                            |                       |  |
| SSDT Support Indicator                       | M        |                            |                       |  |
| Maximum Uplink Eb/No                         | M        |                            | Uplink Eb/No          |  |
| Minimum Uplink Eb/No                         | M        |                            | Uplink Eb/No          |  |
| <b>Neighbouring FDD Cell Information</b>     | O        | 0..<maxnoofFDDn eighbours> |                       |  |
| UC-Id  | M        |                            |                       |  |
| CN PS Domain Identifier                      | O        |                            |                       |  |
| CN CS Domain Identifier                      | O        |                            |                       |  |
| UARFCN                                       | M        |                            |                       |  |
| Frame Offset                                 | O        |                            |                       |  |
| Primary Scrambling Code                      | M        |                            |                       |  |
| Primary CPICH Power                          | O        |                            |                       |  |
| <b>Neighbouring TDD Cell Information</b>     | O        | 0..<maxnoofTDDn eighbours> |                       |  |
| UC-Id  | M        |                            |                       |  |
| CN PS Domain Identifier                      | O        |                            |                       |  |
| CN CS Domain Identifier                      | O        |                            |                       |  |
| UARFCN                                       | M        |                            |                       |  |
| Frame Offset                                 | O        |                            |                       |  |
| Cell Parameter ID                            | M        |                            |                       |  |
| Sync Case                                    | M        |                            |                       |  |
| Time Slot                                    | C-Case3  |                            |                       |  |

|                         |           |  |              |  |
|-------------------------|-----------|--|--------------|--|
| PSCH Time Slot          | C-Case2&3 |  |              |  |
| Uplink Eb/No Target     | O         |  | Uplink Eb/No |  |
| Maximum Uplink Eb/No    | M         |  | Uplink Eb/No |  |
| Minimum Uplink Eb/No    | M         |  | Uplink Eb/No |  |
| Downlink Eb/No Target   | O         |  |              |  |
| Criticality Diagnostics | O         |  |              |  |

| Condition  | Explanation  |
|------------|--|
| IfComb     | This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.     |
| IfNotComb  | This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B. |
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information.                  |
| Case1      | This IE is present only if Sync Case = Case1.  |
| Case2&3    | This IE is present only if Sync Case = Case2 or Case3.                                       |

| Range bound          | Explanation  |
|----------------------|--|
| MaxnoofRLs           | Maximum no. of RLs for one UE.                       |
| MaxnoofDCHs          | Maximum no. of DCHs for one UE.                      |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell |

9.1.5.2 TDD Message

| IE/Group Name                               | Presence | Range | IE type and reference | Semantics description |
|---|----------|-------|-----------------------|-----------------------|
| Message Type                                | M        |       |                       |                       |
| Transaction ID                              | M        |       |                       |                       |
| <b>Unsuccessful RL Information Response</b> |          | 1     |                       |                       |
| RL ID                                       | M        |       |                       |                       |
| Cause                                       | M        |       |                       |                       |
| Criticality Diagnostics                     | O        |       |                       |                       |

## 9.1.6 RADIO LINK ADDITION REQUEST

### 9.1.6.1 FDD Message

| IE/Group Name           | Presence | Range             | IE type and reference | Semantics description |
|-------------------------|----------|-------------------|-----------------------|-----------------------|
| Message Type            | M        |                   |                       |                       |
| Transaction ID          | M        |                   |                       |                       |
| Uplink Eb/No Target     | M        |                   | Uplink Eb/No          |                       |
| <b>RL Information</b>   |          | 1..<maxnoofRLs-1> |                       |                       |
| RL ID                   | M        |                   |                       |                       |
| C-Id                    | M        |                   |                       |                       |
| Frame Offset            | M        |                   |                       |                       |
| Chip Offset             | M        |                   |                       |                       |
| Diversity Control Field | M        |                   |                       |                       |
| Primary CPICH Ec/Io     | O        |                   |                       |                       |
| SSDT Cell Identity      | O        |                   |                       |                       |

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

### 9.1.6.2 TDD Message

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| Message Type            | M        |       |                       |                       |
| Transaction ID          | M        |       |                       |                       |
| <b>RL Information</b>   |          | 1     |                       |                       |
| RL ID                   | M        |       |                       |                       |
| C-Id                    | M        |       |                       |                       |
| Frame Offset            | M        |       |                       |                       |
| Diversity Control Field | M        |       |                       |                       |
| Primary CCPCH RSCP      | O        |       |                       |                       |

## 9.1.7 RADIO LINK ADDITION RESPONSE

### 9.1.7.1 FDD Message

| IE/Group Name                             | Presence  | Range                      | IE type and reference | Semantics description  |
|---|-----------|----------------------------|-----------------------|--|
| Message Type                              | M         |                            |                       |  |
| Transaction ID                            | M         |                            |                       |  |
| <b>RL Information Response</b>            |           | 1..<maxnoofRLs-1>          |                       |  |
| RL ID                                     | M         |                            |                       |  |
| SAI                                       | M         |                            |                       |  |
| UL Interference Level                     | M         |                            |                       |  |
| <b>_DL Code Information</b>               |           | 1..<maxnoofDLCodes>        |                       |  |
| _DL Scrambling Code                       | M         |                            |                       |  |
| _DL Channelisation Code                   | M         |                            |                       |  |
| <b>Diversity Indication</b>               | <b>M</b>  |                            |                       |  |
| _CHOICE diversity indication              |           |                            |                       |  |
| _Combining                                |           |                            |                       |  |
| RL ID                                     | M         |                            |                       | Reference RL-Id  |
| _Non combining                            |           |                            |                       |  |
| <b>DCH Information Response</b>           |           | 1..<maxnoofDCHs>           |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                    | M         |                            |                       |  |
| Binding ID                                | M         |                            |                       |  |
| Transport Layer Address                   | M         |                            |                       |  |
| SSDT Support Indicator                    | M         |                            |                       |  |
| Minimum Uplink Eb/No                      | M         |                            | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                      | M         |                            | Uplink Eb/No          |  |
| <b>_Neighbouring FDD Cell Information</b> |           | 0..<maxnoofFDD Neighbours> |                       |  |
| UC-Id                                     | M         |                            |                       |  |
| CN PS Domain Identifier                   | O         |                            |                       |  |
| CN CS Domain Identifier                   | O         |                            |                       |  |
| UARFCN                                    | M         |                            |                       |  |
| Frame Offset                              | O         |                            |                       |  |
| Primary Scrambling Code                   | M         |                            |                       |  |
| Primary CPICH Power                       | O         |                            |                       |  |
| <b>_Neighbouring TDD Cell Information</b> |           | 0..<maxnoofTDD Neighbours> |                       |  |
| UC-Id                                     | M         |                            |                       |  |
| CN PS Domain Identifier                   | O         |                            |                       |  |
| CN CS Domain Identifier                   | O         |                            |                       |  |
| UARFCN                                    | M         |                            |                       |  |
| Frame Offset                              | O         |                            |                       |  |
| Cell Parameter ID                         | M         |                            |                       |  |
| Sync Case                                 | M         |                            |                       |  |
| Time Slot                                 | C-Case1   |                            |                       |  |
| PSCH Time Slot                            | C-Case2&3 |                            |                       |  |
| Criticality Diagnostics                   | O         |                            |                       |  |

| <b>Condition</b> | <b>Explanation</b>                                     |
|------------------|--|
| Case1            | This IE is present only if Sync Case = Case1.          |
| Case2&3          | This IE is present only if Sync Case = Case2 or Case3. |

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



9.1.7.2 TDD Message

| IE/Group Name                            | Presence | Range                      | IE type and reference | Semantics description  |
|--|----------|----------------------------|-----------------------|--|
| Message Type                             | M        |                            |                       |  |
| Transaction ID                           | M        |                            |                       |  |
| <b>RL Information Response</b>           |          | 1                          |                       |  |
| RL ID                                    | M        |                            |                       |  |
| SAI                                      | M        |                            |                       |  |
| UL Interference Level                    | M        |                            |                       |  |
| <b>UL CTrCH Information</b>              |          | 1..<maxnoof CTrCHs>        |                       |  |
| CCTrCH ID                                | M        |                            |                       |  |
| <b>UL DPCH Information</b>               |          | 1..<maxnoOfDPC Hs>         |                       |  |
| DPCH ID                                  | M        |                            |                       |  |
| TDD Channelisation Code                  | M        |                            |                       |  |
| Burst Type                               | M        |                            |                       |  |
| Midamble Shift                           | M        |                            |                       |  |
| Time Slot                                | M        |                            |                       |  |
| TDD Physical Channel Offset              | M        |                            |                       |  |
| Repetition Period                        | M        |                            |                       |  |
| Repetition Length                        | M        |                            |                       |  |
| TFCI Presence                            | M        |                            |                       |  |
| <b>DL CTrCH Information</b>              |          | 1..<maxnoof CTrCHs>        |                       |  |
| CCTrCH ID                                | M        |                            |                       |  |
| <b>DL DPCH information</b>               |          | 1..<maxnoOfDPC Hs>         |                       |  |
| DPCH ID                                  | M        |                            |                       |  |
| TDD Channelisation Code                  | M        |                            |                       |  |
| Burst Type                               | M        |                            |                       |  |
| Midamble Shift                           | M        |                            |                       |  |
| Time Slot                                | M        |                            |                       |  |
| TDD Physical Channel Offset              | M        |                            |                       |  |
| Repetition Period                        | M        |                            |                       |  |
| Repetition Length                        | M        |                            |                       |  |
| TFCI Presence                            | M        |                            |                       |  |
| <b>Diversity Indication</b>              | <b>M</b> |                            |                       |  |
| CHOICE <i>diversity indication</i>       |          |                            |                       |  |
| <i>Combining</i>                         |          |                            |                       |  |
| RL ID                                    | M        |                            |                       | Reference RL   |
| <i>Non combining</i>                     |          |                            |                       |  |
| <b>DCH Information Response</b>          |          | 1..<maxnoofDCHs >          |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                   | M        |                            |                       |  |
| Binding ID                               | M        |                            |                       |  |
| Transport Layer Address                  | M        |                            |                       |  |
| Minimum Uplink Eb/No                     | M        |                            | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                     | M        |                            | Uplink Eb/No          |  |
| <b>Neighbouring FDD Cell Information</b> |          | 0..<maxnoofFDD Neighbours> |                       |  |
| <b>UC-Id</b>                             | M        |                            |                       |  |
| CN PS Domain Identifier                  | O        |                            |                       |  |
| CN CS Domain Identifier                  | O        |                            |                       |  |
| UARFCN                                   | M        |                            |                       |  |

|  |           |   |  |  |
|--|-----------|---|--|--|
| Frame Offset                             | O         |   |  |  |
| Primary Scrambling Code                  | M         |   |  |  |
| Primary CPICH Power                      | O         |   |  |  |
| <b>Neighbouring TDD Cell Information</b> |           | <i>0..&lt;maxnoofTDD Neighbours&gt;</i> |  |  |
| U-C-Id                                   | M         |   |  |  |
| CN PS Domain Identifier                  | O         |   |  |  |
| CN CS Domain Identifier                  | O         |   |  |  |
| UARFCN                                   | M         |   |  |  |
| Frame Offset                             | O         |   |  |  |
| Cell Parameter ID                        | M         |   |  |  |
| Sync Case                                | M         |   |  |  |
| Time Slot                                | C-Case1   |   |  |  |
| PSCH Time Slot                           | C-Case2&3 |   |  |  |
| Criticality Diagnostics                  | O         |   |  |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1           |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range Bound          | Explanation   |
|----------------------|---|
| MaxnoofDCHs          | Maximum number of dedicated channels on one RL        |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one cell |
| MaxnoofDLCodes       | Maximum number of DL code information                 |
| MaxnoOfDPCHs         | Maximum number of DPCH in one CCTrCH                  |
| MaxnoofCCTrCHs       | no. of CCTrCH for one UE.                             |

## 9.1.8 RADIO LINK ADDITION FAILURE

### 9.1.8.1 FDD Message

| IE/Group Name                               | Presence  | Range                      | IE type and reference | Semantics description  |
|---|-----------|----------------------------|-----------------------|--|
| Message Type                                | M         |                            |                       |  |
| Transaction ID                              | M         |                            |                       |  |
| <b>Unsuccessful RL Information Response</b> |           | 1..<maxnoofRLs-1>          |                       |  |
| RL ID                                       | M         |                            |                       |  |
| Cause                                       | M         |                            |                       |  |
| <b>Successful RL Information Response</b>   |           | 0..<maxnoofRLs-2>          |                       |  |
| RL ID                                       | M         |                            |                       |  |
| SAI   | M         |                            |                       |  |
| UL Interference Level                       | M         |                            |                       |  |
| <b>DL Code Information</b>                  |           | 1..<maxnoofDLCodes>        |                       |  |
| DL scrambling code                          | M         |                            |                       |  |
| FDD DL channelisation code Number           | M         |                            |                       |  |
| Diversity Indication                        | M         |                            |                       |  |
| _CHOICE diversity indication                |           |                            |                       |  |
| Combining                                   |           |                            |                       |  |
| RL ID                                       | M         |                            |                       | Reference RL-Id  |
| Non combining                               |           |                            |                       |  |
| <b>DCH Information Response</b>             |           | 1..<maxnoofDCHs>           |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                      | M         |                            |                       |  |
| Binding ID                                  | M         |                            |                       |  |
| Transport Layer Address                     | M         |                            |                       |  |
| SSDT Support Indicator                      | M         |                            |                       |  |
| Minimum Uplink Eb/No                        | M         |                            | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                        | M         |                            | Uplink Eb/No          |  |
| <b>Neighbouring FDD Cell Information</b>    |           | 0..<maxnoofFDD Neighbours> |                       |  |
| UC-Id                                       | M         |                            |                       |  |
| CN PS Domain Identifier                     | O         |                            |                       |  |
| CN CS Domain Identifier                     | O         |                            |                       |  |
| UARFCN                                      | M         |                            |                       |  |
| Frame Offset                                | O         |                            |                       |  |
| Primary Scrambling Code                     | M         |                            |                       |  |
| Primary CPICH Power                         | O         |                            |                       |  |
| <b>Neighbouring TDD Cell Information</b>    |           | 0..<maxnoofTDD Neighbours> |                       |  |
| UC-Id                                       | M         |                            |                       |  |
| CN PS Domain Identifier                     | O         |                            |                       |  |
| CN CS Domain Identifier                     | O         |                            |                       |  |
| UARFCN                                      | M         |                            |                       |  |
| Frame Offset                                | O         |                            |                       |  |
| Cell Parameter ID                           | M         |                            |                       |  |
| Sync Case                                   | M         |                            |                       |  |
| Time Slot                                   | C-Case1   |                            |                       |  |
| PSCH Time Slot                              | C-Case2&3 |                            |                       |  |
| Criticality Diagnostics                     | O         |                            |                       |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range bound          | Explanation   |
|----------------------|---|
| MaxnoofDCHs          | Maximum number of dedicated channels on one RL        |
| MaxnoofRLs           | Maximum number of radio links for one UE              |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one cell |
| MaxnoofDLCodes       | Maximum number of DL code information                 |

9.1.8.2 TDD Message

| IE/Group Name                               | Presence | Range | IE type and reference | Semantics description |
|---|----------|-------|-----------------------|-----------------------|
| Message Type                                | M        |       |                       |                       |
| Transaction ID                              | M        |       |                       |                       |
| <b>Unsuccessful RL Information Response</b> |          | 1     |                       |                       |
| RL ID                                       | M        |       |                       |                       |
| Cause                                       | M        |       |                       |                       |
| Criticality Diagnostics                     | O        |       |                       |                       |

9.1.9 RADIO LINK DELETION REQUEST

| IE/Group Name         | Presence | Range           | IE type and reference | Semantics description |
|-----------------------|----------|-----------------|-----------------------|-----------------------|
| Message Type          | M        |                 |                       |                       |
| Transaction ID        | M        |                 |                       |                       |
| <b>RL Information</b> |          | 1..<maxnoofRLs> |                       |                       |
| RL ID                 | M        |                 |                       |                       |

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

9.1.10 RADIO LINK DELETION RESPONSE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| Message Type            | M        |       |                       |                       |
| Transaction ID          | M        |       |                       |                       |
| Criticality Diagnostics | O        |       |                       |                       |

## 9.1.11 RADIO LINK RECONFIGURATION PREPARE

### 9.1.11.1 FDD Message

| IE/Group Name                     | Presence      | Range             | IE Type and Reference | Semantics Description |
|-----------------------------------|---------------|-------------------|-----------------------|-----------------------|
| Message Type                      | M             |                   |                       |                       |
| Transaction ID                    | M             |                   |                       |                       |
| Allowed Queuing Time              | O             |                   |                       |                       |
| <b>UL DPCH Information</b>        |               | 0..1              |                       |                       |
| UL Scrambling code                | O             |                   |                       |                       |
| Min UL Channelisation Code Length | O             |                   |                       |                       |
| Max Number of UL DPDCHs           | C – CodeLen   |                   |                       |                       |
| Puncture Limit                    | O             |                   |                       | For the UL.           |
| TFCS                              | O             |                   |                       | TFCS for the UL.      |
| UL DPCCCH Slot Format             | O             |                   |                       |                       |
| SSDT Cell Identity Length         | O             |                   |                       |                       |
| S-Field Length                    | O             |                   |                       |                       |
| Mean Bit Rate                     | O             |                   |                       | For the UL.           |
| <b>DL DPCH Information</b>        |               | 0..1              |                       |                       |
| TFCS                              | O             |                   |                       | TFCS for the DL.      |
| DL DPCH Slot Format               | O             |                   |                       |                       |
| TFCI Signalling Mode              | O             |                   |                       |                       |
| TFCI Presence                     | C- SlotFormat |                   |                       |                       |
| MultiplexingPosition              | O             |                   |                       |                       |
| Mean Bit Rate                     | O             |                   |                       | For the DL.           |
| <b>DCHs to Modify</b>             |               | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                            | M             |                   |                       |                       |
| Transport Format Set              | O             |                   |                       | For the UL.           |
| Transport Format Set              | O             |                   |                       | For the DL.           |
| Allocation/Retention Priority     | O             |                   |                       |                       |
| Frame Handling Priority           | O             |                   |                       |                       |
| UL FP Mode                        | O             |                   |                       |                       |
| ToAWS                             | O             |                   |                       |                       |
| ToAWE                             | O             |                   |                       |                       |
| <b>DCHs to Add</b>                |               | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                            | M             |                   |                       |                       |
| DCH Combination Indicator         | O             |                   |                       |                       |
| RLC Mode                          | M             |                   |                       |                       |
| Transport Format Set              | M             |                   |                       | For the UL.           |
| Transport Format Set              | M             |                   |                       | For the DL.           |
| BLER                              | M             |                   |                       | For the UL.           |
| BLER                              | M             |                   |                       | For the DL.           |
| Allocation/Retention Priority     | M             |                   |                       |                       |
| Frame Handling Priority           | M             |                   |                       |                       |
| Payload CRC Presence Indicator    | M             |                   |                       |                       |
| UL FP Mode                        | M             |                   |                       |                       |
| ToAWS                             | M             |                   |                       |                       |
| ToAWE                             | M             |                   |                       |                       |
| <b>DCHs to Delete</b>             |               | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                            | M             |                   |                       |                       |
| <b>RL Information</b>             |               | 0..<maxnoofRLs>   |                       |                       |
| RL ID                             | M             |                   |                       |                       |

|                    |                  |  |  |  |
|--------------------|------------------|--|--|--|
| SSDT Indication    | O                |  |  |  |
| SSDT Cell Identity | C -<br>SSDTIndON |  |  |  |

| Condition  | Explanation  |
|------------|--|
| SSDTIndON  | The IE may be present if the SSDT Indication is set to 'SSDT Active in the UE'.            |
| CodeLen    | This IE is present only if "Min UL Channelisation Code length" equals to 4.                |
| SlotFormat | This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16. |

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

9.1.11.2 TDD Message

| IE/Group Name                  | Presence | Range                         | IE Type and Reference | Semantics Description              |
|--------------------------------|----------|-------------------------------|-----------------------|------------------------------------|
| Message Type                   | M        |                               |                       |                                    |
| Transaction ID                 | M        |                               |                       |                                    |
| Allowed Queuing Time           | O        |                               |                       |                                    |
| Mean Bit Rate                  | O        |                               |                       | For the UL                         |
| Mean Bit Rate                  | O        |                               |                       | For the DL                         |
| <b>UL CCH Information</b>      |          | <i>0..&lt;maxnoofCCHs&gt;</i> |                       |                                    |
| CCH ID                         | M        |                               |                       |                                    |
| TFCS                           | O        |                               |                       | For the UL.                        |
| TFCI Coding                    | O        |                               |                       |                                    |
| Puncture Limit                 | O        |                               |                       |                                    |
| <b>DL CCH Information</b>      |          | <i>0..&lt;maxnoofCCHs&gt;</i> |                       |                                    |
| CCH ID                         | M        |                               |                       |                                    |
| TFCS                           | O        |                               |                       | For the DL.                        |
| TFCI Coding                    | O        |                               |                       |                                    |
| Puncture Limit                 | O        |                               |                       |                                    |
| <b>DCHs to Modify</b>          |          | <i>0..&lt;maxnoofDCHs&gt;</i> |                       |                                    |
| DCH ID                         | M        |                               |                       |                                    |
| CCH Id                         | O        |                               |                       | UL CCH in which the DCH is mapped. |
| CCH Id                         | O        |                               |                       | DL CCH in which the DCH is mapped  |
| Transport Format Set           | O        |                               |                       | For the UL.                        |
| Transport Format Set           | O        |                               |                       | For the DL.                        |
| Allocation/Retention Priority  | O        |                               |                       |                                    |
| Frame Handling Priority        | O        |                               |                       |                                    |
| UL FP Mode                     | O        |                               |                       |                                    |
| ToAWS                          | O        |                               |                       |                                    |
| ToAWE                          | O        |                               |                       |                                    |
| <b>DCHs to Add</b>             |          | <i>0..&lt;maxnoofDCHs&gt;</i> |                       |                                    |
| DCH ID                         | M        |                               |                       |                                    |
| CCH Id                         | M        |                               |                       | UL CCH in which the DCH is mapped. |
| CCH Id                         | M        |                               |                       | DL CCH in which the DCH is mapped  |
| DCH Combination Indicator      | O        |                               |                       |                                    |
| RLC Mode                       | M        |                               |                       |                                    |
| Transport Format Set           | M        |                               |                       | For the UL.                        |
| Transport Format Set           | M        |                               |                       | For the DL.                        |
| BLER                           | M        |                               |                       | For the UL.                        |
| BLER                           | M        |                               |                       | For the DL.                        |
| Allocation/Retention Priority  | M        |                               |                       |                                    |
| Frame Handling Priority        | M        |                               |                       |                                    |
| Payload CRC Presence Indicator | M        |                               |                       |                                    |
| UL FP Mode                     | M        |                               |                       |                                    |
| ToAWS                          | M        |                               |                       |                                    |
| ToAWE                          | M        |                               |                       |                                    |
| <b>DCHs to Delete</b>          |          | <i>0..&lt;maxnoofDCHs&gt;</i> |                       |                                    |
| DCH ID                         | M        |                               |                       |                                    |

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

## 9.1.12 RADIO LINK RECONFIGURATION READY

### 9.1.12.1 FDD Message

| IE/Group Name                     | Presence | Range               | IE Type and Reference | Semantics Description  |
|-----------------------------------|----------|---------------------|-----------------------|--|
| Message Type                      | M        |                     |                       |  |
| Transaction ID                    | M        |                     |                       |  |
| <b>RL Information Response</b>    |          | 0..<maxnoofRLs>     |                       |  |
| RL ID                             | M        |                     |                       |  |
| Maximum Uplink Eb/No              | O        |                     | Uplink Eb/No          |  |
| Minimum Uplink Eb/No              | O        |                     | Uplink Eb/No          |  |
| <b>Downlink Code Information</b>  |          | 0..<maxnoofDLCodes> |                       |  |
| DL Scrambling Code                | M        |                     |                       |  |
| FDD DL Channelisation Code Number | M        |                     |                       |  |
| <b>DCH to be Added</b>            |          | 0..<maxnoofDCHs>    |                       | Only one DCH per set of coordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLs. |
| DCH ID                            | M        |                     |                       |  |
| Binding ID                        | M        |                     |                       |  |
| Transport Layer Address           | M        |                     |                       |  |
| <b>DCH to be Modified</b>         |          | 0..<maxnoofDCHs>    |                       | Only one DCH per set of coordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLs. |
| DCH ID                            | M        |                     |                       |  |
| Binding ID                        | M        |                     |                       |  |
| Transport Layer Address           | M        |                     |                       |  |
| Criticality Diagnostics           | O        |                     |                       |  |

| Range bound    | Explanation                                      |
|----------------|--|
| MaxnoofDCHs    | Maximum number of DCHs.                          |
| MaxnoofRLs     | Maximum number of RLs for a UE.                  |
| MaxnoofDLCodes | Maximum number of Downlink Channelisation Codes. |



9.1.12.2 TDD Message

| IE/Group Name                  | Presence | Range              | IE Type and Reference | Semantics Description  |
|--------------------------------|----------|--------------------|-----------------------|--|
| Message Type                   | M        |                    |                       |  |
| Transaction ID                 | M        |                    |                       |  |
| <b>RL Information Response</b> |          | 0..1               |                       |  |
| RL ID                          | M        |                    |                       |  |
| Maximum Uplink Eb/No           | O        |                    | Uplink Eb/No          |  |
| Minimum Uplink Eb/No           | O        |                    | Uplink Eb/No          |  |
| <b>UL CTrCH Information</b>    |          | 0..<maxnoofCTrCHs> |                       |  |
| CTrCH ID                       | M        |                    |                       |  |
| <b>UL DPCH Information</b>     |          | 1..<maxnoofDPCHs>  |                       |  |
| DPCH ID                        | M        |                    |                       |  |
| TDD Channelisation Code        | O        |                    |                       |  |
| Burst Type                     | O        |                    |                       |  |
| Midamble Shift                 | O        |                    |                       |  |
| Time Slot                      | O        |                    |                       |  |
| TDD Physical Channel Offset    | O        |                    |                       |  |
| Repetition Period              | O        |                    |                       |  |
| Repetition Length              | O        |                    |                       |  |
| TFCI Presence                  | O        |                    |                       |  |
| <b>DL CTrCH Information</b>    |          | 0..<maxnoofCTrCHs> |                       |  |
| CTrCH ID                       | M        |                    |                       |  |
| <b>DL DPCH Information</b>     |          | 1..<maxnoofDPCHs>  |                       |  |
| DPCH ID                        | M        |                    |                       |  |
| TDD Channelisation Code        | O        |                    |                       |  |
| Burst Type                     | O        |                    |                       |  |
| Midamble Shift                 | O        |                    |                       |  |
| Time Slot                      | O        |                    |                       |  |
| TDD Physical Channel Offset    | O        |                    |                       |  |
| Repetition Period              | O        |                    |                       |  |
| Repetition Length              | O        |                    |                       |  |
| TFCI Presence                  | O        |                    |                       |  |
| <b>DCH to be Added</b>         |          | 0..<maxnoofDCHs>   |                       | Only one DCH per set of coordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLs. |
| DCH ID                         | M        |                    |                       |  |
| Binding ID                     | M        |                    |                       |  |
| Transport Layer Address        | M        |                    |                       |  |
| <b>DCH to be Modified</b>      |          | 0..<maxnoofDCHs>   |                       | Only one DCH per set of coordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLs. |
| DCH ID                         | M        |                    |                       |  |
| Binding ID                     | M        |                    |                       |  |
| Transport Layer Address        | M        |                    |                       |  |
| Criticality Diagnostics        | O        |                    |                       |  |

| Range bound    | Explanation                            |
|----------------|--|
| MaxnoofDCHs    | Maximum number of DCHs for a UE.       |
| MaxnoofCCTrCHs | Maximum number of CCTrCHs for a UE.    |
| Maxnoof DPCHs  | Maximum number of DPCHs in one CCTrCH. |

### 9.1.13 RADIO LINK RECONFIGURATION COMMIT

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description |
|----------------|----------|-------|-----------------------|-----------------------|
| Message Type   | M        |       |                       |                       |
| Transaction ID | M        |       |                       |                       |
| CFN            | M        |       |                       |                       |

### 9.1.14 RADIO LINK RECONFIGURATION FAILURE

| IE/Group Name                              | Presence | Range           | IE Type and Reference | Semantics Description |
|--|----------|-----------------|-----------------------|-----------------------|
| Message Type                               | M        |                 |                       |                       |
| Transaction ID                             | M        |                 |                       |                       |
| Cause                                      | M        |                 |                       |                       |
| <b>RLs Causing Reconfiguration Failure</b> |          | 0..<maxnoofRLs> |                       |                       |
| RL ID                                      | M        |                 |                       |                       |
| Cause                                      | M        |                 |                       |                       |
| Criticality Diagnostics                    | O        |                 |                       |                       |

| Range bound | Explanation                     |
|-------------|---------------------------------|
| MaxnoofRLs  | Maximum number of RLs for a UE. |

### 9.1.15 RADIO LINK RECONFIGURATION CANCEL

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description |
|----------------|----------|-------|-----------------------|-----------------------|
| Message Type   | M        |       |                       |                       |
| Transaction ID | M        |       |                       |                       |

## 9.1.16 RADIO LINK RECONFIGURATION REQUEST

### 9.1.16.1 FDD Message

| IE/Group Name                  | Presence | Range             | IE Type and Reference | Semantics Description |
|--------------------------------|----------|-------------------|-----------------------|-----------------------|
| Message Type                   | M        |                   |                       |                       |
| Transaction ID                 | M        |                   |                       |                       |
| Allowed Queuing Time           | O        |                   |                       |                       |
| <b>UL DPCH Information</b>     |          | 0..1              |                       |                       |
| TFCS                           | O        |                   |                       | TFCS for the UL.      |
| Mean Bit Rate                  | O        |                   |                       |                       |
| <b>DL DPCH Information</b>     |          | 0..1              |                       |                       |
| TFCS                           | O        |                   |                       | TFCS for the DL.      |
| TFCI Signalling Mode           | O        |                   |                       |                       |
| Mean Bit Rate                  | O        |                   |                       |                       |
| <b>DCHs to Modify</b>          |          | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                         | M        |                   |                       |                       |
| Transport Format Set           | O        |                   |                       | For the UL.           |
| Transport Format Set           | O        |                   |                       | For the DL.           |
| Allocation/Retention Priority  | O        |                   |                       |                       |
| Frame Handling Priority        | O        |                   |                       |                       |
| UL FP Mode                     | O        |                   |                       |                       |
| ToAWS                          | O        |                   |                       |                       |
| ToAWE                          | O        |                   |                       |                       |
| <b>DCHs to add</b>             |          | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                         | M        |                   |                       |                       |
| DCH Combination Ind            | O        |                   |                       |                       |
| RLC Mode                       | M        |                   |                       |                       |
| Transport Format Set           | M        |                   |                       | For the UL.           |
| Transport Format Set           | M        |                   |                       | For the DL.           |
| Allocation/Retention Priority  | M        |                   |                       |                       |
| Frame Handling Priority        | M        |                   |                       |                       |
| Payload CRC Presence Indicator | M        |                   |                       |                       |
| UL FP mode                     | M        |                   |                       |                       |
| ToAWS                          | M        |                   |                       |                       |
| ToAWE                          | M        |                   |                       |                       |
| <b>DCHs to Delete</b>          |          | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                         | M        |                   |                       |                       |

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

9.1.16.2 TDD Message

| IE/Group Name                  | Presence | Range                         | IE Type and Reference | Semantics Description              |
|--------------------------------|----------|-------------------------------|-----------------------|------------------------------------|
| Message Type                   | M        |                               |                       |                                    |
| Transaction ID                 | M        |                               |                       |                                    |
| Allowed Queuing Time           | O        |                               |                       |                                    |
| Mean Bit Rate                  | O        |                               |                       | For the UL                         |
| Mean Bit Rate                  | O        |                               |                       | For the DL                         |
| <b>UL CCH Information</b>      |          | <i>0..&lt;maxnoofCCHs&gt;</i> |                       |                                    |
| CCH ID                         | M        |                               |                       |                                    |
| TFCS                           | M        |                               |                       |                                    |
| <b>DL CCH Information</b>      |          | <i>0..&lt;maxnoofCCHs&gt;</i> |                       |                                    |
| CCH ID                         | M        |                               |                       |                                    |
| TFCS                           | M        |                               |                       |                                    |
| <b>DCHs to Modify</b>          |          | <i>0..&lt;maxnoofDCHs&gt;</i> |                       |                                    |
| DCH ID                         | M        |                               |                       |                                    |
| CCH ID                         | O        |                               |                       | UL CCH in which the DCH is mapped. |
| CCH ID                         | O        |                               |                       | DL CCH in which the DCH is mapped  |
| Transport Format Set           | O        |                               |                       | For the UL.                        |
| Transport Format Set           | O        |                               |                       | For the DL.                        |
| Allocation/Retention Priority  | O        |                               |                       |                                    |
| Frame Handling Priority        | O        |                               |                       |                                    |
| UL FP Mode                     | O        |                               |                       |                                    |
| ToAWS                          | O        |                               |                       |                                    |
| ToAWE                          | O        |                               |                       |                                    |
| <b>DCHs to Add</b>             |          | <i>0..&lt;maxnoofDCHs&gt;</i> |                       |                                    |
| DCH ID                         | M        |                               |                       |                                    |
| RLC Mode                       | M        |                               |                       |                                    |
| CCH ID                         | M        |                               |                       | UL CCH in which the DCH is mapped. |
| CCH ID                         | M        |                               |                       | DL CCH in which the DCH is mapped  |
| DCH Combination Ind            | O        |                               |                       |                                    |
| Transport Format Set           | M        |                               |                       | For the UL.                        |
| Transport Format Set           | M        |                               |                       | For the DL.                        |
| Allocation/Retention Priority  | M        |                               |                       |                                    |
| Frame Handling Priority        | M        |                               |                       |                                    |
| Payload CRC Presence Indicator | M        |                               |                       |                                    |
| UL FP Mode                     | M        |                               |                       |                                    |
| ToAWS                          | M        |                               |                       |                                    |
| ToAWE                          | M        |                               |                       |                                    |
| <b>DCHs to Delete</b>          |          | <i>0..&lt;maxnoofDCHs&gt;</i> |                       |                                    |
| DCH ID                         | M        |                               |                       |                                    |

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

### 9.1.17 RADIO LINK RECONFIGURATION RESPONSE

| IE/Group Name                  | Presence | Range            | IE Type and Reference | Semantics Description  |
|--------------------------------|----------|------------------|-----------------------|--|
| Message Type                   | M        |                  |                       |  |
| Transaction ID                 | M        |                  |                       |  |
| <b>RL Information Response</b> |          | 0..<maxnoofRLs>  |                       |  |
| RL ID                          | M        |                  |                       |  |
| Maximum Uplink Eb/No           | O        |                  | Uplink Eb/No          |  |
| Minimum Uplink Eb/No           | O        |                  | Uplink Eb/No          |  |
| <b>DCH to be Added</b>         |          | 0..<maxnoofDCHs> |                       | Only one DCH per set of coordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLs. |
| DCH ID                         | M        |                  |                       |  |
| Binding ID                     | M        |                  |                       |  |
| Transport Layer Address        | M        |                  |                       |  |
| <b>DCH to be Modified</b>      |          | 0..<maxnoofDCHs> |                       | Only one DCH per set of coordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLs. |
| DCH ID                         | M        |                  |                       |  |
| Binding ID                     | M        |                  |                       |  |
| Transport Layer Address        | M        |                  |                       |  |
| Criticality Diagnostics        | O        |                  |                       |  |

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

### 9.1.18 RADIO LINK FAILURE INDICATION

| IE/Group Name         | Presence | Range             | IE type and reference | Semantics description |
|-----------------------|----------|-------------------|-----------------------|-----------------------|
| Message Type          | M        |                   |                       |                       |
| Transaction ID        | M        |                   |                       |                       |
| <b>RL Information</b> | M        | 1 .. <MaxnoofRLs> |                       |                       |
| RL ID                 | M        |                   |                       |                       |
| Cause                 | M        |                   |                       |                       |

| Range bound | Explanation                    |
|-------------|--------------------------------|
| MaxnoofRLs  | Maximum no. of RLs for one UE. |

### 9.1.19 RADIO LINK RESTORE INDICATION

| IE/Group Name         | Presence | Range                | IE type and reference | Semantics description |
|-----------------------|----------|----------------------|-----------------------|-----------------------|
| Message Type          | M        |                      |                       |                       |
| Transaction ID        | M        |                      |                       |                       |
| <b>RL Information</b> |          | 1 ..<br><MaxnoofRLs> |                       |                       |
| RL ID                 | M        |                      |                       |                       |

| Range bound | Explanation                    |
|-------------|--------------------------------|
| MaxnoofRLs  | Maximum no. of RLs for one UE. |

### 9.1.20 DL POWER CONTROL REQUEST [FDD]

| IE/Group Name                         | Presence | Range           | IE type and reference | Semantics description  |
|---------------------------------------|----------|-----------------|-----------------------|--|
| Message Type                          | M        |                 |                       |  |
| Transaction ID                        | M        |                 |                       |  |
| CHOICE <i>procedure scope</i>         |          |                 |                       |  |
| "ALL RL"                              |          |                 |                       |  |
| <b>DL Reference Power</b>             | M        |                 |                       |  |
| "Individual RLs"                      |          |                 |                       |  |
| <b>DL Reference Power Information</b> |          | 1..<maxnoofRLs> |                       |  |
| RL ID                                 | M        |                 |                       |  |
| DL Reference Power                    | M        |                 | DL Power              | The SRNS requested downlink power to be used by the downlink inner loop power control to eliminate the power drifting problem. |

| Range Bound | Explanation                       |
|-------------|-----------------------------------|
| MaxnoofRLs  | Maximum number of RLs for one UE. |

### 9.1.21 PHYSICAL CHANNEL RECONFIGURATION REQUEST

#### 9.1.21.1 FDD Message

| IE/Group Name                     | Presence | Range                        | IE type and reference | Semantics description |
|-----------------------------------|----------|------------------------------|-----------------------|-----------------------|
| Message Type                      | M        |                              |                       |                       |
| Transaction ID                    | M        |                              |                       |                       |
| <b>RL Information</b>             |          | 1                            |                       |                       |
| RL ID                             | M        |                              |                       |                       |
| <b>DL Code Information</b>        |          | 1 ..<br><maxnoofDLCode<br>s> |                       |                       |
| DL Scrambling Code                | M        |                              |                       |                       |
| FDD DL Channelisation Code Number | M        |                              |                       |                       |

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

9.1.21.2 TDD Message

| IE/Group Name               | Presence | Range              | IE type and reference | Semantics description |
|-----------------------------|----------|--------------------|-----------------------|-----------------------|
| Message Type                | M        |                    |                       |                       |
| Transaction ID              | M        |                    |                       |                       |
| <b>RL Information</b>       |          | 1                  |                       |                       |
| RL ID                       | M        |                    |                       |                       |
| <b>UL CTrCH Information</b> |          | 1..<maxnoofCTrCHs> |                       |                       |
| <b>CCTrCH ID</b>            | M        |                    |                       |                       |
| <b>UL DPCH Information</b>  |          | 1..<MaxnoofDPC Hs> |                       |                       |
| DPCH ID                     | M        |                    |                       |                       |
| TDD Channelisation Code     | O        |                    |                       |                       |
| Burst Type                  | O        |                    |                       |                       |
| Midamble Shift              | O        |                    |                       |                       |
| Time Slot                   | O        |                    |                       |                       |
| TDD Physical Channel Offset | O        |                    |                       |                       |
| Repetition Period           | O        |                    |                       |                       |
| Repetition Length           | O        |                    |                       |                       |
| TFCI Presence               | O        |                    |                       |                       |
| <b>DL CTrCH Information</b> |          | 1..<maxnoofCTrCHs> |                       |                       |
| <b>CCTrCH ID</b>            | M        |                    |                       |                       |
| <b>DL DPCH Information</b>  |          | 1..<MaxnoofDPC Hs> |                       |                       |
| DPCH ID                     | M        |                    |                       |                       |
| TDD Channelisation Code     | O        |                    |                       |                       |
| Burst Type                  | O        |                    |                       |                       |
| Midamble Shift              | O        |                    |                       |                       |
| Time Slot                   | O        |                    |                       |                       |
| TDD Physical Channel Offset | O        |                    |                       |                       |
| Repetition Period           | O        |                    |                       |                       |
| Repetition Length           | O        |                    |                       |                       |
| TFCI Presence               | O        |                    |                       |                       |

| Range bound   | Explanation                         |
|---------------|-------------------------------------|
| MaxnoofDPCHs  | Maximum no. of DPCHs for one CTrCH. |
| MaxnoofCTrCHs | Maximum number of CTrCHs for a UE.  |

9.1.22 PHYSICAL CHANNEL RECONFIGURATION COMMAND

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| Message Type            | M        |       |                       |                       |
| Transaction ID          | M        |       |                       |                       |
| CFN                     | M        |       |                       |                       |
| Criticality Diagnostics | O        |       |                       |                       |

### 9.1.23 PHYSICAL CHANNEL RECONFIGURATION FAILURE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| Message Type            | M        |       |                       |                       |
| Transaction ID          | M        |       |                       |                       |
| Cause                   | M        |       |                       |                       |
| Criticality Diagnostics | O        |       |                       |                       |

### 9.1.24 UPLINK SIGNALLING TRANSFER INDICATION

| IE/Group Name                              | Presence | Range                | IE type and reference | Semantics description |
|--|----------|----------------------|-----------------------|-----------------------|
| Message Type                               | M        |                      |                       |                       |
| Transaction ID                             | M        |                      |                       |                       |
| UC-ID                                      | M        |                      |                       |                       |
| SAI  | M        |                      |                       |                       |
| C-RNTI                                     | M        |                      |                       |                       |
| S-RNTI                                     | M        |                      |                       |                       |
| D-RNTI                                     | O        |                      |                       |                       |
| L3 Information                             | M        |                      |                       |                       |
| CN PS Domain Identifier                    | O        |                      |                       |                       |
| CN CS Domain Identifier                    | O        |                      |                       |                       |
| URA ID                                     | M        |                      |                       |                       |
| Multiple URAs Indicator                    | M        |                      |                       |                       |
| <b>RNCs with Cells in the Accessed URA</b> |          | 0 .. <MaxRNCinURA-1> |                       |                       |
| RNC-Id                                     | M        |                      |                       |                       |

| Range bound | Explanation                      |
|-------------|----------------------------------|
| MaxRNCinURA | Maximum number of RNC in one URA |

### 9.1.25 DOWNLINK SIGNALLING TRANSFER REQUEST

| IE/Group Name             | Presence | Range | IE type and reference | Semantics description |
|---------------------------|----------|-------|-----------------------|-----------------------|
| Message Type              | M        |       |                       |                       |
| Transaction ID            | M        |       |                       |                       |
| C-Id                      | M        |       |                       |                       |
| D-RNTI                    | M        |       |                       |                       |
| L3 Information            | M        |       |                       |                       |
| D-RNTI Release Indication | M        |       |                       |                       |

### 9.1.26 RELOCATION COMMIT

| IE/Group Name                | Presence | Range | IE type and reference | Semantics description |
|------------------------------|----------|-------|-----------------------|-----------------------|
| Message Type                 | M        |       |                       |                       |
| Transaction ID               | M        |       |                       |                       |
| D-RNTI                       | O        |       |                       |                       |
| RANAP Relocation Information | O        |       |                       |                       |



### 9.1.27 PAGING REQUEST

| IE/Group Name             | Presence | Range | IE type and reference | Semantics description |
|---------------------------|----------|-------|-----------------------|-----------------------|
| Message Type              | M        |       |                       |                       |
| Transaction ID            | M        |       |                       |                       |
| CHOICE <i>paging area</i> |          |       |                       |                       |
| "URA"                     |          |       |                       |                       |
| URA-Id                    | M        |       |                       |                       |
| "Cell"                    |          |       |                       |                       |
| C-Id                      | M        |       |                       |                       |
| SRNC-Id                   | M        |       | RNC-Id                |                       |
| S-RNTI                    | M        |       |                       |                       |
| DRX Parameter             | M        |       |                       |                       |

### 9.1.28 DEDICATED MEASUREMENT INITIATION REQUEST

| IE/Group Name                                   | Presence | Range           | IE Type and Reference | Semantics Description |
|---|----------|-----------------|-----------------------|-----------------------|
| Message Type                                    | M        |                 |                       |                       |
| Transaction Id                                  | M        |                 |                       |                       |
| Measurement Id                                  | M        |                 |                       |                       |
| Dedicated Measurement Object Type               | M        |                 |                       |                       |
| CHOICE <i>Dedicated Measurement Object Type</i> |          |                 |                       |                       |
| "RL"  |          |                 |                       |                       |
| <b>RL Information</b>                           |          | 1..<maxnoofRLs> |                       |                       |
| RL-Id   | M        |                 |                       |                       |
| DPCH Id   | O        |                 |                       |                       |
| Dedicated Measurement Type                      | M        |                 |                       |                       |
| Measurement Characteristics                     | M        |                 |                       |                       |
| Report Characteristics                          | M        |                 |                       |                       |

| Range bound | Explanation   |
|-------------|---|
| MaxnoofRLs  | Maximum number of individual RLs a measurement can be started on. |

### 9.1.29 DEDICATED MEASUREMENT INITIATION RESPONSE

| IE/Group Name                                   | Presence | Range           | IE Type and Reference | Semantics Description  |
|---|----------|-----------------|-----------------------|--|
| Message Type                                    | M        |                 |                       |  |
| Transaction Id                                  | M        |                 |                       | Are both transaction id and Measurement id needed ?                  |
| Measurement Id                                  | M        |                 |                       |  |
| CHOICE <i>Dedicated Measurement Object Type</i> |          |                 |                       | Dedicated Measurement Object Type the measurement was initiated with |
| "RL"  |          |                 |                       |  |
| <b>RL Information</b>                           |          | 1..<maxnoofRLs> |                       |  |
| RL-id   | M        |                 |                       |  |
| DPCH Id   | O        |                 |                       |  |
| Dedicated Measurement Value                     | M        |                 |                       |  |
| "ALLRL"   |          |                 |                       |  |
| Dedicated Measurement Value                     | M        |                 |                       |  |
| CFN   | O        |                 |                       | Dedicated Measurement Time Reference                                 |
| Criticality Diagnostics                         | O        |                 |                       |  |

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

### 9.1.30 DEDICATED MEASUREMENT INITIATION FAILURE

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| Message Type            | M        |       |                       |                       |
| Transaction Id          | M        |       |                       |                       |
| Measurement Id          | M        |       |                       |                       |
| Cause                   | M        |       |                       |                       |
| Criticality Diagnostics | O        |       |                       |                       |

### 9.1.31 DEDICATED MEASUREMENT REPORT

| IE/Group Name                                   | Presence | Range           | IE Type and Reference | Semantics Description  |
|---|----------|-----------------|-----------------------|--|
| Message Type                                    | M        |                 |                       |  |
| Transaction Id                                  | M        |                 |                       |  |
| Measurement Id                                  | M        |                 |                       |  |
| CHOICE <i>Dedicated Measurement Object Type</i> |          |                 |                       | Dedicated Measurement Object Type the measurement was initiated with |
| "RL"  |          |                 |                       |  |
| <b>RL Information</b>                           |          | 1..<maxnoofRLs> |                       |  |
| RL-Id   | M        |                 |                       |  |
| DPCH Id   | O        |                 |                       |  |
| Dedicated Measurement Value                     | M        |                 |                       |  |
| "ALLRL"   |          |                 |                       |  |
| Dedicated Measurement Value                     | M        |                 |                       |  |
| CFN   | O        |                 |                       | Dedicated Measurement Time Reference                                 |

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

### 9.1.32 DEDICATED MEASUREMENT TERMINATION REQUEST

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description |
|----------------|----------|-------|-----------------------|-----------------------|
| Message Type   | M        |       |                       |                       |
| Transaction Id | M        |       |                       |                       |
| Measurement Id | M        |       |                       |                       |

### 9.1.33 DEDICATED MEASUREMENT FAILURE INDICATION

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description |
|----------------|----------|-------|-----------------------|-----------------------|
| Message Type   | M        |       |                       |                       |
| Transaction Id | M        |       |                       |                       |
| Measurement Id | M        |       |                       |                       |
| Cause          | M        |       |                       |                       |

### 9.1.34 COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description            |
|----------------|----------|-------|-----------------------|----------------------------------|
| Message Type   | M        |       |                       |                                  |
| Transaction ID | M        |       |                       |                                  |
| D-RNTI         | M        |       |                       |                                  |
| C-RNTI         | O        |       |                       | Release of an individual C-RNTI. |

### 9.1.35 COMMON TRANSPORT CHANNEL RESOURCES REQUEST

| <b>IE/Group Name</b>               | <b>Presence</b> | <b>Range</b> | <b>IE type and reference</b> | <b>Semantics description</b>  |
|------------------------------------|-----------------|--------------|------------------------------|---|
| Message Type                       | M               |              |                              |   |
| Transaction ID                     | M               |              |                              |   |
| D-RNTI                             | M               |              |                              |   |
| Transport Bearer Request Indicator | M               |              |                              | Request a new transport bearer or to use an existing bearer for the user plane. |
| Transport Bearer ID                | M               |              |                              | Indicates the lur transport bearer to be used for the user plane.               |

## 9.1.36 COMMON TRANSPORT CHANNEL RESOURCES RESPONSE

### 9.1.36.1 FDD Message

| IE/Group Name                                       | Presence | Range                   | IE type and reference | Semantics description   |
|---|----------|-------------------------|-----------------------|---|
| Message Type  | M        |                         |                       |   |
| Transaction ID                                      | M        |                         |                       |   |
| S-RNTI  | M        |                         |                       |   |
| <b>FACH Info for S-CCPCH coupled to PRACH</b>       |          | <b>1</b>                |                       |   |
| <b>Priority Indicator &amp; Initial Window Size</b> |          | 1..16                   |                       | Provide Information for each priority class used  |
| FACH Priority Indicator                             | M        |                         |                       |   |
| <b>MAC-c SDU Length</b>                             |          | 1..<MaxNbMACcSDULength> |                       |   |
| MAC-c SDU Length                                    | M        |                         |                       |   |
| FACH Initial Window Size                            | M        |                         |                       |   |
| <b>FACH Info for optional S-CCPCH</b>               | ⊖        | <u>0..1</u>             |                       |   |
| FDD S-CCPCH Offset                                  | M        |                         |                       | Corresponds to: $\tau_{S-CCPCH,k}$ , see ref. <b>[Error! Reference source not found.]</b> |
| DL Scrambling Code                                  | M        |                         |                       |   |
| FDD DL Channelisation Code Number                   | M        |                         |                       |   |
| TFCS  | M        |                         |                       | For the DL.   |
| Secondary CCPCH Slot Format                         | M        |                         |                       |   |
| Pilot Bits Used Indicator                           | M        |                         |                       |   |
| MultiplexingPosition                                | M        |                         |                       |   |
| STTD Indicator                                      | M        |                         |                       |   |
| <b>Priority Indicator &amp; Initial Window Size</b> |          | 1..16                   |                       | Provide Information for each priority class used  |
| FACH Priority Indicator                             | M        |                         |                       |   |
| <b>MAC-c SDU LengthData Frame Size</b>              |          | 1..<MaxNbMACcSDULength> |                       |   |
| .....MAC-c SDU Length                               | M        |                         |                       |   |
| FACH Initial Window Size                            | M        |                         |                       |   |
| Transport Layer Address                             | O        |                         |                       |   |
| Binding Identity                                    | O        |                         |                       |   |
| Criticality Diagnostics                             | O        |                         |                       |   |

| Range Bound        | Explanation                                    |
|--------------------|--|
| MaxNbMACcSDULength | Maximum number of different MAC-c SDU Lengths. |

9.1.36.2 TDD Message

| IE/Group Name                                       | Presence | Range                    | IE type and reference | Semantics description                             |
|---|----------|--------------------------|-----------------------|---|
| Message Type  | M        |                          |                       |   |
| Transaction ID                                      | M        |                          |                       |   |
| S-RNTI  | M        |                          |                       |   |
| <b>FACH Info for S-CCPCHs coupled to PRACH</b>      |          | 0..1                     |                       |   |
| <b>Priority Indicator &amp; Initial Window Size</b> |          | 1..16                    |                       | Provide Information for each priority class used  |
| FACH Priority Indicator                             | M        |                          |                       |   |
| <b>MAC-c SDU Length</b>                             |          | 1..<MaxNbMACcSDU Length> |                       |   |
| MAC-c SDU Length                                    | M        |                          |                       |   |
| FACH Initial Window Size                            | M        |                          |                       |   |
| <b>FACH Info for optional group of S-CCPCHs</b>     |          | 0..1                     |                       |   |
| TFCS  | M        |                          |                       | For DL CCTrCH supporting several Secondary CCPCHs |
| <b>Secondary CCPCH</b>                              | M        | 1..<MaxnoofSCCPCHs>      |                       |   |
| TDD Channelisation Code                             | M        |                          |                       |   |
| Time Slot   | M        |                          |                       |   |
| Burst Type  | M        |                          |                       |   |
| Midamble shift                                      | M        |                          |                       |   |
| TDD Physical Channel Offset                         | M        |                          |                       |   |
| Repetition Period                                   | M        |                          |                       |   |
| Repetition Length                                   | M        |                          |                       |   |
| STTD Indicator                                      | M        |                          |                       |   |
| <b>Priority Indicator &amp; Initial Window Size</b> |          | 1..16                    |                       | Provide Information for each priority class used  |
| FACH Priority Indicator                             | M        |                          |                       |   |
| <b>MAC-c SDU LengthData Frame Size</b>              |          | 1..<MaxNbMACcSDU Length> |                       |   |
| MAC-c SDU Length                                    | M        |                          |                       |   |
| FACH Initial Window Size                            | M        |                          |                       |   |
| Transport Layer Address                             | O        |                          |                       |   |
| Binding Identity                                    | O        |                          |                       |   |
| Criticality Diagnostics                             | O        |                          |                       |   |

| Range Bound        | Explanation                                    |
|--------------------|--|
| MaxNbMACcSDULength | Maximum number of different MAC-c SDU Lengths. |
| MaxnoofSCCPCHs     | TBD  |

### 9.1.37 COMMON TRANSPORT CHANNEL RESOURCES FAILURE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| Message Type            | M        |       |                       |                       |
| Transaction ID          | M        |       |                       |                       |
| S-RNTI                  | M        |       |                       |                       |
| Cause                   | M        |       |                       |                       |
| Criticality Diagnostics | O        |       |                       |                       |

### 9.1.38 COMPRESSED MODE PREPARE [FDD]

| IE/Group Name                   | Presence | Range | IE type and reference | Semantics description  |
|---------------------------------|----------|-------|-----------------------|--|
| Message Type                    |          |       |                       |  |
| Transaction ID                  |          |       |                       |  |
| TGP1                            | M        |       | Gap Period            | Applies only to the first and all the subsequent odd gaps if TGP2 is present, see ref. [Error! Bookmark not defined.]. |
| TGP2                            | O        |       | Gap Period            |  |
| TGL                             | M        |       |                       |  |
| TGD                             | M        |       |                       |  |
| PD                              | M        |       |                       |  |
| UL/DL Compressed Mode Selection | M        |       |                       |  |
| Compressed Mode Method          | M        |       |                       |  |
| Gap Position Mode               | M        |       |                       |  |
| SN                              | C-Flex   |       |                       |  |
| Downlink Frame Type             | M        |       |                       |  |
| Scrambling Code Change          | C-SF/2   |       |                       |  |
| Power Control Mode              | M        |       |                       |  |
| Power Resume Mode               | M        |       |                       |  |
| Uplink Delta Eb/No              | M        |       |                       |  |
| Uplink Delta Eb/No After        | M        |       |                       |  |

| Condition | Explanation  |
|-----------|--|
| Flex      | This IE is present only if "Gap position Mode" equals to 'flexible'. |
| SF/2      | This IE is present only if Compressed Mode Method equals to SF/2     |

### 9.1.39 COMPRESSED MODE READY [FDD]

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| Message Type            | M        |       |                       |                       |
| Transaction ID          | M        |       |                       |                       |
| Criticality Diagnostics | O        |       |                       |                       |

### 9.1.40 COMPRESSED MODE FAILURE [FDD]

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| Message Type            | M        |       |                       |                       |
| Transaction ID          | M        |       |                       |                       |
| Cause                   | M        |       |                       |                       |
| Criticality Diagnostics | O        |       |                       |                       |

### 9.1.41 COMPRESSED MODE COMMIT [FDD]

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description |
|----------------|----------|-------|-----------------------|-----------------------|
| Message Type   | M        |       |                       |                       |
| Transaction ID | M        |       |                       |                       |
| CFN            | M        |       |                       |                       |

### 9.1.42 COMPRESSED MODE CANCEL [FDD]

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description |
|----------------|----------|-------|-----------------------|-----------------------|
| Message Type   | M        |       |                       |                       |
| Transaction ID | M        |       |                       |                       |

### 9.1.43 ERROR INDICATION

| IE/Group Name           | Presence  | Range | IE Type and Reference | Semantics Description |
|-------------------------|-----------|-------|-----------------------|-----------------------|
| Message Type            | M         |       |                       |                       |
| Transaction Id          | M         |       |                       |                       |
| Cause                   | C_ifalone |       |                       |                       |
| Criticality Diagnostics | C_ifalone |       |                       |                       |

| Condition | Explanation   |
|-----------|---|
| C_ifalone | At least either of Cause IE or Criticality Diagnostics IE shall be present. |

## 9.2 Information Element Functional Definition and Contents

### 9.2.1 Common Parameters

This chapter contains parameters that are common to FDD and TDD.

#### 9.2.1.1 Allocation/Retention Priority

This parameter indicates the priority level in the allocation and retention of DCH resources in DRNS.



| IE/Group Name                         | Presence | Range | IE type and reference   | Semantics description |
|---------------------------------------|----------|-------|-------------------------|-----------------------|
| 9.2.1.1 Allocation/Retention Priority |          |       | Frame Handling Priority |                       |

9.2.1.2 Allowed Queuing Time

This parameter specifies the maximum queuing time that is allowed in the DRNS. The default value is no queuing.

| IE/Group Name        | Presence | Range | IE type and reference | Semantics description |
|----------------------|----------|-------|-----------------------|-----------------------|
| Allowed Queuing Time |          |       | INTEGER(0..60)        | Seconds               |

9.2.1.3 Binding ID

The Binding ID is the identifier of a user data stream. It is allocated at the DRNS and it is unique for each transport bearer under establishment to/from the DRNS. The length of this parameter is variable.

| IE/Group Name | Presence | Range | IE type and reference  | Semantics description |
|---------------|----------|-------|------------------------|-----------------------|
| Binding ID    |          |       | Octetstring (1..4,...) |                       |

9.2.1.4 BLER

This Block Error Rate defines the radio interface Transport Block Error Rate that shall be guaranteed to the DCH by the SRNC.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description                                   |
|---------------|----------|-------|-----------------------|---|
| BLER          |          |       | INTEGER (-63..0)      | Step 0.1. (Range -6.3...0). It is the Log10 of the BLER |

9.2.1.5 Cause

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

| IE/Group Name              | Presence | Range | IE type and reference   | Semantics description |
|----------------------------|----------|-------|---|-----------------------|
| Cause Group                | M        |       | ENUMERATED<br>(Radio Network Layer,<br>Transport Layer,<br>Protocol,<br>Misc)   |                       |
| <i>CHOICE cause group</i>  |          |       |   |                       |
| <i>Radio Network Layer</i> |          |       |   |                       |
| Radio Network Layer Cause  | M        |       | ENUMERATED<br>(Unknown C-ID,<br>Cell not Available,<br>Power Level not Supported,<br>UL Scrambling Code Already in Use,<br>DL Radio Resources not Available,<br>UL Radio Resources not Available,<br>Measurement not Supported For The<br>Object,<br>Macrodiversity Combining Not<br>Possible,<br>Reconfiguration not Allowed,<br>Requested Configuration not<br>Supported,<br>Synchronisation Failure,<br>Unspecified) |                       |
| <i>Transport Layer</i>     |          |       |   |                       |
| Transport Layer Cause      | M        |       | ENUMERATED<br>(Transport link failure,<br>Transmission port not available,<br>Unspecified)  |                       |
| <i>Protocol</i>            |          |       |   |                       |
| Protocol Cause             |          |       | ENUMERATED<br>(Transaction not Allowed,<br>Transfer Syntax Error,<br>Abstract Syntax Error (Reject),<br>Abstract Syntax Error (Ignore and<br>Notify),<br>Message not Compatible with<br>Receiver State,<br>Semantic Error,<br>Unspecified)  |                       |
| <i>Misc</i>                |          |       |   |                       |
| Miscellaneous Cause        | M        |       | ENUMERATED<br>(Control Processing Overload<br>Hardware Failure,<br>O&M Intervention,<br>Not enough User Plane Processing<br>Resources,<br>Unspecified)  |                       |

9.2.1.6 Cell Identifier (C-Id)

The C-ID (Cell Identifier) is the identifier of a cell in one RNS.

| IE/Group Name | Presence | Range | IE type and reference  | Semantics description |
|---------------|----------|-------|------------------------|-----------------------|
| C-ID          |          |       | INTEGER<br>(0...65535) |                       |

9.2.1.7 Cell Parameter ID

The Cell Parameter ID identifies unambiguously the Code Groups, Scrambling Codes, Midambles and Toffset (see table 9 of ref. [Error! Reference source not found.]).

| IE/Group Name     | Presence | Range | IE type and reference | Semantics description |
|-------------------|----------|-------|-----------------------|-----------------------|
| Cell Parameter ID |          |       | INTEGER<br>(0...127)  |                       |

9.2.1.8 CFN

Connection Frame Number for the radio connection, see ref. [Error! Reference source not found.].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| CFN           |          |       | INTEGER (0... 255)    |                       |

9.2.1.9 CN CS Domain Identifier

Identification of the CN node in the CS Domain.

| IE/Group Name                  | Presence | Range | IE type and reference | Semantics description  |
|--------------------------------|----------|-------|-----------------------|--|
| <b>CN PS Domain Identifier</b> |          |       |                       |  |
| PLMN Id                        | M        |       | OCTET STRING (3)      | - digits 0 to 9, two digits per octet,<br>- each digit encoded 0000 to 1001,<br>- 1111 used as filler<br>- bit 4 to 1 of octet n encoding digit 2n-1<br>- bit 8 to 5 of octet n encoding digit 2n<br><br>-The PLMN-ID consists of 3 digits from MCC followed by either<br>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or<br>-3 digits from MNC (in case of a 3 digit MNC). |
| LAC                            | M        |       | OCTET STRING (3)      | 0000 and FFFE not allowed  |

9.2.1.10 CN PS Domain Identifier

Identification of the CN Node in the PS Domain.

| IE/Group Name                  | Presence | Range | IE type and reference | Semantics description  |
|--------------------------------|----------|-------|-----------------------|--|
| <b>CN PS Domain Identifier</b> |          |       |                       |  |
| PLMN Id                        | M        |       | OCTET STRING (3)      | - digits 0 to 9, two digits per octet,<br>- each digit encoded 0000 to 1001,<br>- 1111 used as filler<br>- bit 4 to 1 of octet n encoding digit 2n-1<br>- bit 8 to 5 of octet n encoding digit 2n<br><br>-The PLMN-ID consists of 3 digits from MCC followed by either<br>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or<br>-3 digits from MNC (in case of a 3 digit MNC). |
| LAC                            | M        |       | OCTET STRING (2)      | 0000 and FFFE not allowed  |
| RAC                            | M        |       | OCTET STRING (1)      |  |

9.2.1.11 Criticality Diagnostics

| IE/Group Name                                      | Presence | Range               | IE type and reference   | Semantics description  |
|--|----------|---------------------|---|--|
| <b>Criticality Diagnostics</b>                     |          |                     |   |  |
| Procedure Code                                     | O        |                     | INTEGER (0..255)  | Procedure code is to be used if Criticality diagnostics is part of Error Indication procedure, and not within the response message of the same operation that caused the error |
| Triggering Message                                 | O        |                     | ENUMERATED (initiating message, successful outcome, unsuccessful outcome) | The Triggering Message is used only if the Criticality diagnostics is part of Error Indication except when the procedure code is not understood.                               |
| Criticality Response                               | O        |                     | ENUMERATED (reject, ignore, notify)                                       | This Criticality response IE is used for reporting the Criticality of the Triggering message   |
| Transaction Id                                     | O        |                     | INTEGER (0..255)  |  |
| <b>Information Element Criticality Diagnostics</b> |          | 1..<maxnoof errors> |   |  |
| Criticality Response                               | M        |                     | ENUMERATED (reject, ignore, notify)                                       | The Criticality response IE is used for reporting the criticality of the triggering IE. The value 'Ignore' shall never be used.  |
| IE Id  | M        |                     | INTEGER (0..65535)  | The IE Id of the not understood IE as defined in the ASN.1 part of the specification.  |

| Range bound   | Explanation  |
|---------------|--|
| maxnooferrors | Maximum no. of IE errors allowed to be reported with a single message. The value for maxnooferrors is 256. |

9.2.1.12 C-RNTI

C-RNTI (Cell RNTI) is the UE identifier in the CRNC to be used over the radio interface. It is unique in the cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| C-RNTI        |          |       | INTEGER(0..65535)     |                       |

9.2.1.13 DCH Combination Indicator

The DCH Combination Indicator is used to indicate the multiplexing of more than one DCH on transport bearer. The value should be unique for each group of coordinated DCH's per request message.

| IE/Group Name       | Presence | Range | IE type and reference | Semantics description |
|---------------------|----------|-------|-----------------------|-----------------------|
| DCH Combination Ind |          |       | INTEGER (0..255)      |                       |

9.2.1.14 DCH ID

The DCH ID is the identifier of an active dedicated transport channel. It is unique for each active DCH among the active DCHs simultaneously allocated for the same UE.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| DCH ID        |          |       | INTEGER (0..255)      |                       |

9.2.1.15 Dedicated Measurement Object Type

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

| IE/Group Name                     | Presence | Range | IE Type and Reference     | Semantics Description |
|-----------------------------------|----------|-------|---------------------------|-----------------------|
| Dedicated Measurement Object Type |          |       | ENUMERATED (RL,ALLRL,...) |                       |

9.2.1.16 Dedicated Measurement Type

The Dedicated Measurement Type identifies the type of measurement that shall be performed.

| IE/Group Name              | Presence | Range | IE Type and Reference   | Semantics Description     |
|----------------------------|----------|-------|---|---------------------------|
| Dedicated Measurement Type |          |       | ENUMERATED (SIR, SIR Error, Transmitted Code Power, RSCP,...) | RSCP is used by TDD only. |

NOTE: For definitions of the measurement types refer to ref. [Error! Bookmark not defined.] and [Error! Reference source not found.].

## 9.2.1.17 Dedicated Measurement Value

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

| IE/Group Name                      | Presence | Range | IE Type and Reference              | Semantics Description  |
|------------------------------------|----------|-------|------------------------------------|--|
| <b>Dedicated measurement Value</b> |          |       |                                    |  |
| SIR value                          | O        |       | Enumerated(-10 .. 20), step 0.1 dB |  |
| SIR error Value                    | O        |       | Enumerated(-10 .. 10), step 0.1 dB | If SIRerror<=-10, SIR error Value shall be set to -10<br>If SIRerror=>10, SIR error Value shall be set to 10 |
| Transmitted Code Power Value       | O        |       | Enumerated(-35 .. 15), step 0.1 dB | Relative to CPICH  |
| RSCP                               | O        |       | TBD                                | TDD only.  |

<Editors Note: Some adjustment of the ranges for these measurements might be needed as they await a decision on range for this measurement in TSG RAN WG1>

## 9.2.1.18 Downlink Eb/No Target

It is the Target Downlink Eb/No that shall be used as initial value by the UE.

| IE/Group Name         | Presence | Range | IE type and reference | Semantics description |
|-----------------------|----------|-------|-----------------------|-----------------------|
| Downlink Eb/No Target |          |       | Uplink Eb/No          |                       |

## 9.2.1.19 D-RNTI

D-RNTI is the UE context identifier in the DRNC.

| IE/Group Name | Presence | Range | IE type and reference          | Semantics description |
|---------------|----------|-------|--------------------------------|-----------------------|
| D-RNTI        |          |       | Integer(0..2 <sup>20</sup> -1) |                       |

## 9.2.1.20 D-RNTI Release Indication

The D-RNTI Release Indication indicates whether or not a CRNC shall release the D-RNTI allocated for a particular UE.

| IE/Group Name             | Presence | Range | IE type and reference                           | Semantics description |
|---------------------------|----------|-------|---|-----------------------|
| D-RNTI Release Indication |          |       | ENUMERATED (Release D-RNTI, not Release D-RNTI) |                       |

## 9.2.1.21 DRX Parameter

[Editor's note: This parameter needs to be defined. Contributions are invited.]

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| DRX Parameter |          |       | TBD                   |                       |

#### 9.2.1.22 FACH Initial Window Size

Indicates the initial number of MAC-c SDUs that may be transmitted before an acknowledgement is received from the DRNC.

| IE/Group Name            | Presence | Range | IE type and reference | Semantics description  |
|--------------------------|----------|-------|-----------------------|--|
| FACH Initial Window Size |          |       | INTEGER (0..255)      | Number of framesMAC-c SDUs.<br>255 = Unlimited number of FACH data frames. |

#### 9.2.1.23 FACH Priority Indicator

Indicates the relative priority of the FACH data frame. Used by the DRNC when scheduling FACH traffic.

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description  |
|-------------------------|----------|-------|-----------------------|--|
| FACH Priority Indicator |          |       | INTEGER (0..15)       | Relative priority of the FACH data frame:<br>0=Lowest Priority<br>...<br>15=Highest Priority |

#### 9.2.1.24 Frame Handling Priority

This parameter indicates the priority level to be used during the lifetime of the DCH/DSCH for temporary restriction of the allocated resources due overload reason.

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description                            |
|-------------------------|----------|-------|-----------------------|--|
| Frame Handling Priority |          |       | INTEGER (0..15)       | 0=Lowest Priority,<br>...<br>15=Highest Priority |

#### 9.2.1.25 Frame Offset

Frame Offset is the required offset between the dedicated channel downlink transmission frames (CFN, Connection Frame Number) and the broadcast channel frame offset (Cell Frame Number). The Frame\_offset is used in the translation between Connection Frame Number (CFN) on Iub/Iur and least significant 8 bits of SFN (System Frame Number) on Uu. The Frame Offset is UE and cell specific.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| Frame Offset  |          |       | INTEGER (0..255)      | Frames                |

#### 9.2.1.26 MAC-c SDU Length

Indicates the MAC-c SDU Length. There may be multiple data frame sizes per priority class.

| IE/Group Name    | Presence | Range | IE type and reference | Semantics description                    |
|------------------|----------|-------|-----------------------|--|
| MAC-c SDU Length |          |       | INTEGER (1..5000)     | Size of the MAC-c SDU in number of bits. |

9.2.1.27 Mean Bit Rate

It is the mean user data rate that is expected to be carried by the transport channels of one radio link.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| Mean Bit Rate |          |       | INTEGER (1...2000)    | Kbit/seconds          |

9.2.1.28 Measurement Characteristics

The Measurement Characteristics indicates how the measurement shall be performed.

| IE/Group Name                      | Presence | Range | IE Type and Reference | Semantics Description |
|------------------------------------|----------|-------|-----------------------|-----------------------|
| <b>Measurement Characteristics</b> |          |       |                       |                       |
| Measurement Frequency              | M        |       | TBD                   |                       |
| Averaging Duration                 | M        |       | TBD                   |                       |

**Editors Note: The exact definition and structure is this information element awaits decisions in TSG RAN WG2.**

9.2.1.29 Measurement ID

The Measurement Id uniquely identifies any measurement on dedicated resources requested over RNSAP.

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

9.2.1.30 Message Type

The Message Type uniquely identifies the message being sent.



| IE/Group Name | Presence | Range | IE type and reference   | Semantics description               |
|---------------|----------|-------|---|-------------------------------------|
| Message Type  |          |       | ENUMERATED (RL Setup Request, RL Setup Response, RL Setup Failure, RL Addition Request, RL Addition Response, RL Addition Failure, RL Deletion Request, RL Deletion Response, RL Reconfiguration Prepare, RL Reconfiguration Ready, RL Reconfiguration Commit, RL Reconfiguration Failure, RL Reconfiguration Cancel, RL Reconfiguration Request, RL Reconfiguration Response, RL Failure Indication, RL Restore Indication, DL Power Control Request, Physical Channel Reconfiguration Request, Physical Channel Reconfiguration Command, Physical Channel Reconfiguration Failure, UL Signalling Transfer Indication, DL Signalling Transfer Request, Relocation Commit, Paging Request, Dedicated Measurement Initiation Request, Dedicated Measurement Initiation Response, Dedicated Measurement Initiation Failure, Dedicated Measurement Report, Dedicated Measurement Termination Request, Dedicated Measurement Failure Indication, Common Transport Channel Resources Release Request, Common Transport Channel Resources Request, Common Transport Channel Resources Response, Common Transport Channel Resources Failure, Compressed Mode Prepare, Compressed Mode Ready, Compressed Mode Failure, Compressed Mode Commit, Compressed Mode Cancel, Error Indication, ...) | Future extensions shall be possible |

9.2.1.31 Multiple URAs Indicator

The Multiple URAs Indicator indicates whether the accessed cell has multiple URAs.

| IE/Group Name           | Presence | Range | IE type and reference                               | Semantics description |
|-------------------------|----------|-------|---|-----------------------|
| Multiple URAs Indicator |          |       | Enumerated (Multiple URAs exist, Single URAs Exist) |                       |

9.2.1.32 Payload CRC Present Indicator

This parameter indicates whether FP payload 16 bit CRC is used or not.

| IE/Group Name                  | Presence | Range | IE type and reference                       | Semantics description |
|--------------------------------|----------|-------|---|-----------------------|
| Payload CRC Presence Indicator |          |       | ENUMERATED (CRC Included, CRC not included) |                       |

## 9.2.1.33 Primary CPICH Power

| IE/Group Name       | Presence | Range | IE type and reference | Semantics description           |
|---------------------|----------|-------|-----------------------|---------------------------------|
| Primary CPICH power |          |       | ENUMERATED (-15..40)  | Unit dBm<br>Granularity 0.1 dB. |

## 9.2.1.34 Primary Scrambling Code

The Primary scrambling code to be used in the cell.

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| Primary Scrambling Code |          |       | INTEGER (0 .. 511)    |                       |

## 9.2.1.35 PSCH Time Slot

The PSCH Time Slot is only applicable if the value of *Sync Case* IE is Case 2 or 3.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| PSCHTime Slot |          |       | INTEGER(0..6)         |                       |

## 9.2.1.36 Puncture Limit

The maximum amount of puncturing for a transport channel in rate matching.

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description |
|----------------|----------|-------|-----------------------|-----------------------|
| Puncture Limit |          |       | INTEGER (0..100)      | %                     |

## 9.2.1.37 RANAP Relocation Information

This parameter is transparent to the RNSAP. The parameter contains information for the Relocation procedure as defined in [Error! Reference source not found.].

| IE/Group Name                | Presence | Range | IE type and reference | Semantics description   |
|------------------------------|----------|-------|-----------------------|---|
| RANAP Relocation Information |          |       | Bit String            | The contents is defined in ref. [Error! Reference source not found.]. |

## 9.2.1.38 Report Characteristics

The report characteristics, defines how the reporting shall be performed.

| IE/Group Name                        | Presence     | Range | IE Type and Reference  | Semantics Description  |
|--------------------------------------|--------------|-------|--|--|
| <b>Report characteristics</b>        |              |       |  |  |
| Report characteristics type          |              |       | ENUMERATED (On Demand, Periodic, Event A, Event B, Event C, Event D, Event E, Event F) |  |
| <b>..Periodic Report Information</b> | C – Periodic |       |  |  |
| Report Periodicity                   | M            |       | ENUMERATED (10ms... 1min) step 10ms, (1min... 1hr) step 1min                           | The frequency with which the Node B shall send measurement reports. First working assumption!    |
| <b>..Event A</b>                     | C – Event A  |       |  |  |
| Measurement Threshold                | M            |       | TBD  | The threshold for which the Node B shall trigger a measurement report.                           |
| Measurement Hysteresis Time          | O            |       | ENUMERATED (10ms... 1min) step 10ms,...  |  |
| <b>Event B</b>                       | C – Event B  |       |  |  |
| Measurement Threshold                | M            |       | TBD  | The threshold for which the Node B shall trigger a measurement report.                           |
| Measurement Hysteresis Time          | O            |       | ENUMERATED (10ms... 1min) step 10ms,...  |  |
| <b>Event C</b>                       | C – Event C  |       |  |  |
| Measurement Increase Threshold       | M            |       | TBD  |  |
| Measurement Change Time              | M            |       | ENUMERATED (10ms... 1min) step 10ms,...  | The time the measurement entity shall rise on (in ms), in order to trigger a measurement report. |
| <b>Event D</b>                       | C – Event D  |       |  |  |
| Measurement Decrease Threshold       | M            |       | TBD  |  |
| Measurement Change Time              | M            |       | ENUMERATED (10ms... 1min) step 10ms,...  | The time the measurement entity shall fall (in ms), in order to trigger a measurement report.    |
| <b>Event E</b>                       | C – Event E  |       |  |  |
| Measurement Threshold 1              | M            |       | TBD  |  |
| Measurement Threshold 2              | O            |       | TBD  |  |

|                             |                    |  |  |   |
|-----------------------------|--------------------|--|--|---|
| Measurement Hysteresis Time | O                  |  | ENUMERATED (10ms...1min) step 10ms,...                     | The hysteresis time in ms   |
| Report Periodicity          | O                  |  | ENUMERATED (10ms...1min) step 10ms, (1min...1hr) step 1min | The frequency with which the Node B shall send measurement reports. |
| <b>Event F</b>              | <b>C – Event F</b> |  |  |   |
| Measurement Threshold 1     | M                  |  | TBD  |   |
| Measurement Threshold 2     | O                  |  | TBD  |   |
| Measurement Hysteresis Time | O                  |  | ENUMERATED (10ms...1min) step 10ms,...                     | The hysteresis time in ms   |
| Report Periodicity          | O                  |  | ENUMERATED (10ms...1min) step 10ms, (1min...1hr) step 1min | The frequency with which the Node B shall send measurement reports. |

Editors note: Encoding of threshold TBD.

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

9.2.1.39 RL ID

The RL ID is the unique identifier for one RL associated with a UE.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| RL ID         |          |       | INTEGER (0..31)       |                       |

9.2.1.40 RLC Mode

This parameter defines the RLC mode of the logical channels multiplexed on the transport channel.

| IE/Group Name | Presence | Range | IE type and reference  | Semantics description |
|---------------|----------|-------|--|-----------------------|
| RLC Mode      |          |       | ENUMERATED(Acknowledged Mode, Unacknowledged Mode, Transparent Mode) |                       |

9.2.1.41 RNC-Id

This is the identifier of one RNC in UTRAN.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| RNC Id        |          |       | INTEGER (0..4095)     |                       |

9.2.1.42 Service Area Identifier (SAI)

This information element is used to uniquely identify an area consisting of one or more cells belonging to the same Location Area. Such an area is called a Service Area and can be used for indicating the location of a UE to the CN.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description   |
|---------------|----------|-------|-----------------------|---|
| <b>SAI</b>    |          |       |                       |   |
| PLMN Id       | M        |       | OCTET STRING (3)      | <ul style="list-style-type: none"> <li>- digits 0 to 9, two digits per octet,</li> <li>- each digit encoded 0000 to 1001,</li> <li>- 1111 used as filler</li> <li>- bit 4 to 1 of octet n encoding digit 2n-1</li> <li>- bit 8 to 5 of octet n encoding digit 2n</li> </ul> <p>-The PLMN-ID consists of 3 digits from MCC followed by either</p> <ul style="list-style-type: none"> <li>-a filler plus 2 digits from MNC (in case of 2 digit MNC) or</li> <li>-3 digits from MNC (in case of a 3 digit MNC).</li> </ul> |
| LAC           | M        |       | OCTET STRING (2)      | 0000 and FFFE not allowed   |
| SAC           | M        |       | OCTET STRING (2)      |   |

9.2.1.43 S-RNTI

S-RNTI is the UE context identifier in the SRNC.

| IE/Group Name | Presence | Range | IE type and reference          | Semantics description |
|---------------|----------|-------|--------------------------------|-----------------------|
| S-RNTI        |          |       | Integer(0..2 <sup>20</sup> -1) |                       |

## 9.2.1.44 Sync Case

The PSCH and PCCPCH in a TDD cell are mapped on one or two downlink slots per frame. There are three cases of Sync Case as follows:

Case 1) PSCH and PCCPCH allocated in a single TS#k

Case 2) PSCH in two TS and PCCPCH in the same two TS: TS#k and TS#k+8

Case 3) PSCH in two TS, TS#k and TS#k+8, and the PCCPCH in TS#i, pointed by PSCH.

| IE/Group Name | Presence | Range | IE type and reference            | Semantics description |
|---------------|----------|-------|----------------------------------|-----------------------|
| Sync Case     |          |       | ENUMERATED (Case1, Case2, Case3) |                       |

## 9.2.1.45 TFCI Presence

The TFCI Presence parameter indicates whether the TFCI shall be included.

| IE/Group Name | Presence | Range | IE type and reference             | Semantics description |
|---------------|----------|-------|-----------------------------------|-----------------------|
| TFCI presence |          |       | ENUMERATED (Present, not present) |                       |

## 9.2.1.46 Time Slot

The Time Slot represents the time interval assigned to a Physical Channel referred to the start of a Radio Frame.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| Time Slot     |          |       | INTEGER (0..14)       |                       |

## 9.2.1.47 ToAWE

ToAWE is the window endpoint. DL data frames are expected to be received before this window endpoint. ToAWE is defined with a positive value relative Latest Time of Arrival (LToA). A data frame arriving after ToAWS gives a Timing Adjustment Control frame response.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| ToAWE         |          |       | INTEGER (0..2559)     | msec.                 |

## 9.2.1.48 ToAWS

ToAWS is the window startpoint. DL data frames are expected to be received after this window startpoint. ToAWS is defined with a positive value relative Time of Arrival Window Endpoint (ToAWE). A data frame arriving before ToAWS gives a Timing Adjustment Control frame response.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| ToAWS         |          |       | INTEGER (0..1279)     | msec.                 |

## 9.2.1.49 Transaction ID

The Transaction ID is used to associate all the messages belonging to the same pending procedure of the same RNSAP procedure type (e.g. Radio Link Addition), i.e. the Request-, Response-, Confirm-type of messages have the same Transaction ID. The messages belonging to different pending procedures have different Transaction IDs.

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description  |
|----------------|----------|-------|-----------------------|--|
| Transaction ID |          |       | INTEGER (0..255)      | Since the scope is not clear, the range of this parameter is to be considered a working assumption |

## 9.2.1.50 Transport Bearer ID

The Transport Bearer ID uniquely identifies an Iur transport bearer.

| IE/Group Name       | Presence | Range | IE type and reference | Semantics description |
|---------------------|----------|-------|-----------------------|-----------------------|
| Transport Bearer ID |          |       | INTEGER (0..4095)     |                       |

## 9.2.1.51 Transport Bearer Request Indicator

Indicates whether an Iur transport bearer needs to be established for carrying the FACH data stream(s), or whether an existing transport bearer will be used.

| IE/Group Name                      | Presence | Mult | IE type and reference                               | Semantics description |
|------------------------------------|----------|------|---|-----------------------|
| Transport Bearer Request Indicator |          |      | ENUMERATED (Bearer Requested, Bearer not Requested) |                       |

## 9.2.1.52 Transport Layer Address

Transport Layer Address defines the transport address of the DRNS. For details on the Transport Address used see [**Error! Reference source not found.**].

| IE/Group Name           | Presence | Range | IE type and reference     | Semantics description |
|-------------------------|----------|-------|---------------------------|-----------------------|
| Transport Layer Address |          |       | Bit string(1... 160, ...) |                       |

## 9.2.1.53 Transport Format Combination Set

The Transport Format Combination Set is defined as a set of Transport Format Combinations on a Coded Composite Transport Channel. It is the allowed Transport Format Combinations of the corresponding Transport Channels. The DL Transport Format Combination Set is applicable for DL Transport Channels.

| IE/Group Name | Presence | Range              | IE type and reference | Semantics description   |
|---------------|----------|--------------------|-----------------------|---|
| TFCs          |          | 1 to <maxnoofTFCs> |                       | The first instance of the parameter corresponds to TFC zero, the second to 1 and so on.   |
| CTFC          | M        |                    | INTEGER(0..MaxCTFC-1) | Integer number calculated according to ref. <b>[Error! Reference source not found.]</b> . |

| Range bound        | Explanation   |
|--------------------|---|
| <i>MaxnoofTFCs</i> | The maximum number of Transport Format Combinations (1024).   |
| <i>MaxCTFC</i>     | Maximum number of the CTFC value is calculated according to the following:<br>$\sum_{i=1}^I (L_i - 1)P_i$ with the notation according to ref. <b>[Error! Reference source not found.]</b> . |

9.2.1.54 Transport Format Set

The Transport Format Set is defined as the set of Transport Formats associated to a Transport Channel, e.g. DCH.



| IE/Group Name                            | Presence        | Range            | IE type and reference                        | Semantics description |
|--|-----------------|------------------|--|-----------------------|
| <b>Transport Format Set</b>              |                 |                  |  |                       |
| Dynamic Transport Format Information     |                 | 1..<maxTFcount>  |  |                       |
| Number of Transport blocks               | M               |                  | INTEGER (0..4095)                            |                       |
| Transport Block Size                     | C – Blocks      |                  | INTEGER (1..5000)                            | Bits                  |
| <i>CHOICE mode</i>                       |                 |                  |  |                       |
| <i>TDD</i>                               |                 |                  |  |                       |
| Transmission time interval               | C-TTIdynamic    | 1..<maxTTIcount> | Enumerated(10, 20, 40, 80)                   |                       |
| Semi-static Transport Format Information |                 |                  |  |                       |
| Transmission time interval               | C-TTIsemistatic |                  | ENUMERATED (10, 20, 40, 80)                  | Msec                  |
| Type of channel coding                   | M               |                  | ENUMERATED (No coding, Convolutional, Turbo) |                       |
| Coding Rate                              | C – Coding      |                  | ENUMERATED (1/2, 1/3)                        |                       |
| Rate matching attribute                  | M               |                  | INTEGER (1..maxRM)                           |                       |
| CRC size                                 | M               |                  | ENUMERATED (0, 8, 12, 16, 24)                |                       |
| <i>CHOICE mode</i>                       |                 |                  |  |                       |
| <i>TDD</i>                               |                 |                  |  |                       |
| 2 <sup>nd</sup> interleaving mode        | M               |                  | Enumerated (Frame related, Timeslot related) |                       |

| Condition     | Explanation  |
|---------------|--|
| Blocks        | This IE is only present if "Number of Transport Blocks" is greater than 0.           |
| Coding        | This IE is only present if IE "Type of channel coding" is "Convolutional" or "Turbo" |
| TTIdynamic    | This IE is mandatory if not defined as semistatic parameter. Otherwise it is absent. |
| TTIsemistatic | This IE is mandatory if not defined as dynamic parameter. Otherwise it is absent.    |

| Range bound | Explanation   |
|-------------|---|
| MaxTFcount  | The maximum number of different transport formats that can be included in the Transport format set for one transport channel is 32. |
| MaxRM       | The maximum number that could be set as rate matching attribute for a transport channel is 256.                                     |
| MaxTTIcount | The amount of different TTI that are possible for that transport format is 4.   |

9.2.1.55 UARFCN

The UTRAN Absolute Radio Frequency Channel Number defines the carrier.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description   |
|---------------|----------|-------|-----------------------|---|
| UARFCN        |          |       | INTEGER (0..698, ...) | Corresponds to: 1885.2MHz..2024.8MHz see ref. [Error! Reference source not found.]. |

9.2.1.56 UL FP Mode

This parameter defines if normal or silent mode of the Frame Protocol shall be used for the UL.

| IE/Group Name | Presence | Range | IE type and reference      | Semantics description |
|---------------|----------|-------|----------------------------|-----------------------|
| UL FP mode    |          |       | ENUMERATED(Normal, Silent) |                       |

9.2.1.57 Uplink Eb/No

The UL Eb/No indicates a received UL Eb/No.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description                  |
|---------------|----------|-------|-----------------------|--|
| Uplink Eb/No  |          |       | INTEGER (0..255)      | Resolution is 0.1 dB, range 0-25.5 dB. |

9.2.1.58 UL Interference Level

The parameter indicates the UL Interference Level in a cell. The UL Interference Level is used by the UE to calculate its initial UL power for the cell.

| IE/Group Name         | Presence | Range | IE type and reference  | Semantics description       |
|-----------------------|----------|-------|------------------------|-----------------------------|
| UL Interference Level |          |       | ENUMERATED (-128..-60) | Unit: dBm, Step size=0.1 dB |

9.2.1.59 URA ID

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| URA ID        |          |       | INTEGER (0..65 535)   |                       |

9.2.1.60 UTRAN Cell Identifier (UC-Id)

The UC-ID (UTRAN Cell identifier) is the identifier of a cell in one UTRAN.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| <b>UC-ID</b>  |          | 1     |                       |                       |
| RNC-ID        | M        |       | INTEGER (0...4095)    |                       |
| C-ID          | M        |       | C-ID                  |                       |

### 9.2.1.61 L3 Information

This parameter contains the Layer 3 Information from a Uu message as received from the UE over the Uu interface or the Layer 3 Information for a Uu message to be sent to a UE by the CRNC, as defined in ref. **[Error! Reference source not found.]**.

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description  |
|----------------|----------|-------|-----------------------|--|
| L3 Information |          |       | Bit String            | The content is defined in ref. <b>[Error! Reference source not found.]</b> . |

## 9.2.2 FDD Specific Parameters

This chapter contains parameters that are specific to FDD.

### 9.2.2.1 Chip Offset

The Chip Offset is defined as the radio timing offset inside a radio frame. The Chip Offset is used as offset for the DL DPCH relative to the Primary CPICH timing.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| Chip Offset   |          |       | INTEGER (0..38399)    | Chips                 |

### 9.2.2.2 Compressed Mode Method

Defines the method for generating the downlink compressed mode gap, as described in ref. **[Error! Reference source not found.]**.

| IE/Group Name          | Presence | Range | IE type and reference                       | Semantics description          |
|------------------------|----------|-------|---|--------------------------------|
| Compressed Mode Method |          |       | ENUMERATED (None, Puncturing, SF/2, Gating) | None = restore the normal mode |

### 9.2.2.3 D-Field Length

Defines the D Field size of the UL DPCH slot.

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description |
|----------------|----------|-------|-----------------------|-----------------------|
| D Field Length |          |       | ENUMERATED (1, 2)     |                       |

### 9.2.2.4 Diversity Control Field

The Diversity Control Field indicates if the current RL may, must or must not be combined with the already existing RLs.

| IE/Group Name           | Presence | Range | IE type and reference            | Semantics description |
|-------------------------|----------|-------|----------------------------------|-----------------------|
| Diversity Control Field |          |       | ENUMERATED (May, Must, Must not) |                       |

9.2.2.5 Diversity Indication

| IE/Group Name        | Presence | Range | IE type and reference               | Semantics description |
|----------------------|----------|-------|-------------------------------------|-----------------------|
| Diversity Indication |          |       | ENUMERATED (Combined, Not Combined) |                       |

9.2.2.6 Diversity Mode

Define the diversity mode to be applied.

| IE/Group Name  | Presence | Range | IE type and reference  | Semantics description |
|----------------|----------|-------|--|-----------------------|
| Diversity Mode |          |       | ENUMERATED (None, STTD, Closed loop mode 1, Closed loop mode2) |                       |

9.2.2.7 DL DPCH Slot Format

Indicates the slot format used in DPCH in DL, according to ref. [Error! Reference source not found.].

| IE/Group Name       | Presence | Range | IE type and reference | Semantics description |
|---------------------|----------|-------|-----------------------|-----------------------|
| DL DPCH Slot Format |          |       | INTEGER (0..16)       |                       |

9.2.2.8 DL Scrambling Code

DL Scrambling code to be used by the RL. One cell may have multiple DL Scrambling codes available.

| IE/Group Name      | Presence | Range | IE type and reference | Semantics description   |
|--------------------|----------|-------|-----------------------|---|
| DL Scrambling Code |          |       | INTEGER (0..15)       | 0= Primary scrambling code of the cell<br>1...15= Secondary scrambling code |

9.2.2.9 Downlink Frame Type

This parameter defines if frame type 'A' or 'B' shall be used in downlink compressed mode. This is defined in [Error! Reference source not found.].

| IE/Group Name       | Presence | Range | IE type and reference     | Semantics description |
|---------------------|----------|-------|---------------------------|-----------------------|
| Downlink Frame Type |          |       | ENUMERATED (TypeA, TypeB) |                       |

9.2.2.10 FDD DL Channelisation Code Number

The DL Channelisation Code Number indicates the DL Channelisation Code number for a specific DL physical channel.

The Diversity Indication indicates if the RL has been or has not been combined with another RL.

| IE/Group Name                     | Presence | Range | IE type and reference | Semantics description                                    |
|-----------------------------------|----------|-------|-----------------------|--|
| FDD DL Channelisation Code Number | M        |       | INTEGER(0..255)       | The maximum value is equal to the DL spreading factor –1 |

### 9.2.2.xx FDD S-CCPCH Offset

The Secondary CCPCH offset is defined as the time offset towards the Primary CCPCH in the cell. The offset is a multiple of 256 chips.

| IE/Group Name      | Presence | Range | IE type and reference | Semantics description   |
|--------------------|----------|-------|-----------------------|---|
| FDD S-CCPCH Offset |          |       | INTEGER(0..149)       | 0: 0 chip<br>1: 256 chip<br>2: 512 chip<br>..<br>149: 38144 chip<br>[TS 25.211] |

### 9.2.2.11 Gap Position Mode

The gap position can be fixed or adjustable, as defined in ref. [Error! Reference source not found.].

| IE/Group Name     | Presence | Range | IE type and reference        | Semantics description |
|-------------------|----------|-------|------------------------------|-----------------------|
| Gap Position Mode |          |       | ENUMERATED (Fixed, Flexible) |                       |

### 9.2.2.12 Gap Period (TGP)

Gap Period is the period of repetition of a set of consecutive frames containing up to 2 transmission gaps.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| Gap Period    |          |       | INTEGER(0..255)       | Frames                |

### 9.2.2.13 Gap Starting Slot Number (SN)

It defines the slot number when the transmission gap starts.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| SN            |          |       | Time Slot             |                       |

### 9.2.2.14 Max Number of UL DPDCHs

This parameter is an UE Radio Access Capability parameter which is needed in rate matching algorithm.

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| Max Number of UL DPDCHs |          |       | INTEGER (1..6)        |                       |

## 9.2.2.15 Min UL Channelisation Code Length

Minimum UL channelisation code length (spreading factor) of a DPDCH which is supported by UE. Needed by rate matching algorithm.

| IE/Group Name                     | Presence | Range | IE type and reference            | Semantics description |
|-----------------------------------|----------|-------|----------------------------------|-----------------------|
| Min UL Channelisation Code Length |          |       | ENUMERATED(4,8,16,32,64,128,256) |                       |

## 9.2.2.16 Multiplexing Position

Multiplexing Position specifies whether fixed or flexible positions of transport channels shall be used in the physical channel.

| IE/Group Name         | Presence | Range | IE type and reference       | Semantics description |
|-----------------------|----------|-------|-----------------------------|-----------------------|
| Multiplexing Position |          |       | ENUMERATED(Fixed, Flexible) |                       |

## 9.2.2.17 Pattern Duration (PD)

Pattern duration is the total time of the compressed mode pattern (all consecutive TGPs) expressed in number of frames.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| PD            |          |       | INTEGER(0..2047, ...) | Frames                |

## 9.2.2.18 Power Control Mode (PCM)

Power Control Mode specifies the uplink power mode applied during recovery period after each transmission gap in compressed mode. PCM can take 2 values (0 or 1). The different power control modes are described in ref. **[Error! Reference source not found.]**.

| IE/Group Name      | Presence | Range | IE type and reference | Semantics description |
|--------------------|----------|-------|-----------------------|-----------------------|
| Power Control Mode |          |       | ENUMERATED(0, 1, ...) |                       |

## 9.2.2.19 Power Offset

This IE defines a power offset respect the Downlink transmission power of a DPCH.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description               |
|---------------|----------|-------|-----------------------|-------------------------------------|
| Power Offset  |          |       | INTEGER(0..24)        | Unit dB, Step 0.25 dB, range 0-6 dB |

## 9.2.2.20 Power Resume Mode (PRM)

Power Resume Mode selects the uplink power control method to calculate the initial transmit power after the gap. PRM can take two values (0 or 1) and is described in ref. **[Error! Reference source not found.]**.

| IE/Group Name     | Presence | Range | IE type and reference | Semantics description                                   |
|-------------------|----------|-------|-----------------------|---|
| Power Resume Mode |          |       | ENUMERATED (0, 1,..)  | Described in ref. [Error! Reference source not found.]. |

9.2.2.21 Primary CPICH Ec/No

Energy per chip divided by the power density per band measured on the Primary CPICH by the terminal.

| IE/Group Name       | Presence | Range | IE type and reference | Semantics description |
|---------------------|----------|-------|-----------------------|-----------------------|
| Primary CPICH Ec/No |          |       | INTEGER (-30...+30)   | Unit dB, step 1 dB    |

9.2.2.22 Propagation Delay (PD)

Propagation delay is the one-way propagation delay of the radio signal from the MS to the Node B.

| IE/Group Name     | Presence | Range | IE type and reference | Semantics description                                  |
|-------------------|----------|-------|-----------------------|--|
| Propagation Delay |          |       | INTEGER (0..255)      | Chips. Step size is 3 chips. 0=0 chips, 1=3 chips, ... |

9.2.2.23 S-Field Length

The UE uses the S Field of the UL DPCCH slot to send the SSID Cell ID to the network.

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description |
|----------------|----------|-------|-----------------------|-----------------------|
| S Field Length |          |       | ENUMERATED (1, 2)     |                       |

9.2.2.24 Scrambling Code Change

This parameter indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.

| IE/Group Name          | Presence | Range | IE type and reference          | Semantics description |
|------------------------|----------|-------|--------------------------------|-----------------------|
| Scrambling Code Change |          |       | ENUMERATED (Change, No change) |                       |

9.2.2.xx Secondary CCPCH Slot Format

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|--------------------------------|----------|-------|-----------------------|-----------------------|
| Secondary CCPCH Slot Format    |          |       | INTEGER (0..178)      | refer to 25.211.      |

9.2.2.25 Slot Number (SN)

It defines the slot number when the transmission gap starts.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| SN            |          |       | Time Slot             |                       |

9.2.2.26 SS DT Cell Identity

The SS DT Cell ID is a temporary ID for SS DT assigned to a cell.

| IE/Group Name       | Presence | Range | IE type and reference   | Semantics description |
|---------------------|----------|-------|-------------------------|-----------------------|
| SS DT Cell Identity |          |       | ENUMERATED (a, b..., h) |                       |

9.2.2.27 SS DT Cell Identity Length

The SS DT Cell ID Length parameter shows the length of the SS DT Cell ID.

| IE/Group Name  | Presence | Range | IE type and reference            | Semantics description |
|----------------|----------|-------|----------------------------------|-----------------------|
| Cell ID Length |          |       | ENUMERATED (Short, Medium, Long) |                       |

9.2.2.28 SS DT Indication

The SS DT Indication indicates whether SS DT is in use by the UE or not.

| IE/Group Name    | Presence | Range | IE type and reference   | Semantics description |
|------------------|----------|-------|---|-----------------------|
| SS DT Indication |          |       | ENUMERATED (SS DT Active in the UE, SS DT not Active in the UE) |                       |

9.2.2.29 SS DT Support Indicator

The SS DT Support Indicator indicates whether a RL supports SS DT or not.

| IE/Group Name           | Presence | Range | IE type and reference                              | Semantics description |
|-------------------------|----------|-------|--|-----------------------|
| SS DT Support Indicator |          |       | ENUMERATED (SS DT Supported, SS DT not supported). |                       |

9.2.2.xx STTD Indicator

Indicates if STTD shall be active or not.

| <u>IE/Group Name</u>  | <u>Presence</u> | <u>Range</u> | <u>IE type and reference</u>         | <u>Semantics description</u> |
|-----------------------|-----------------|--------------|--------------------------------------|------------------------------|
| <u>STTD Indicator</u> |                 |              | <u>ENUMERATED (active, inactive)</u> |                              |



9.2.2.30 TFCI Signalling Mode

This parameter indicates if the normal or split mode is used for the TFCI.

| IE/Group Name        | Presence | Range | IE type and reference      | Semantics description |
|----------------------|----------|-------|----------------------------|-----------------------|
| TFCI Signalling Mode |          |       | ENUMERATED (Normal, Split) |                       |

9.2.2.31 TPC Downlink Step Size

This parameter indicates step size for the DL power adjustment.

| IE/Group Name          | Presence | Range | IE type and reference | Semantics description |
|------------------------|----------|-------|-----------------------|-----------------------|
| TPC Downlink step size |          |       | ENUMERATED (0.5, 1)   |                       |

9.2.2.32 Transmission Gap Distance (TGD)

Transmission Gap Distance is the duration of transmission between two consecutive transmission gaps within a transmission gap period, expressed in number of frames. In case there is only one transmission gap in the transmission gap period, this parameter shall be set to zero.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| TGD           |          |       | INTEGER(0..255)       | Frames                |

9.2.2.33 Transmit Gap Length (TGL)

Transmission Gap Length is the duration of no transmission, expressed in number of slots.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| TGL           |          |       | INTEGER (3,4,7,10,14) | Slot                  |

9.2.2.34 UL/DL Compressed Mode Selection

This parameter specifies whether compressed mode is used in UL only, DL only or both UL and DL

| IE/Group Name                   | Presence | Range | IE type and reference                         | Semantics description |
|---------------------------------|----------|-------|---|-----------------------|
| UL/DL Compressed Mode Selection |          |       | ENUMERATED (UL only, DL only, both UL and DL) |                       |

9.2.2.35 UL DPCCH Slot Format

Indicates the slot format used in DPCCH in UL, according to ref. [Error! Reference source not found.].

| IE/Group Name        | Presence | Range | IE type and reference | Semantics description |
|----------------------|----------|-------|-----------------------|-----------------------|
| UL DPCCH Slot Format |          |       | INTEGER (0..5)        |                       |

### 9.2.2.36 UL Scrambling Code

The UL Scrambling Code is the scrambling code used by UE. Every UE has its specific UL Scrambling Code.

| IE/Group Name             | Presence | Range | IE type and reference     | Semantics description |
|---------------------------|----------|-------|---------------------------|-----------------------|
| <b>UL scrambling code</b> |          |       |                           |                       |
| UL Scrambling Code Number | M        |       | INTEGER (0.. $2^{24}-1$ ) |                       |
| UL Scrambling Code Length | M        |       | ENUMERATED (Short, Long)  |                       |

### 9.2.2.37 Uplink Delta Eb/No

The delta in uplink Eb/No that shall be added to the Eb/No target used during compressed mode frames.

| Information Element/Group Name | Presence | Range | IE type and reference  | Semantics description |
|--------------------------------|----------|-------|------------------------|-----------------------|
| Uplink Delta Eb/No             |          |       | Enumerated (-6..+10dB) | Step 0.1 dB.          |

### 9.2.2.38 Uplink Delta Eb/No After

The delta in uplink Eb/No target that shall be added to the Eb/No target used one frame after the compressed mode frames.

| Information Element/Group Name | Presence | Range | IE type and reference  | Semantics description |
|--------------------------------|----------|-------|------------------------|-----------------------|
| Uplink Delta Eb/No after       |          |       | Enumerated (-6..+10dB) | Step 0.1 dB.          |

## 9.2.3 TDD Specific Parameters

This chapter contains parameters that are specific to TDD.

### 9.2.3.1 Burst Type

Defines the burst type of the physical channel, see ref. [Error! Reference source not found.].

| IE/Group Name | Presence | Range | IE type and reference     | Semantics description |
|---------------|----------|-------|---------------------------|-----------------------|
| Burst Type    |          |       | ENUMERATED (Type1, Type2) |                       |

### 9.2.3.2 CCTrCH ID

The CCTrCH ID identifies unambiguously a CCTrCH inside a Radio Link.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| CCTrCH ID     |          |       | INTEGER (0..15)       |                       |

9.2.3.3 DPCH ID

The DPCH ID identifies unambiguously a DPCH inside a Radio Link.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| DPCH ID       |          |       | INTEGER (0..239)      |                       |

9.2.3.4 Midamble Shift

Different bursts transmitted simultaneously, using the same midamble code shall use different Midamble Shifts.

The 256 chip midamble supports 3 different time shifts, the 512 chips midamble may support 8 or even 16 time shifts.

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description |
|----------------|----------|-------|-----------------------|-----------------------|
| Midamble Shift |          |       | INTEGER (0..15)       |                       |

9.2.3.5 Primary CCPCH RSCP

Received Signal Code Power is the received power on PCCPCH of the target cell after despreading. The reference point for the RSCP is the antenna connector at the UE, see ref. [Error! Reference source not found.].

| IE/Group Name      | Presence | Range | IE type and reference     | Semantics description  |
|--------------------|----------|-------|---------------------------|--|
| Primary CCPCH RSCP |          |       | INTEGER (-115..-25.0..91) | P-CCPCH RSCP is given with a resolution of 1 dBm with the range [-115, ..., -25] dBm According to mapping in 25.225. |

9.2.3.6 Repetition Length

The Repetition Length represents the number of consecutive Radio Frames inside a Repetition Period in which the same Time Slot is assigned to the same Physical Channel.

| IE/Group Name     | Presence | Range | IE type and reference | Semantics description |
|-------------------|----------|-------|-----------------------|-----------------------|
| Repetition Length |          |       | INTEGER(1..63)        |                       |

9.2.3.7 Repetition Period

The Repetition Period represents the number of consecutive Radio Frames after which the same assignment scheme of Time Slots to a Physical Channel is repeated. This means that if the Time Slot *K* is assigned to a physical channel in the Radio Frame *J*, it is assigned to the same physical channel also in all the Radio Frames  $J+n*Repetition\ Period$  (where *n* is an integer).

| IE/Group Name     | Presence | Range | IE type and reference            | Semantics description |
|-------------------|----------|-------|----------------------------------|-----------------------|
| Repetition Period |          |       | ENUMERATED<br>(1,2,4,8,16,32,64) |                       |

9.2.3.8 TDD Channelisation Code

The Channelisation Code Number indicates which Channelisation Code is used for a given Physical Channel. In TDD the Channelisation Code is an Orthogonal Variable Spreading Factor code, that can have a spreading factor of 1, 2, 4, 8 or 16.

| IE/Group Name           | Presence | Range | IE type and reference   | Semantics description |
|-------------------------|----------|-------|---|-----------------------|
| TDD Channelisation Code |          |       | ENUMERATED<br>((1/1), (2/1), (2/2), (4/1),... (4/4), (8/1), (8/8), (16/1)... (16/16)) |                       |

9.2.3.9 TDD Physical Channel Offset

The TDD Physical Channel Offset represents the phase information for the allocation of a physical channel. (SFN mod Repetition Period = TDD Physical Channel Offset).

| IE/Group Name               | Presence | Range | IE type and reference | Semantics description |
|-----------------------------|----------|-------|-----------------------|-----------------------|
| TDD Physical Channel Offset |          |       | INTEGER<br>(0..63)    |                       |

9.2.3.10 TFCI Coding

The TFCI Coding describes how the TFCI bits are coded. By default 1 TFCI bit is coded with 4 bits, 2 TFCI bits are coded with 8 bits, 3-5 TFCI bits are coded with 16 bits and 6-10 TFCI bits are coded with 32 bits.

| IE/Group Name | Presence | Range | IE type and reference        | Semantics description |
|---------------|----------|-------|------------------------------|-----------------------|
| TFCI Coding   | M        |       | Enumerated<br>(4, 8, 16, 32) |                       |

## 9.3 Message and Information element abstract syntax (with ASN.1)

This chapter is for the time being only **INFORMATIVE**.

In case of misalignment with the tabular format of the messages in chapter 9.1 the ASN.1 needs to be aligned with the tabular format.

The setting of the criticality field and the level on which criticality is set for the IEs and sequences of IEs is still to be decided upon.

### 9.3.1 Usage of protocol extension mechanism for non-standard use

The protocol extension mechanism for non-standard use may be used

- For special operator- (and/or vendor) specific features considered not to be part of the basic functionality, i.e. the functionality required for a complete and high-quality specification in order to guarantee multi-vendor interoperability.
- By vendors for research purposes, e.g. to implement and evaluate new algorithms/features before such features are proposed for standardisation

The extension mechanism shall not be used for basic functionality. Such functionality shall be standardised.

### 9.3.2 Elementary Procedure Definitions

```
-- *****
--
-- Elementary Procedure definitions
--
-- *****

RNSAP-PDU-Descriptions -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    Criticality,
    ProcedureID,
    TransactionID
FROM RNSAP-CommonDataTypes

    CommonTransportChannelResourcesFailure,
    CommonTransportChannelResourcesRequest,
    CommonTransportChannelResourcesReleaseRequest,
    CommonTransportChannelResourcesResponseFDD,
    CommonTransportChannelResourcesResponseTDD,
    CompressedModeCancel,
    CompressedModeCommit,
    CompressedModeFailure,
    CompressedModePrepare,
    CompressedModeReady,
    DedicatedMeasurementFailureIndication,
    DedicatedMeasurementInitiationFailure,
    DedicatedMeasurementInitiationRequest,
    DedicatedMeasurementInitiationResponse,
    DedicatedMeasurementReport,
    DedicatedMeasurementTerminationRequest,
    DL-PowerControlRequest,
    DownlinkSignallingTransferRequest,
    ErrorIndication,
    PagingRequest,
```

```

PhysicalChannelReconfigurationCommand,
PhysicalChannelReconfigurationFailure,
PhysicalChannelReconfigurationRequestFDD,
PhysicalChannelReconfigurationRequestTDD,
PrivateMessage,
RadioLinkAdditionFailureFDD,
RadioLinkAdditionFailureTDD,
RadioLinkAdditionRequestFDD,
RadioLinkAdditionRequestTDD,
RadioLinkAdditionResponseFDD,
RadioLinkAdditionResponseTDD,
RadioLinkDeletionRequest,
RadioLinkDeletionResponse,
RadioLinkFailureIndication,
RadioLinkReconfigurationCancel,
RadioLinkReconfigurationCommit,
RadioLinkReconfigurationFailure,
RadioLinkReconfigurationPrepareFDD,
RadioLinkReconfigurationPrepareTDD,
RadioLinkReconfigurationReadyFDD,
RadioLinkReconfigurationReadyTDD,
RadioLinkReconfigurationRequestFDD,
RadioLinkReconfigurationRequestTDD,
RadioLinkReconfigurationResponseFDD,
RadioLinkReconfigurationResponseTDD,
RadioLinkRestoreIndication,
RadioLinkSetupFailureFDD,
RadioLinkSetupFailureTDD,
RadioLinkSetupRequestFDD,
RadioLinkSetupRequestTDD,
RadioLinkSetupResponseFDD,
RadioLinkSetupResponseTDD,
RelocationCommit,
UplinkSignallingTransferIndication
FROM RNSAP-PDU-Contents

```

```

id-commonTransportChannelResourcesInitiationFDD,
id-commonTransportChannelResourcesInitiationTDD,
id-commonTransportChannelResourcesRelease,
id-compressedModeCancellationFDD,
id-compressedModeCommitFDD,
id-compressedModePrepareFDD,
id-downlinkPowerControl,
id-downlinkSignallingTransfer,
id-errorIndication,
id-measurementFailure,
id-measurementInitiation,
id-measurementReporting,
id-measurementTermination,
id-pagingRequest,
id-physicalChannelReconfiguration,
id-privateMessage,
id-radioLinkAddition,
id-radioLinkDeletion,
id-radioLinkFailure,
id-radioLinkRestoration,
id-radioLinkSetup,
id-srnsRelocationCommit,
id-synchronisedRadioLinkReconfigurationCancellation,
id-synchronisedRadioLinkReconfigurationCommit,
id-synchronisedRadioLinkReconfigurationPrepare,
id-unsynchronisedRadioLinkReconfiguration,
id-uplinkSignallingTransfer
FROM RNSAP-Constants;

```

```

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

```

```

RNSAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage           ,
    &SuccessfulOutcome           OPTIONAL,
    &UnsuccessfulOutcome        OPTIONAL,
    &Outcome                     OPTIONAL,
    &procedureID                 ProcedureID  UNIQUE,
    &criticality                 Criticality  DEFAULT ignore
}

```

```

}
WITH SYNTAX {
  INITIATING MESSAGE      &InitiatingMessage
  [SUCCESSFUL OUTCOME     &SuccessfulOutcome]
  [UNSUCCESSFUL OUTCOME   &UnsuccessfulOutcome]
  [OUTCOME                 &Outcome]
  PROCEDURE ID            &procedureID
  [CRITICALITY            &criticality]
}

-- *****
--
-- Interface PDU Definition
--
-- *****

RNSAP-PDU ::= CHOICE {
  initiatingMessage  InitiatingMessage,
  succesfulOutcome   SuccessfulOutcome,
  unsuccessulOutcome UnsuccessfulOutcome,
  outcome            Outcome,
  ...
}

InitiatingMessage ::= SEQUENCE {
  procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ({RNSAP-ELEMENTARY-PROCEDURES}),
  criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality        ({RNSAP-ELEMENTARY-
PROCEDURES}@@procedureID}),
  transactionID TransactionID,
  value        RNSAP-ELEMENTARY-PROCEDURE.&InitiatingMessage  ({RNSAP-ELEMENTARY-
PROCEDURES}@@procedureID})
}

SuccessfulOutcome ::= SEQUENCE {
  procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ({RNSAP-ELEMENTARY-PROCEDURES}),
  criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality        ({RNSAP-ELEMENTARY-
PROCEDURES}@@procedureID}),
  transactionID TransactionID,
  value        RNSAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome  ({RNSAP-ELEMENTARY-
PROCEDURES}@@procedureID})
}

UnsuccessfulOutcome ::= SEQUENCE {
  procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ({RNSAP-ELEMENTARY-PROCEDURES}),
  criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality        ({RNSAP-ELEMENTARY-
PROCEDURES}@@procedureID}),
  transactionID TransactionID,
  value        RNSAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome  ({RNSAP-ELEMENTARY-
PROCEDURES}@@procedureID})
}

Outcome ::= SEQUENCE {
  procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ({RNSAP-ELEMENTARY-PROCEDURES}),
  criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality        ({RNSAP-ELEMENTARY-
PROCEDURES}@@procedureID}),
  transactionID TransactionID,
  value        RNSAP-ELEMENTARY-PROCEDURE.&Outcome          ({RNSAP-ELEMENTARY-
PROCEDURES}@@procedureID})
}

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

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

RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURE ::= {
  radioLinkSetupFDD      |
  radioLinkSetupTDD      |
  radioLinkAdditionFDD   |
  radioLinkAdditionTDD   |

```

```

radioLinkDeletion
synchronisedRadioLinkReconfigurationPreparationFDD
synchronisedRadioLinkReconfigurationPreparationTDD
unSynchronisedRadioLinkReconfigurationFDD
unSynchronisedRadioLinkReconfigurationTDD
physicalChannelReconfigurationFDD
physicalChannelReconfigurationTDD
measurementInitiation
compressedModePreparationFDD
commonTransportChannelResourcesInitiationFDD
commonTransportChannelResourcesInitiationTDD
...
}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= {
  uplinkSignallingTransfer
  downlinkSignallingTransfer
  srnsRelocationCommit
  paging
  synchronisedRadioLinkReconfigurationCommit
  synchronisedRadioLinkReconfigurationCancellation
  radioLinkFailure
  radioLinkRestoration
  measurementReporting
  measurementTermination
  measurementFailure
  downlinkPowerControlFDD
  compressedModeCommitFDD
  compressedModeCancellationFDD
  commonTransportChannelResourcesRelease
  errorIndication
  privateMessage
  ...
}

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

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

radioLinkSetupFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkSetupRequestFDD
  SUCCESSFUL OUTCOME RadioLinkSetupResponseFDD
  UNSUCCESSFUL OUTCOME RadioLinkSetupFailureFDD
  PROCEDURE ID { procedureCode id-radioLinkSetup, ddMode fdd }
  CRITICALITY ignore
}

radioLinkSetupTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkSetupRequestTDD
  SUCCESSFUL OUTCOME RadioLinkSetupResponseTDD
  UNSUCCESSFUL OUTCOME RadioLinkSetupFailureTDD
  PROCEDURE ID { procedureCode id-radioLinkSetup, ddMode tdd }
  CRITICALITY ignore
}

radioLinkAdditionFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkAdditionRequestFDD
  SUCCESSFUL OUTCOME RadioLinkAdditionResponseFDD
  UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureFDD
  PROCEDURE ID { procedureCode id-radioLinkAddition, ddMode fdd }
  CRITICALITY ignore
}

radioLinkAdditionTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkAdditionRequestTDD
  SUCCESSFUL OUTCOME RadioLinkAdditionResponseTDD
  UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureTDD
  PROCEDURE ID { procedureCode id-radioLinkAddition, ddMode tdd }
  CRITICALITY ignore
}

radioLinkDeletion RNSAP-ELEMENTARY-PROCEDURE ::= {

```



```

INITIATING MESSAGE RadioLinkDeletionRequest
SUCCESSFUL OUTCOME RadioLinkDeletionResponse
PROCEDURE ID      { procedureCode id-radioLinkDeletion, ddMode common }
CRITICALITY      ignore
}

synchronisedRadioLinkReconfigurationPreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationPrepareFDD
  SUCCESSFUL OUTCOME RadioLinkReconfigurationReadyFDD
  UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
  PROCEDURE ID      { procedureCode id-synchronisedRadioLinkReconfigurationPrepare, ddMode fdd }
  CRITICALITY      ignore
}

synchronisedRadioLinkReconfigurationPreparationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationPrepareTDD
  SUCCESSFUL OUTCOME RadioLinkReconfigurationReadyTDD
  UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
  PROCEDURE ID      { procedureCode id-synchronisedRadioLinkReconfigurationPrepare, ddMode tdd }
  CRITICALITY      ignore
}

unSynchronisedRadioLinkReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationRequestFDD
  SUCCESSFUL OUTCOME RadioLinkReconfigurationResponseFDD
  UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
  PROCEDURE ID      { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
  CRITICALITY      ignore
}

unSynchronisedRadioLinkReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationRequestTDD
  SUCCESSFUL OUTCOME RadioLinkReconfigurationResponseTDD
  UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
  PROCEDURE ID      { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
  CRITICALITY      ignore
}

physicalChannelReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE PhysicalChannelReconfigurationRequestFDD
  SUCCESSFUL OUTCOME PhysicalChannelReconfigurationCommand
  UNSUCCESSFUL OUTCOME PhysicalChannelReconfigurationFailure
  PROCEDURE ID      { procedureCode id-physicalChannelReconfiguration, ddMode fdd }
  CRITICALITY      ignore
}

physicalChannelReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE PhysicalChannelReconfigurationRequestTDD
  SUCCESSFUL OUTCOME PhysicalChannelReconfigurationCommand
  UNSUCCESSFUL OUTCOME PhysicalChannelReconfigurationFailure
  PROCEDURE ID      { procedureCode id-physicalChannelReconfiguration, ddMode tdd }
  CRITICALITY      ignore
}

measurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementInitiationRequest
  SUCCESSFUL OUTCOME DedicatedMeasurementInitiationResponse
  UNSUCCESSFUL OUTCOME DedicatedMeasurementInitiationFailure
  PROCEDURE ID      { procedureCode id-measurementInitiation, ddMode common }
  CRITICALITY      ignore
}

compressedModePreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CompressedModePrepare
  SUCCESSFUL OUTCOME CompressedModeReady
  UNSUCCESSFUL OUTCOME CompressedModeFailure
  PROCEDURE ID      { procedureCode id-compressedModePrepareFDD, ddMode fdd }
  CRITICALITY      ignore
}

commonTransportChannelResourcesInitiationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME CommonTransportChannelResourcesResponseFDD
  UNSUCCESSFUL OUTCOME CommonTransportChannelResourcesFailure
  PROCEDURE ID      { procedureCode id-commonTransportChannelResourcesInitiationFDD, ddMode
common }
  CRITICALITY      ignore
}

```

```
commonTransportChannelResourcesInitiationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME CommonTransportChannelResourcesResponseTDD
  UNSUCCESSFUL OUTCOME CommonTransportChannelResourcesFailure
  PROCEDURE ID { procedureCode id-commonTransportChannelResourcesInitiationTDD, ddMode
common }
  CRITICALITY ignore
}

uplinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE UplinkSignallingTransferIndication
  PROCEDURE ID { procedureCode id-uplinkSignallingTransfer, ddMode common }
  CRITICALITY ignore
}

downlinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DownlinkSignallingTransferRequest
  PROCEDURE ID { procedureCode id-downlinkSignallingTransfer, ddMode common }
  CRITICALITY ignore
}

srnsRelocationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RelocationCommit
  PROCEDURE ID { procedureCode id-srnsRelocationCommit, ddMode common }
  CRITICALITY ignore
}

paging RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE PagingRequest
  PROCEDURE ID { procedureCode id-pagingRequest, ddMode common }
  CRITICALITY ignore
}

synchronisedRadioLinkReconfigurationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationCommit
  PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common
}
  CRITICALITY ignore
}

synchronisedRadioLinkReconfigurationCancellation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationCancel
  PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode
common }
  CRITICALITY ignore
}

radioLinkFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkFailureIndication
  PROCEDURE ID { procedureCode id-radioLinkFailure, ddMode common }
  CRITICALITY ignore
}

radioLinkRestoration RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkRestoreIndication
  PROCEDURE ID { procedureCode id-radioLinkRestoration, ddMode common }
  CRITICALITY ignore
}

measurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementReport
  PROCEDURE ID { procedureCode id-measurementReporting, ddMode common }
  CRITICALITY ignore
}

measurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementTerminationRequest
  PROCEDURE ID { procedureCode id-measurementTermination, ddMode common }
  CRITICALITY ignore
}

measurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementFailureIndication
  PROCEDURE ID { procedureCode id-measurementFailure, ddMode common }
  CRITICALITY ignore
}
```

```

downlinkPowerControlFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DL-PowerControlRequest
  PROCEDURE ID       { procedureCode id-downlinkPowerControl, ddMode fdd }
  CRITICALITY        ignore
}

compressedModeCommitFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CompressedModeCommit
  PROCEDURE ID       { procedureCode id-compressedModeCommitFDD, ddMode fdd }
  CRITICALITY        ignore
}

compressedModeCancellationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CompressedModeCancel
  PROCEDURE ID       { procedureCode id-compressedModeCancellationFDD, ddMode fdd }
  CRITICALITY        ignore
}

commonTransportChannelResourcesRelease RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE CommonTransportChannelResourcesReleaseRequest
  PROCEDURE ID       { procedureCode id-commonTransportChannelResourcesRelease, ddMode common }
  CRITICALITY        ignore
}

errorIndication RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE ErrorIndication
  PROCEDURE ID       { procedureCode id-errorIndication, ddMode common }
  CRITICALITY        ignore
}

privateMessage RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE PrivateMessage
  PROCEDURE ID       { procedureCode id-privateMessage, ddMode common }
  CRITICALITY        ignore
}

END

```

### 9.3.3 PDU Definitions

```

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

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
  AllocationRetentionPriority,
  AllowedQueuingTime,
  BLER,
  BindingID,
  BurstType,
  C-ID,
  C-RNTI,
  CCTrCH-ID,
  CFN,
  CN-CS-DomainIdentifier,
  CN-PS-DomainIdentifier,
  CPICH-EcIo,
  CPICH-Power,
  Cause,
  CellParameterID,
  ChipOffset,
  CompressedModeMethod,
  CriticalityDiagnostics,
  D-FieldLength,
  D-RNTI,

```

D-RNTI-ReleaseIndication,  
 DCH-CombinationInd,  
 DCH-ID,  
~~DL-ChannelisationCode,~~  
~~DL-DPCH-SlotFormat,~~  
 DL-DPCH-SlotFormatNumber,  
 DL-EbNo,  
 DL-EbNoTarget,  
 DL-FrameType,  
 DL-Power,  
 DL-ScramblingCode,  
 DPCH-ID,  
 DRX-Parameter,  
~~DedicatedMeasurementType,~~  
 DedicatedMeasurementValue,  
 DiversityControlField,  
 DiversityMode,  
~~FACH-DataFrameSize,~~  
 FACH-InitialWindowSize,  
 FACH-PriorityIndicator,  
 FDD-DL-ChannelisationCodeNumber,  
 FDD-S-CCPCH-Offset,  
 FrameHandlingPriority,  
 FrameOffset,  
 GapPeriod,  
 GapPositionMode,  
 L3-Information,  
 MAC-c-SDU-Length,  
 MaxNrOfUL-DPCHs,  
 MeanBitRate,  
 MeasurementCharacteristics,  
 MeasurementID,  
 MidambleShift,  
 MinUL-ChannelisationCodeLength,  
 MultipleURAsIndicator,  
 MultiplexingPosition,  
~~Offset,~~  
 PD,  
~~PSCH-PCCPCH-TimeSlot,~~  
 PSCH-TimeSlot,  
 PayloadCRC-PresenceIndicator,  
~~PilotBitsUsedIndicator,~~  
 PowerControlMode,  
 PowerOffset,  
 PowerResumeMode,  
 PrimaryCCPCH-RSCP,  
 PrimaryCPICH-EcNo,  
 PrimaryCPICH-Power,  
 PrimaryScramblingCode,  
 PropagationDelay,  
 PunctureLimit,  
 RANAP-RelocationInformation,  
 RL-ID,  
 RLC-Mode,  
 RNC-ID,  
 RepetitionLength,  
 RepetitionPeriod,  
 ReportCharacteristics,  
 S-FieldLength,  
 S-RNTI,  
 SAI,  
 SN,  
~~SRNC-ID,~~  
 SSDT-CellID,  
 SSDT-CellID-Length,  
 SSDT-Indication,  
 SSDT-SupportIndicator,  
~~STD-Indicator,~~  
~~ScaledUL-InterferenceLevel,~~  
~~ScramblingCode,~~  
 ScramblingCodeChange,  
 SecondaryCCPCH-SlotFormat,  
 SyncCase,  
 TDD-ChannelisationCode,  
 TDD-PhysicalChannelOffset,  
 TFCI-Coding,  
 TFCI-Presence,  
 TFCI-SignallingMode,

```

TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSetTFCS,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
UC-ID,
UL-DeltaEbNo,
UL-DeltaEbNoAfter,
UL-DL-CompressedModeSelection,
UL-DPCH-SlotFormat,
UL-EbNo,
UL-EbNoTarget,
UL-FP-Mode,
UL-ScramblingCode,
URA-ID
FROM RNSAP-IEs

PrivateExtensionContainer{},
ProtocolExtensionContainer{},
ProtocolIE-ContainerList{},
ProtocolIE-ContainerPair{},
ProtocolIE-ContainerPairList{},
ProtocolIE-Container{},
RNSAP-PRIVATE-EXTENSION,
RNSAP-PROTOCOL-EXTENSION,
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers

maxNrOfDL-Codes,
maxNrOfCCTrCHs,
maxNrOfDCHs,
maxNrOfDL-Codes,
maxNrOfDPCHs,
maxNrOfFACH-FD-Size,
maxNrOfFDD-Neighbours,
maxNrOfMACcSDU-Length,
maxNrOfTDD-Neighbours,
maxNrOfRLs,
maxNrOfRLs-1,
maxNrOfRLs-2,
maxNrOfSCCPCHs,
maxRNCinURA,

id-AllowedQueuingTime,
id-BindingID,
id-C-ID,
id-C-RNTI,
id-CCTrCH-ID,
id-CFN,
id-CN-CS-DomainIdentifier,
id-CN-PS-DomainIdentifier,
id-Cause,
id-CompressedModeMethod,
id-CriticalityDiagnostics,
id-D-RNTI,
id-D-RNTI-ReleaseIndication,
id-DCH-AddItem,
id-DCH-AddItem-RL-ReconfPrepFDD,
id-DCH-AddItem-RL-ReconfPrepTDD,
id-DCH-AddItem-RL-ReconfReadyFDD,
id-DCH-AddItem-RL-ReconfReadyTDD,
id-DCH-AddItem-RL-ReconfRqstFDD,
id-DCH-AddItem-RL-ReconfRqstTDD,
id-DCH-AddItem-RL-ReconfRsp,
id-DCH-AddList-RL-ReconfPrepFDD,
id-DCH-AddList-RL-ReconfPrepTDD,
id-DCH-AddList-RL-ReconfRqstFDD,
id-DCH-AddList-RL-ReconfRqstTDD,
id-DCH-DeleteItem-RL-ReconfPrepFDD,

```

id-DCH-DeleteItem-RL-ReconfPrepTDD,  
 id-DCH-DeleteItem-RL-ReconfRqstFDD,  
 id-DCH-DeleteItem-RL-ReconfRqstTDD,  
 id-DCH-DeleteList-RL-ReconfPrepFDD,  
 id-DCH-DeleteList-RL-ReconfPrepTDD,  
 id-DCH-DeleteList-RL-ReconfRqstFDD,  
 id-DCH-DeleteList-RL-ReconfRqstTDD,  
 id-DCH-Information-RL-SetupReeqgstFDD,  
 id-DCH-InformationItem-RL-SetupReeqgstFDD,  
 id-DCH-InformationItem-RL-SetupReeqgstTDD,  
 id-DCH-InformationList-RL-SetupReeqgstTDD,  
~~id-DCH-ModifyItem,~~  
 id-DCH-ModifyItem-RL-ReconfPrepFDD,  
 id-DCH-ModifyItem-RL-ReconfPrepTDD,  
 id-DCH-ModifyItem-RL-ReconfReadyFDD,  
~~id-DCH-ModifyItem-RL-ReconfReadyTDD,~~  
 id-DCH-ModifyItem-RL-ReconfRqstFDD,  
 id-DCH-ModifyItem-RL-ReconfRqstTDD,  
~~id-DCH-ModifyItem-RL-ReconfRsp,~~  
 id-DCH-ModifyList-RL-ReconfPrepFDD,  
 id-DCH-ModifyList-RL-ReconfPrepTDD,  
 id-DCH-ModifyList-RL-ReconfRqstFDD,  
 id-DCH-ModifyList-RL-ReconfRqstTDD,  
 id-DL-CCTrCH-Information-RL-ReconfPrepTDD,  
 id-DL-CCTrCH-Information-RL-ReconfRqstTDD,  
 id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,  
 id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD,  
 id-DL-CCTrChInformationItem-RL-SetupReeqgstTDD,  
 id-DL-CCTrChInformationList-RL-SetupReeqgstTDD,  
 id-DL-CodeInformation-PhyChReconfRqstFDD,  
 id-DL-DPCH-Information,  
 id-DL-DPCH-Information-RL-SetupReeqgstFDD,  
 id-DL-DPCH-InformationList-PhyChReconfRqstTDD,  
 id-DL-DPCH-InformationList-RL-ReconfReadyTDD,  
 id-DL-EbNoTarget,  
 id-DL-FrameType,  
 id-DL-MeanBitRate,  
 id-DL-ReferencePowerInformation-DL-PC-Rqst,  
 id-DRX-Parameter,  
 id-DedicatedMeasurementObjectType-DM-Rprt,  
 id-DedicatedMeasurementObjectType-DM-Rqst,  
 id-DedicatedMeasurementObjectType-DM-Rspas,  
~~id-DedicatedMeasurementType,~~  
 id-FACH-InfoForOptionalGroupS-CCPCH-CTCH-ResourceRspFDD,  
 id-FACH-InfoForOptionalS-CCPCH-CTCH-ResourceRspTDD,  
 id-FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspFDD,  
~~id-FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspTDD,~~  
 id-GapPositionMode,  
 id-L3-Information,  
~~id-MaxUL-EbNo,~~  
 id-MeasurementCharacteristics,  
 id-MeasurementID,  
~~id-MinUL-EbNo,~~  
 id-MultipleURAsIndicator,  
 id-PD,  
 id-PagingArea-PagingRqst,  
 id-PowerControlMode,  
 id-PowerResumeMode,  
 id-ProcedureScope-DL-PC-Rqst,  
 id-RANAP-RelocationInformation,  
 id-RL-Information-PhyChReconfRqstFDD,  
 id-RL-Information-PhyChReconfRqstTDD,  
 id-RL-Information-RL-AdditionRqstFDD,  
 id-RL-Information-RL-AdditionRqstTDD,  
 id-RL-Information-RL-DeletionRqst,  
 id-RL-Information-RL-FailureInd,  
 id-RL-Information-RL-ReconfPrepFDD,  
 id-RL-Information-RL-RestoreInd,  
 id-RL-Information-RL-SetupReeqgstFDD,  
 id-RL-Information-RL-SetupReeqgstTDD,  
 id-RL-InformationItem-DM-Rprt,  
 id-RL-InformationItem-DM-Rqst,  
 id-RL-InformationItem-DM-Rspas,  
 id-RL-InformationItem-RL-SetupReeqgstFDD,  
 id-RL-InformationList-RL-AdditionRqstFDD,  
 id-RL-InformationList-RL-DeletionRqst,  
 id-RL-InformationList-RL-FailureInd,  
 id-RL-InformationList-RL-ReconfPrepFDD,

```

id-RL-InformationList-RL-RestoreInd,
id-RL-InformationResponse-RL-AdditionRspTDD,
id-RL-InformationResponse-RL-ReconfReadyTDD,
id-RL-InformationResponse-RL-SetupRspTDD,
id-RL-InformationResponseItem-RL-AdditionRspFDD,
id-RL-InformationResponseItem-RL-ReconfReadyFDD,
id-RL-InformationResponseItem-RL-ReconfRsp,
id-RL-InformationResponseItem-SetupRspFDD,
id-RL-InformationResponseList-RL-AdditionRspFDD,
id-RL-InformationResponseList-RL-ReconfReadyFDD,
id-RL-InformationResponseList-RL-ReconfRsp,
id-RL-InformationResponseList-SetupRspFDD,
id-RL-ReconfigurationFailure-RL-ReconfFail,
id-RL-ReconfigurationFailureList-RL-ReconfFail,
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind,
id-ReportCharacteristics,
id-S-RNTI,
id-SAI,
id-SN,
id-SRNC-ID,
id-ScramblingCodeChange,
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
id-TGD,
id-TGL,
id-TGP1,
id-TGP2,
id-TransportBearerID,
id-TransportBearerRequestIndicator,
id-TransportLayerAddress,
id-UC-ID,
id-UL-CCTrCH-Information-RL-ReconfPrepTDD,
id-UL-CCTrCH-Information-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,
id-UL-CCTrChInformationItem-RL-SetupReqRqstTDD,
id-UL-CCTrChInformationList-RL-SetupReqRqstTDD,
id-UL-DL-CompressedModeSelection,
id-UL-DPCH-Information,
id-UL-DPCH-Information-RL-SetupReqRqstFDD,
id-UL-DPCH-InformationList-PhyChReconfRqstTDD,
id-UL-DPCH-InformationList-RL-ReconfReadyTDD,
id-UL-DeltaEbNo,
id-UL-DeltaEbNoAfter,
id-UL-EbNoTarget,
id-UL-MeanBitRate,
id-URA-ID,
id-UnsuccessfulRL-InformationResponse,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
FROM RNSAP-Constants;

```

```

-- *****
--
-- Common Container List
--
-- *****

```

```

DCH-IE-ContainerList0 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 0,
maxNrOfDCHs, { IEsSetParam } }
DCH-IE-ContainerList1 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1,
maxNrOfDCHs, { IEsSetParam } }
RL-IE-ContainerList0 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 0,
maxNrOfRLs, { IEsSetParam } }
RL-IE-ContainerList1 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1,
maxNrOfRLs, { IEsSetParam } }
RL-IE-ContainerList1-1 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList {
1, maxNrOfRLs-1, { IEsSetParam } }
RL-IE-ContainerList0-1 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList {
0, maxNrOfRLs-1, { IEsSetParam } }
RL-IE-ContainerList0-2 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList {
0, maxNrOfRLs-2, { IEsSetParam } }

```

```

CCTrCH-IE-ContainerList0 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 0,
maxNrOfCCTrCHs, { IEsSetParam } }
CCTrCH-IE-ContainerList1 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1,
maxNrOfCCTrCHs, { IEsSetParam } }
DL-Code-IE-ContainerList0 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 0,
maxNrOfDL-Codes, { IEsSetParam } }
DL-Code-IE-ContainerList1 { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1,
maxNrOfDL-Codes, { IEsSetParam } }

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

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

RadioLinkSetupRequestFDD-IES RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI                CRITICALITY ignore TYPE S-RNTI                PRESENCE
mandatory } |
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
optional } |
    { ID id-AllowedQueuingTime    CRITICALITY ignore TYPE AllowedQueuingTime
PRESENCE optional } |
    { ID id-UL-DPCH-Information-RL-SetupReqgstFDD CRITICALITY ignore TYPE UL-DPCH-Information-RL-
SetupReqgstFDD PRESENCE mandatory } |
    { ID id-DL-DPCH-Information-RL-SetupReqgstFDD CRITICALITY ignore TYPE DL-DPCH-Information-RL-
SetupReqgstFDD PRESENCE mandatory } |
    { ID id-DCH-Information-RL-SetupReqgstFDD CRITICALITY ignore TYPE DCH-InformationList-RL-
SetupReqgstFDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqgstFDD CRITICALITY ignore TYPE RL-InformationList-RL-
SetupReqgstFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-SetupReqgstFDD ::= SEQUENCE {
    ul-ScramblingCode            UL-ScramblingCode,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs              MaxNrOfUL-DPCHs            OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit             PunctureLimit,
    ul-TransportFormatCombinationSetTFCS TransportFormatCombinationSetTFCS,
    ul-DPCCH-SlotFormat          UL-DPCCH-SlotFormat,
    ul-EbNoTarget                UL-EbNoTarget              OPTIONAL,
    diversityMode                DiversityMode,
    d-FieldLength                D-FieldLength              OPTIONAL
    -- This IE is present only if Feed Back mode diversity is activated -- ,
    sSDT-CellIdLength            SSDT-CellID-Length      OPTIONAL,
    s-FieldLength                S-FieldLength              OPTIONAL,
    ul-meanBitRate                MeanBitRate                OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {UL-DPCH-Information-RL-
SetupReqgstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-SetupReqgstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupReqgstFDD ::= SEQUENCE {
    transportFormatCombinationSetTFCS TransportFormatCombinationSetTFCS,
    dl-DPCH-SlotFormatNumber      DL-DPCH-SlotFormatNumber,
    tFCI-SignallingMode            TFCI-SignallingMode,
    tFCI-Presence                  TFCI-Presence          OPTIONAL
    -- This IE is present if Slot Format is from 12 to 16 -- ,
    multiplexingPosition          MultiplexingPosition,
    powerOffsetInformation        SEQUENCE {
        po1-ForTFCI-Bits          PowerOffset,
        po2-ForTPC-Bits           PowerOffset,
        po3-ForPilotBits          PowerOffset,
        ...
    },
    dl-TPC-StepSize                TPC-StepSize,

```



```

    meanBitRate                MeanBitRate                OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {DL-DPCH-Information-RL-
| SetupReqqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-SetupReqqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationList-RL-SetupReqqstFDD ::= DCH-IE-ContainerList1 { {DCH-InformationItemIEs-
RL-SetupReqqstFDD} }

DCH-InformationItemIEs-RL-SetupReqqstFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqqstFDD CRITICALITY ignore TYPE DCH-InformationItem-RL-
SetupReqqstFDD PRESENCE mandatory },
    ...
}

DCH-InformationItem-RL-SetupReqqstFDD ::= SEQUENCE {
    dCH-ID                    DCH-ID,
    dCH-CombinationInd        DCH-CombinationInd        OPTIONAL,
    rLC-Mode                  RLC-Mode,
    ul-transportFormatSet     TransportFormatSet,
    dl-transportFormatSet     TransportFormatSet,
    ul-BLER                   BLER,
    dl-BLER                   BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority     FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode                UL-FP-Mode,
    toAWS                     ToAWS,
    toAWE                     ToAWE,
    iE-Extensions              ProtocolExtensionContainer { {DCH-InformationItem-RL-
| SetupReqqstFDD-ExtIEs} } OPTIONAL,
    ...
}

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

RL-InformationList-RL-SetupReqqstFDD ::= RL-IE-ContainerList1 { {RL-InformationItemIEs-
RL-SetupReqqstFDD} }

RL-InformationItemIEs-RL-SetupReqqstFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-SetupReqqstFDD CRITICALITY ignore TYPE RL-InformationItem-RL-
SetupReqqstFDD PRESENCE mandatory },
    ...
}

RL-InformationItem-RL-SetupReqqstFDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    cC-ID                    C-ID,
    frameOffset              FrameOffset,
    chipOffset               ChipOffset,
    propagationDelay         PropagationDelay            OPTIONAL,
    diversityControlField    DiversityControlField      OPTIONAL
    -- This IE is present only if the RL is not the first one in the RL-InformationList-RL-
| SetupReqqstFDD --,
    dl-InitialTX-Power       DL-Power                    OPTIONAL
    -- Initial DL transmission power --,
    cPICH-EcIo               CPICH-EcIo                OPTIONAL,
    sSDT-CellID              SSdT-CellID                OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {RL-InformationItem-RL-
| SetupReqqstFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupReqqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****

```

```

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

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

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI                CRITICALITY ignore TYPE S-RNTI                PRESENCE
mandatory } |
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
optional } |
    { ID id-AllowedQueuingTime    CRITICALITY ignore TYPE AllowedQueuingTime
PRESENCE optional } |
    { ID id-UL-MeanBitRate        CRITICALITY ignore TYPE MeanBitRate          PRESENCE
optional } |
    { ID id-DL-MeanBitRate        CRITICALITY ignore TYPE MeanBitRate          PRESENCE
optional } |
    { ID id-UL-CCTrChInformationList-RL-SetupReqgstTDD CRITICALITY ignore TYPE UL-
CCTrChInformationList-RL-SetupReqgstTDD PRESENCE mandatory } |
    { ID id-DL-CCTrChInformationList-RL-SetupReqgstTDD CRITICALITY ignore TYPE DL-
CCTrChInformationList-RL-SetupReqgstTDD PRESENCE mandatory } |
    { ID id-DCH-InformationList-RL-SetupReqgstTDD CRITICALITY ignore TYPE DCH-InformationList-RL-
SetupReqgstTDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqgstTDD CRITICALITY ignore TYPE RL-Information-RL-
SetupReqgstTDD PRESENCE mandatory },
    ...
}

UL-CCTrChInformationList-RL-SetupReqgstTDD ::= CCTrCH-IE-ContainerList1 { {UL-
CCTrChInformationItemIEs-RL-SetupReqgstTDD} }

UL-CCTrChInformationItemIEs-RL-SetupReqgstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrChInformationItem-RL-SetupReqgstTDD CRITICALITY ignore TYPE UL-
CCTrChInformationItem-RL-SetupReqgstTDD PRESENCE mandatory },
    ...
}

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

UL-CCTrChInformationItem-RL-SetupReqgstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrChInformationList-RL-SetupReqgstTDD ::= CCTrCH-IE-ContainerList1 { {DL-
CCTrChInformationItemIEs-RL-SetupReqgstTDD} }

DL-CCTrChInformationItemIEs-RL-SetupReqgstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrChInformationItem-RL-SetupReqgstTDD CRITICALITY ignore TYPE DL-
CCTrChInformationItem-RL-SetupReqgstTDD PRESENCE mandatory },
    ...
}

DL-CCTrChInformationItem-RL-SetupReqgstTDD ::= SEQUENCE {
    cCTrCH-ID                    CCTrCH-ID,
    dl-TFCS                       TransportFormatCombinationSetTFCS,
    tFCI-Coding                   TFCI-Coding,
    dl-PunctureLimit              PunctureLimit,
    iE-Extensions                 ProtocolExtensionContainer { {DL-CCTrChInformationItem-RL-
SetupReqgstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrChInformationItem-RL-SetupReqgstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

DCH-InformationList-RL-SetupReqgstTDD ::= DCH-IE-ContainerList1 { {DCH-InformationItemIEs-
RL-SetupReqgstTDD} }

DCH-InformationItemIEs-RL-SetupReqgstTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationItem-RL-SetupReqgstTDD CRITICALITY ignore TYPE DCH-InformationItem-RL-
SetupReqgstTDD PRESENCE mandatory },
  ...
}

DCH-InformationItem-RL-SetupReqgstTDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  ul-cTrCH-ID CTrCH-ID, -- UL CTrCH in which the DCH is mapped
  dl-cTrCH-ID CTrCH-ID, -- DL CTrCH in which the DCH is mapped
  dCH-CombinationInd DCH-CombinationInd OPTIONAL,
  rLC-Mode RLC-Mode,
  ul-transportFormatSet TransportFormatSet,
  dl-transportFormatSet TransportFormatSet,
  ul-BLER BLER,
  dl-BLER BLER,
  allocationRetentionPriority AllocationRetentionPriority,
  frameHandlingPriority FrameHandlingPriority,
  payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
  ul-FP-Mode UL-FP-Mode,
  toAWS ToAWS,
  toAWE ToAWE,
  iE-Extensions ProtocolExtensionContainer { {DCH-InformationItem-RL-
SetupReqgstTDD-ExtIEs} } OPTIONAL,
  ...
}

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

RL-Information-RL-SetupReqgstTDD ::= SEQUENCE {
  rL-ID RL-ID,
  c-ID C-ID,
  frameOffset FrameOffset,
  primaryCCPCH-RSCP PrimaryCCPCH-RSCP OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-SetupReqgstTDD-
ExtIEs} } OPTIONAL,
  ...
}

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

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

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

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

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE
optional } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier
PRESENCE optional } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier
PRESENCE optional } |
  { ID id-RL-InformationResponseList-RL-SetupRspFDD
CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD
PRESENCE mandatory } |

```

```

    { ID id-UL-EbNoTarget          CRITICALITY ignore  TYPE UL-EbNoTarget          PRESENCE
optional    } |
    { ID id-DL-EbNoTarget          CRITICALITY ignore  TYPE DL-EbNoTarget          PRESENCE
optional    } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore  TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList1 { {RL-
InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-SetupRspFDD
        CRITICALITY ignore  TYPE RL-InformationResponseItem-RL-SetupRspFDD
        PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    sAI            SAI,
    ul-InterferenceLevel          ScaledUL-InterferenceLevel,
    dl-CodeInformation            DL-CodeInformationList-RL-SetupRspFDD,
    diversityIndication           CHOICE {
        combining                 SEQUENCE {
            rL-ID                 RL-ID
        },
        nonCombiningOrIENotPresentFirstRL SEQUENCE {
            dCH-InformationResponse-RL-SetupRspFDD
            DCH-InformationResponseList-RL-SetupRspFDD
        } OPTIONAL
    } OPTIONAL,
    sSDT-SupportIndicator          SSdT-SupportIndicator,
    maxUL-EbNo                    UL-EbNo,
    minUL-EbNo                    UL-EbNo,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp
OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp
OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNreOfDL-Codes)) OF DL-
CodeInformationItem-RL-SetupRspFDD

DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE {
    dl-ScramblingCode            DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication           CHOICE {
        combining                 SEQUENCE {
            rL-ID                 RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-SetupRspFDD
            DCH-InformationResponseList-RL-SetupRspFDD
        } OPTIONAL
    } OPTIONAL,
-- This IE is present only if the RL is not the first on in the RL Information --
    iE-Extensions                 ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

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

** NOTE: Shall this be made as an IE container? **

```

```

DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupRspFDD

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

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

** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (0+..maxNrOfFDD-Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-SetupRsp

NeighbouringFDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier    OPTIONAL,
    uARFCN                UARFCN,
    frameOffset           FrameOffset    OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power    PrimaryCPICH-Power    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (0+..maxNrOfTDD-Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-SetupRsp

NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    c-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier    OPTIONAL,
    uARFCN                UARFCN,
    frameOffset           FrameOffset    OPTIONAL,
    cellParameterID      CellParameterID,
    syncCase              SyncCase,
    timeSlot              TimeSlot    OPTIONAL
    -- This IE is present only if Sync Case =1 Case1 -- ,
    pSCH-TimeSlot        PSCH-TimeSlot    OPTIONAL
    -- This IE is present only if Sync Case PSCH PCCPCH Allocation = Case2 or Case3 -- ,
    ul-EbNo             UL-EbNo             OPTIONAL,
    dl-EbNo             DL-EbNo             OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

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

```

```

}

RadioLinkSetupResponseTDD-IES RNSAP-PROTOCOL-IES ::= {
  optional { ID id-D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE
  optional } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier
  PRESENCE optional } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier
  PRESENCE optional } |
  { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-
  RL-SetupRspTDD PRESENCE mandatory } |
  { ID id-UL-EbNoTarget CRITICALITY ignore TYPE UL-EbNo PRESENCE
  optional } |
  { ID id-DL-EbNoTarget CRITICALITY ignore TYPE DL-EbNoTarget PRESENCE
  optional } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
  PRESENCE optional },
  ...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
  rL-ID RL-ID,
  SAI SAI,
  ul-InterferenceLevel SealedUL-InterferenceLevel,
  maxUL-EbNo UL-EbNo,
  minUL-EbNo UL-EbNo,
  ul-EbNoTarget UL-EbNo OPTIONAL,
  dl-EbNoTarget DL-EbNo OPTIONAL,
  ul-CCTrCHInformation UL-CCTrCHInformationList-RL-SetupRspTDD,
  dl-CCTrCHInformation DL-CCTrCHInformationList-RL-SetupRspTDD,
  dCH-InformationResponse DCH-InformationResponseList-RL-SetupRspTDD,
  neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp
  OPTIONAL,
  neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp
  OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {RL-InformationResponse-RL-
  SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

---** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
  cCtRCH-ID CCTrCH-ID,
  ul-DPCH-Information UL-DPCH-InformationList-RL-SetupRspTDD,
  iE-Extensions ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-
  SetupRspTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

---** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationItem-RL-SetupRspTDD

---**NOTE: UL-DPCH-InformationItem-RL-SetupRspTDD and DL-DPCH-InformationItem-RL-SetupRspTDD
are currently similar. Combine them? **
UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
  dPCH-ID DPCH-ID,
  tDD-ChannelisationCode TDD-ChannelisationCode,
  burstType BurstType,
  midambleShift MidambleShift,
  timeSlot TimeSlot,
  tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tFCI-Presence TFCI-Presence,
  iE-Extensions ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-
  SetupRspTDD-ExtIEs} } OPTIONAL,

```

```

}
...
}
UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
| ---** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCHInformationItem-RL-SetupRspTDD
DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    dl-DPCH-Information      DL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions          ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}
DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
| ---** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-
InformationItem-RL-SetupRspTDD
DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID          DPCH-ID,
    tDD-ChannelisationCode      TDD-ChannelisationCode,
    burstType          BurstType,
    midambleShift      MidambleShift,
    timeSlot          TimeSlot,
    tDD-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
    repetitionPeriod      RepetitionPeriod,
    repetitionLength      RepetitionLength,
    tFCI-Presence          TFCI-Presence,
    iE-Extensions          ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}
DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-InformationResponseList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupRspTDD
DCH-InformationResponseItem-RL-SetupRspTDD ::= SEQUENCE {
    dCH-ID          DCH-ID,
    bindingID          BindingID,
    transportLayerAddress      TransportLayerAddress,
    iE-Extensions          ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}
DCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****
RadioLinkSetupFailureFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container      {{RadioLinkSetupFailureFDD-IEs}},
    protocolExtensions      ProtocolExtensionContainer {{RadioLinkSetupFailureFDD-
Extensions}}
    ...
}

```

```

RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE
  mandatoryoptional } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier
  PRESENCE mandatoryoptional } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier
  PRESENCE mandatoryoptional } |
  { ID id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
  CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-
SetupFailureFDD PRESENCE mandatory } |
  { ID id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
  CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-
SetupFailureFDD PRESENCE mandatoryoptional } |
  { ID id-UL-EbNoTarget CRITICALITY ignore TYPE UL-EbNoTarget PRESENCE
optional } |
  { ID id-MaxUL-EbNo CRITICALITY ignore TYPE UL-EbNo PRESENCE
mandatory } |
  { ID id-MinUL-EbNo CRITICALITY ignore TYPE UL-EbNo PRESENCE
mandatory } |
  { ID id-DL-EbNoTarget CRITICALITY ignore TYPE DL-EbNoTarget PRESENCE
optional } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
  PRESENCE optional },
  ...
}

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList1 {
{UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
  CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureFDD PRESENCE mandatory },
  ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
  CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-
SetupFailureFDD PRESENCE mandatory },
  ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  sAI SAI,
  ul-InterferenceLevel ScaledUL-InterferenceLevel,
  dl-CodeInformation DL-CodeInformationList-RL-SetupFailureFDD,
  diversityIndication CHOICE {
    combining SEQUENCE {
      rL-ID RL-ID
    },
    nonCombiningOrIENotPresentFirstRL SEQUENCE {
      dCH-InformationResponse-RL-SetupFailureFDD DCH-InformationResponseList-RL-
SetupFailureFDD OPTIONAL
    }
  },
  sSDT-SupportIndicator SSdT-SupportIndicator,

```



```

maxUL-EbNo          UL-EbNo,
minUL-EbNo          UL-EbNo,
neighbouringFDD-CellInformation      NeighbouringFDD-CellInformationList-RL-SetupFailureFDD
OPTIONAL,
neighbouringTDD-CellInformation      NeighbouringTDD-CellInformationList-RL-SetupFailureFDD
OPTIONAL,
ul-EbNoTarget          UL-EbNo,
maxUL-EbNo          UL-EbNo,
minUL-EbNo          UL-EbNo,
dl-EbNoTarget          DL-EbNo,
iE-Extensions      ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-
RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}


** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF DL-
CodeInformationItem-RL-SetupFailureFDD

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DL-CodeInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
dl-ScramblingCode          DL-ScramblingCode,
fDD-DL-ChannelisationCodeNumber      FDD-DL-ChannelisationCodeNumber,

** NOTE: How many alternatives are there, 2 or 3? **
diversityIndication        CHOICE {
combining          SEQUENCE {
rL-ID              RL-ID
},
nonCombiningOrIENotPresent      SEQUENCE {
dCH-InformationResponse-RL-SetupFailureFDD      DCH-InformationResponseList-RL-
SetupFailureFDD OPTIONAL
}
} OPTIONAL
This IE is present only if the RL is not the first on in the RL Information
iE-Extensions      ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
SetupFailureFDD-ExtIEs} } OPTIONAL,
...
}

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


** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupFailureFDD

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

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

NeighbouringFDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (0..maxNrOfFDD-
Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
uC-ID          C-ID,
cN-PS-DomainIdentifier      CN-PS-DomainIdentifier      OPTIONAL,
cN-CS-DomainIdentifier      CN-CS-DomainIdentifier      OPTIONAL,
uARFCN          UARFCN,
frameOffset      FrameOffset      OPTIONAL,
primaryScramblingCode      PrimaryScramblingCode,


```

```

    primaryCPICH-Power          PrimaryCPICH-Power          OPTIONAL,
    iE-Extensions               ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (0+..maxNrOfTDD-
Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID                       C-ID,
    cN-PS-DomainIdentifier      CN-PS-DomainIdentifier      OPTIONAL,
    cN-CS-DomainIdentifier      CN-CS-DomainIdentifier      OPTIONAL,
    uARFCN                      UARFCN,
    frameOffset                 FrameOffset                OPTIONAL,
    cellParameterID             CellParameterID,
    syncCase                    SyncCase,
    timeSlot                    TimeSlot                  OPTIONAL,
    -- This IE is present only if Sync Case = Case3+ --
    pSCH-TimeSlot               PSCH-TimeSlot              OPTIONAL
    -- This IE is present only if Sync Case+PCCPCH-Allocation = Case2 or Case3 -- ,
    iE-Extensions               ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

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

RadioLinkSetupFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureTDD
    PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD ::= SEQUENCE {
    rL-ID                       RL-ID,
    cause                        Cause,
    iE-Extensions               ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

```

```

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

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

RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-EbNoTarget          CRITICALITY ignore  TYPE UL-EbNo          PRESENCE
mandatory } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD  CRITICALITY ignore  TYPE RL-InformationList-RL-
AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-InformationList-RL-AdditionRqstFDD ::= RL-IE-ContainerList1 { {RL-Information-RL-
AdditionRqstFDD-IEs} }

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

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

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

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

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

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

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

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                 C-ID,
    frameOffset          FrameOffset,
    chipOffset      ChipOffset,
    diversityControlField DiversityControlField,
    primaryCCPCH-RSCP    PrimaryCCPCH-RSCP    OPTIONAL,

```

```

    iE-Extensions
ExtIEs} } OPTIONAL,
    ...
}

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

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

-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

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

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {

    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE
optional } |
    { ID id-RL-InformationResponseList-RL-AdditionRspFDD
          CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
          PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= RL-IE-ContainerList1 { {RL-
InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-AdditionRspFDD
          CRITICALITY ignore TYPE RL-InformationResponseItem-RL-AdditionRspFDD
          PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    SAI            SAI,
    ul-InterferenceLevel          ScaledUL-InterferenceLevel,
    dl-CodeInformation          DL-CodeInformationList-RL-AdditionRspFDD,

    diversityIndication          CHOICE {
        combining          SEQUENCE {
            rL-ID          RL-ID
        },
        nonCombining          SEQUENCE {
            dCH-InformationResponse-RL-AdditionRspFDD          DCH-InformationResponseList-RL-
AdditionRspFDD
        }
    }

    sSDT-SupportIndicator          SSdT-SupportIndicator,
    maxUL-EbNo          UL-EbNo,
    minUL-EbNo          UL-EbNo,
    neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-SetupRsp
OPTIONAL,
    neighbouringTDD-CellInformation          NeighbouringTDD-CellInformationList-RL-SetupRsp
OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```


** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF DL-
CodeInformationItem-RL-AdditionRspFDD

DL-CodeInformationItem-RL-AdditionRspFDD ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber    FDD-DL-ChannelisationCodeNumber,

** NOTE: How many alternatives are there, 2 or 3? **
diversityIndication          CHOICE {
    combining                  SEQUENCE {
        rL-ID                  RL-ID
    }
},
nonCombiningOrIENotPresent  SEQUENCE {
    dCH-InformationResponse-RL-AdditionRspFDD  DCH-InformationResponseList-RL-
AdditionRspFDD OPTIONAL
}
}
OPTIONAL
This IE is present only if the RL is not the first on in the RL Information,
iE-Extensions                ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
...
}

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


** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionRspFDD

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

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


** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (0±..maxNrOfFDD-Neighbours))
OF
    NeighbouringFDD-CellInformationItem-RL-AdditionRsp

NeighbouringFDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    uC-ID                      C-ID,
    cN-PS-DomainIdentifier      CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier      CN-CS-DomainIdentifier    OPTIONAL,
    uARFCN                      UARFCN,
    frameOffset                  FrameOffset              OPTIONAL,
    primaryScramblingCode        PrimaryScramblingCode,
    primaryCPICH-Power           PrimaryCPICH-Power      OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (0±..maxNrOfTDD-Neighbours))
OF
    NeighbouringTDD-CellInformationItem-RL-AdditionRsp

NeighbouringTDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    uC-ID                      C-ID,
    cN-PS-DomainIdentifier      CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier      CN-CS-DomainIdentifier    OPTIONAL,
    uARFCN                      UARFCN,
    frameOffset                  FrameOffset              OPTIONAL,
    cellParameterID              CellParameterID,


```

```

syncCase                SyncCase,
timeSlot                TimeSlot OPTIONAL,
-- This IE is present only if Sync Case = Case1 --
pSCH-TimeSlot          PSCH-TimeSlot    OPTIONAL
-- This IE is present only if Sync CasepSCH-PCCPCH Allocation = Case2 or Case3 -- ,
iE-Extensions          ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

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

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
optional }
  { ID id-RL-InformationResponse-RL-AdditionRspTDD
    CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD
    PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
  ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  sAI                SAI,
  ul-InterferenceLevel          SealedUL-InterferenceLevel,
  ul-CCTrCHInformation          UL-CCTrCHInformationList-RL-AdditionRspTDD,
  dl-CCTrCHInformation          DL-CCTrCHInformationList-RL-AdditionRspTDD,
  diversityIndication          CHOICE {
    combining                SEQUENCE {
      rL-ID                RL-ID
    },
    nonCombiningOrIENotPresent          SEQUENCE {
      dCH-InformationResponse-RL-AdditionRspTDD          DCH-InformationResponseList-RL-
AdditionRspTDDFDD-OPTIONAL
    }
  },
}, OPTIONAL,
  maxUL-EbNo                UL-EbNo,
  minUL-EbNo                UL-EbNo,
  neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-AdditionRspTDD
  OPTIONAL,
  neighbouringTDD-CellInformation          NeighbouringTDD-CellInformationList-RL-AdditionRspTDD
  OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponse-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-AdditionRspTDD

UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  cCTrCH-ID                CCTrCH-ID,

```

```

    ul-DPCH-Information          UL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions                ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

~~\*\* NOTE: Shall this be made as an IE container? \*\*~~

```

UL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationItem-RL-AdditionRspTDD

```

```

UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    burstType              BurstType,
    midambleShift          MidambleShift,
    timeSlot               TimeSlot,
offset                Offset,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod        RepetitionPeriod,
    repetitionLength        RepetitionLength,
    tFCI-Presence           TFCI-Presence,
    iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

~~\*\* NOTE: Shall this be made as an IE container? \*\*~~

```

DL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCHInformationItem-RL-AdditionRspTDD

```

```

DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID              CCTrCH-ID,
    dl-DPCH-Information    DL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions          ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

~~\*\* NOTE: Shall this be made as an IE container? \*\*~~

```

DL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-
InformationItem-RL-AdditionRspTDD

```

```

DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    burstType              BurstType,
    midambleShift          MidambleShift,
    timeSlot               TimeSlot,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod        RepetitionPeriod,
    repetitionLength        RepetitionLength,
    tFCI-Presence           TFCI-Presence,
    iE-Extensions          ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DCH-InformationResponseList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionRspTDD

```

```

DCH-InformationResponseItem-RL-AdditionRspTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,

```

```

bindingID BindingID,
transportLayerAddress TransportLayerAddress,
iE-Extensions ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

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

NeighbouringFDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (0+..maxNrOfFDD-
Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    uC-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (0+..maxNrOfTDD-
Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    uC-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    cellParameterID CellParameterID,
    syncCase SyncCase,
    timeSlot TimeSlot OPTIONAL,
    -- This IE is present only if Sync Case = Case1 --
    pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation-Sync Case = Case2 or Case3 -- ,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

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

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-
AdditionFailureFDD

```



```

    PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-
AdditionFailureFDD
    PRESENCE mandatoryoptional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
      PRESENCE optional },
    ...
  }

UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList1 {
  {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
AdditionFailureFDD
    PRESENCE mandatory },
  ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-
AdditionFailureFDD
    PRESENCE mandatory },
  ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  SAI SAI,
  ul-InterferenceLevel UL-InterferenceLevelScaledUL-InterferenceLevel,
  dl-CodeInformation DL-CodeInformationList-RL-AdditionFailureFDD,
  diversityIndication CHOICE {diversityIndication CHOICE {
    combining SEQUENCE {combining SEQUENCE {
      rL-ID RL-ID
    }
  },
  nonCombining SEQUENCE {nonCombining SEQUENCE {
    dCH-InformationResponse-RL-AdditionFailureFDD DCH-InformationResponseList-RL-
AdditionFailureFDDdCH-InformationResponse-RL-AdditionFailureFDD DCH-InformationResponseList-RL-
AdditionFailureFDD
  },
  sSDT-SupportIndicator SSdT-SupportIndicator,
  minUL-EbNo UL-EbNo,minUL-EbNo UL-EbNo,
  maxUL-EbNo UL-EbNo,
  minUL-EbNo UL-EbNo,minUL-EbNo UL-EbNo,
  neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-
AdditionFailureFDD OPTIONAL,
  neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-
AdditionFailureFDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-
RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDL-Codes)) OF DL-
CodeInformationItem-RL-AdditionFailureFDD

```

```

DL-CodeInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  fdd-DLdl-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
  diversityIndication        CHOICE {
    combining                  SEQUENCE {
      rL-ID                    RL-ID
    },
    nonCombiningOrIENotPresent SEQUENCE {
      dCH-InformationResponse-RL-AdditionFailureFDD DCH-InformationResponseList-RL-
      AdditionFailureFDD OPTIONAL
    }
  } OPTIONAL
  -- This IE is present only if the RL is not the first on in the RL Information --
  iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
  AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

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

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionFailureFDD

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

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

NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (0+..maxNrOfFDD-
Neighbours)) OF
  NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID          C-ID,
  cN-PS-DomainIdentifier  CN-PS-DomainIdentifier  OPTIONAL,
  cN-CS-DomainIdentifier  CN-CS-DomainIdentifier  OPTIONAL,
  uARFCN         UARFCN,
  frameOffset    FrameOffset  OPTIONAL,
  primaryScramblingCode  PrimaryScramblingCode,
  primaryCPICH-Power     PrimaryCPICH-Power  OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {NeighbouringFDD-
  CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (0+..maxNrOfTDD-
Neighbours)) OF
  NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID          C-ID,
  cN-PS-DomainIdentifier  CN-PS-DomainIdentifier  OPTIONAL,
  cN-CS-DomainIdentifier  CN-CS-DomainIdentifier  OPTIONAL,
  uARFCN         UARFCN,
  frameOffset    FrameOffset  OPTIONAL,
  cellParameterID  CellParameterID,
  syncCase        SyncCase,
  timeSlot        TimeSlot  OPTIONAL,
  -- This IE is present only if Sync Case = Case1 --
  pSCH-TimeSlot   PSCH-TimeSlot  OPTIONAL
  -- This IE is present only if Sync Case pSCH-PCCPCH-Allocation = Case2 or Case3 -- ,

```

```

        iE-Extensions                ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
        ...
    }

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *****

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

RadioLinkAdditionFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse CRITICALITY ignore TYPE UnsuccessfulRL-
InformationResponse PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponse ::= SEQUENCE {
    rL-ID                        RL-ID,
    cause                        Cause,
    iE-Extensions                ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK DELETION REQUEST
--
-- *****

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

RadioLinkDeletionRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationList-RL-DeletionRqst CRITICALITY ignore TYPE RL-InformationList-RL-
DeletionRqst PRESENCE mandatory },
    ...
}

RL-InformationList-RL-DeletionRqst ::= RL-IE-ContainerList1 { {RL-Information-RL-
DeletionRqst-IEs} }

RL-Information-RL-DeletionRqst-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-DeletionRqst CRITICALITY ignore TYPE RL-Information-RL-
DeletionRqst PRESENCE mandatory },
    ...
}

```

```

RL-Information-RL-DeletionRqst ::= SEQUENCE {
    rL-ID                                RL-ID,
    iE-Extensions                        ProtocolExtensionContainer { {RL-Information-RL-DeletionRqst-
ExtIEs} } OPTIONAL,
    ...
}

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

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

-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

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

RadioLinkDeletionResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CriticalityDiagnostics      CRITICALITY ignore  TYPE CriticalityDiagnostics
    PRESENCE optional  },
    ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

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

RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore  TYPE AllowedQueuingTime
    PRESENCE mandatoryoptional } |
    { ID id-UL-DPCH-Information         CRITICALITY ignore  TYPE UL-DPCH-Information
    PRESENCE optional  } |
    { ID id-DL-DPCH-Information         CRITICALITY ignore  TYPE DL-DPCH-Information
    PRESENCE optional  } |
    { ID id-DCH-ModifyList-RL-ReconfPrepFDD CRITICALITY ignore  TYPE DCH-ModifyList-RL-
ReconfPrepFDD      PRESENCE optional  } |
    { ID id-DCH-AddList-RL-ReconfPrepFDD CRITICALITY ignore  TYPE DCH-AddList-RL-
ReconfPrepFDD      PRESENCE optional  } |
    { ID id-DCH-DeleteList-RL-ReconfPrepFDD CRITICALITY ignore  TYPE DCH-DeleteList-RL-
ReconfPrepFDD      PRESENCE optional  } |
    { ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY ignore  TYPE RL-InformationList-RL-
ReconfPrepFDD      PRESENCE optionalmandatory },
    ...
}

UL-DPCH-Information ::= SEQUENCE {
    ul-ScramblingCode                  UL-ScramblingCode      OPTIONAL,
    minUL-ChannelisationCodeLength     MinUL-ChannelisationCodeLength OPTIONAL,
    maxNrOfUL-DPDCHs                   MaxNrOfUL-DPDCHs      OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 --,
    ul-PunctureLimit                    PunctureLimit        OPTIONAL,
    tFCS                                TransportFormatCombinationSetTFCS OPTIONAL,
    ul-DPCCH-SlotFormat                 UL-DPCCH-SlotFormat  OPTIONAL,

```

```

sSDT-CellIDLength          SSDT-CellID-Length          OPTIONAL,
s-FieldLength              S-FieldLength              OPTIONAL,
meanBitRate                MeanBitRate                OPTIONAL,
iE-Extensions              ProtocolExtensionContainer { {UL-DPCH-Information-ExtIEs} }
OPTIONAL,
...
}

UL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DL-DPCH-Information ::= SEQUENCE {
tFCS                       TransportFormatCombinationSetTFCS OPTIONAL,
dl-DPCH-SlotFormat         DL-DPCH-SlotFormat         OPTIONAL,
tFCI-SignallingMode        TFCI-SignallingMode        OPTIONAL,
tFCI-Presence              TFCI-Presence              OPTIONAL
-- This IE is present if Slot Format is from 12 to 16 --,
multiplexingPosition       MultiplexingPosition       OPTIONAL,
meanBitRate                MeanBitRate                OPTIONAL,
iE-Extensions              ProtocolExtensionContainer { {DL-DPCH-Information-ExtIEs} }
OPTIONAL,
...
}

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

DCH-ModifyList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-
ReconfPrepFDD-IEs} }

DCH-Modify-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-ModifyItem-RL-ReconfPrepFDD    CRITICALITY ignore TYPE DCH-ModifyItem-RL-
ReconfPrepFDD    PRESENCE mandatory },
...
}

DCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
dCH-ID                      DCH-ID,
ul-TransportformatSet       TransportFormatSet         OPTIONAL,
dl-TransportformatSet       TransportFormatSet         OPTIONAL,
allocationRetentionPriority  AllocationRetentionPriority OPTIONAL,
frameHandlingPriority        FrameHandlingPriority       OPTIONAL,
ul-FP-Mode                  UL-FP-Mode                 OPTIONAL,
toAWS                       ToAWS                      OPTIONAL,
toAWE                       ToAWE                      OPTIONAL,
iE-Extensions              ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepFDD-
ExtIEs} } OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-AddList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfPrepFDD-
IEs} }

DCH-Add-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-AddItem-RL-ReconfPrepFDD    CRITICALITY ignore TYPE DCH-AddItem-RL-
ReconfPrepFDD    PRESENCE mandatory },
...
}

DCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE {
dCH-ID                      DCH-ID,
rLC-Mode                RLC-Mode,
dCH-CombinationInd          DCH-CombinationInd        OPTIONAL,
rLC-Mode                RLC-Mode,
ul-TransportformatSet       TransportFormatSet,
dl-TransportformatSet       TransportFormatSet,
ul-BLER                     BLER,
dl-BLER                     BLER,
allocationRetentionPriority  AllocationRetentionPriority,
frameHandlingPriority        FrameHandlingPriority,
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode                  UL-FP-Mode,

```

```

toAWS                               ToAWS,
toAWE                               ToAWE,
  iE-Extensions                     ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepFDD-
ExtIEs} } OPTIONAL,
  ...
}

DCH-AddItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-DeleteList-RL-ReconfPrepFDD      ::= DCH-IE-ContainerList0 { {DCH-Delete-RL-
ReconfPrepFDD-IEs} }

DCH-Delete-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-DeleteItem-RL-ReconfPrepFDD      CRITICALITY ignore  TYPE DCH-DeleteItem-RL-
ReconfPrepFDD      PRESENCE mandatory },
  ...
}

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

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

RL-InformationList-RL-ReconfPrepFDD  ::= RL-IE-ContainerList01 { {RL-Information-RL-
ReconfPrepFDD-IEs} }

RL-Information-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-ReconfPrepFDD      CRITICALITY ignore  TYPE RL-Information-RL-
ReconfPrepFDD      PRESENCE mandatory },
  ...
}

RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
  rL-ID                               RL-ID,
  sSDT-Indication                     SSDT-Indication      OPTIONAL,
  sSDT-CellIdentity                   SSDT-CellID        OPTIONAL
  -- The IE may be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
  iE-Extensions                       ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-
ExtIEs} } OPTIONAL,
  ...
}

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

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

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

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

RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime           CRITICALITY ignore  TYPE AllowedQueuingTime
PRESENCE optional } |
  { ID id-UL-MeanBitRate               CRITICALITY ignore  TYPE MeanBitRate
optional } |
  ...
}

```

```

    { ID id-DL-MeanBitRate          CRITICALITY ignore  TYPE MeanBitRate          PRESENCE
optional    } |
    { ID id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD
          CRITICALITY ignore  TYPE UL-CCTrCH-InformationList-RL-ReconfPrepTDD
PRESENCE mandatoryoptional } |
    { ID id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD
          CRITICALITY ignore  TYPE DL-CCTrCH-InformationList-RL-ReconfPrepTDD
PRESENCE mandatoryoptional } |
    { ID id-DCH-ModifyList-RL-ReconfPrepTDD  CRITICALITY ignore  TYPE DCH-ModifyList-RL-
ReconfPrepTDD  PRESENCE mandatoryoptional } |
    { ID id-DCH-AddList-RL-ReconfPrepTDD     CRITICALITY ignore  TYPE DCH-AddList-RL-
ReconfPrepTDD  PRESENCE mandatoryoptional } |
    { ID id-DCH-DeleteList-RL-ReconfPrepTDD  CRITICALITY ignore  TYPE DCH-DeleteList-RL-
ReconfPrepTDD  PRESENCE mandatoryoptional },
    ...
}

UL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList0 { {UL-CCTrCH-
Information-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-Information-RL-ReconfPrepTDD  CRITICALITY ignore  TYPE UL-CCTrCH-Information-
RL-ReconfPrepTDD  PRESENCE mandatory },
    ...
}

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

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

DL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList0 { {DL-CCTrCH-
Information-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-Information-RL-ReconfPrepTDD  CRITICALITY ignore  TYPE DL-CCTrCH-Information-
RL-ReconfPrepTDD  PRESENCE mandatory },
    ...
}

DL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    cCtRch-ID          CCTrCH-ID,
    tFCS               TransportFormatCombinationSetTFCS          OPTIONAL,
    tFCI-Coding        TFCI-Coding          OPTIONAL,
    punctureLimit      PunctureLimit        OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-
ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DCH-ModifyList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-
ReconfPrepTDD-IEs} }

DCH-Modify-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfPrepTDD        CRITICALITY ignore  TYPE DCH-ModifyItem-RL-
ReconfPrepTDD        PRESENCE mandatory },
    ...
}

DCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID            DCH-ID,
    ul-CCTrCH-ID      CCTrCH-ID          OPTIONAL,
    dl-CCTrCH-ID      CCTrCH-ID          OPTIONAL,
    ul-TransportformatSet  TransportFormatSet  OPTIONAL,
    dl-TransportformatSet  TransportFormatSet  OPTIONAL,

```

```

allocationRetentionPriority      AllocationRetentionPriority OPTIONAL,
frameHandlingPriority            FrameHandlingPriority      OPTIONAL,
ul-FP-Mode                      UL-FP-Mode              OPTIONAL,
toAWS                           ToAWS                 OPTIONAL,
toAWE                           ToAWE                 OPTIONAL,
iE-Extensions                   ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepTDD-
ExtIEs} } OPTIONAL,
...
}

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

DCH-AddList-RL-ReconfPrepTDD      ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfPrepTDD-
IEs} }

DCH-Add-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IEs ::= {
{ ID id-DCH-AddItem-RL-ReconfPrepTDD      CRITICALITY ignore  TYPE DCH-AddItem-RL-
ReconfPrepTDD      PRESENCE mandatory },
...
}

DCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
dCH-ID                      DCH-ID,
rLC-Mode                 RLC-Mode,
ul-CCTrCH-ID                CCTrCH-ID,
dl-CCTrCH-ID                CCTrCH-ID,
dCH-CombinationInd          DCH-CombinationInd OPTIONAL,
rLC-Mode                 RLC-Mode,
ul-TransportformatSet       TransportFormatSet,
dl-TransportformatSet       TransportFormatSet,
ul-BLER                      BLER,
dl-BLER                      BLER,
allocationRetentionPriority  AllocationRetentionPriority,
frameHandlingPriority        FrameHandlingPriority,
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode                  UL-FP-Mode,
toAWS                       ToAWS,
toAWE                       ToAWE,
iE-Extensions               ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepTDD-
ExtIEs} } OPTIONAL,
...
}

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

DCH-DeleteList-RL-ReconfPrepTDD  ::= DCH-IE-ContainerList0 { {DCH-Delete-RL-
ReconfPrepTDD-IEs} }

DCH-Delete-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IEs ::= {
{ ID id-DCH-DeleteItem-RL-ReconfPrepTDD  CRITICALITY ignore  TYPE DCH-DeleteItem-RL-
ReconfPrepTDD      PRESENCE mandatory },
...
}

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

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

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

-- *****
--
-- RADIO LINK RECONFIGURATION READY FDD
--
-- *****

```



```

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

```

```

RadioLinkReconfigurationReadyFDD-IES RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseList-RL-ReconfReadyFDD
        CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfReadyFDD
        PRESENCE optional } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics
        PRESENCE optional },
    ...
}

```

```

RL-InformationResponseList-RL-ReconfReadyFDD ::= RL-IE-ContainerList01 { {RL-
InformationResponse-RL-ReconfReadyFDD-IES} }

```

```

RL-InformationResponse-RL-ReconfReadyFDD-IES RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfReadyFDD
        CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfReadyFDD
        PRESENCE mandatory },
    ...
}

```

```

RL-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    max-UL-EbNo          UL-EbNo OPTIONAL,
    min-UL-EbNo          UL-EbNo OPTIONAL,
    dl-CodeInformationList DL-CodeInformationList-RL-ReconfReadyFDD OPTIONAL,
    dCHsToBeAdded        DCH-AddList-RL-ReconfReadyFDD OPTIONAL,
    dCHsToBeModified     DCH-ModifyList-RL-ReconfReadyFDD OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
ReconfReadyFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DL-CodeInformationList-RL-ReconfReadyFDD ::= SEQUENCE (SIZE (0..maxNrOfDL-Codes)) OF
SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    iE-Extensions              ProtocolExtensionContainer { { DL-CodeInformationList-
RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,
    ...
}

```

```

DL-CodeInformationList-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DCH-AddList-RL-ReconfReadyFDD ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfReadyFDD-
IEs} }

```

```

DCH-Add-RL-ReconfReadyFDD-IES RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfReadyFDD          CRITICALITY ignore TYPE DCH-AddItem-RL-
ReconfReadyFDD          PRESENCE mandatory },
    ...
}

```

```

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

```

```

DCH-AddItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

DCH-ModifyList-RL-ReconfReadyFDD ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-
ReconfReadyFDD-IEs} }

DCH-Modify-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem-RL-ReconfReadyFDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-
ReconfReadyFDD PRESENCE mandatory },
  ...
}

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

DCH-ModifyItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION READY TDD
--
-- *****

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

RadioLinkReconfigurationReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponse-RL-ReconfReadyTDD
PRESENCE optional } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
  ...
}

RL-InformationResponse-RL-ReconfReadyTDD ::= SEQUENCE {
  rL-ID RL-ID,
  max-UL-EbNo UL-EbNo OPTIONAL,
  min-UL-EbNo UL-EbNo OPTIONAL,
  ul-CCTrCH-Information UL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
  dl-CCTrCH-Information DL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
  dCHsToBeAdded DCH-AddList-RL-ReconfReadyTDD OPTIONAL,
  dCHsToBeModified DCH-ModifyList-RL-ReconfReadyTDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {RL-InformationResponse-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= CCTrCH-IE-ContainerList0 { {UL-CCTrCH-
InformationList-RL-ReconfReadyTDD-IEs} }

UL-CCTrCH-InformationList-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CCTrCH-ID CRITICALITY ignore TYPE CCTrCH-ID PRESENCE
mandatory } |
  { ID id-UL-DPCH-InformationList-RL-ReconfReadyTDD
CRITICALITY ignore TYPE UL-DPCH-InformationList-RL-ReconfReadyTDD
PRESENCE mandatory },
  ...
}

```

```

}

UL-DPCH-InformationList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType              BurstType OPTIONAL,
    midambleShift          MidambleShift OPTIONAL,
    timeSlot               TimeSlot OPTIONAL,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    repetitionPeriod       RepetitionPeriod OPTIONAL,
    repetitionLength       RepetitionLength OPTIONAL,
    tFCI-Presence          TFCI-Presence OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationList-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= CCTrCH-IE-ContainerList0 { {DL-CCTrCH-
InformationList-RL-ReconfReadyTDD-IEs} }

DL-CCTrCH-InformationList-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID                CRITICALITY ignore TYPE CCTrCH-ID                PRESENCE
mandatory } |
    { ID id-DL-DPCH-InformationList-RL-ReconfReadyTDD
CRITICALITY ignore TYPE DL-DPCH-InformationList-RL-ReconfReadyTDD
PRESENCE mandatory },
    ...
}

DL-DPCH-InformationList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType              BurstType OPTIONAL,
    midambleShift          MidambleShift OPTIONAL,
    timeSlot               TimeSlot OPTIONAL,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    repetitionPeriod       RepetitionPeriod OPTIONAL,
    repetitionLength       RepetitionLength OPTIONAL,
    tFCI-Presence          TFCI-Presence OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {DL-DPCH-InformationList-RL-
ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfReadyTDD ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfReadyTDD-
IEs} }

DCH-Add-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfReadyTDD CRITICALITY ignore TYPE DCH-AddItem-RL-
ReconfReadyTDD PRESENCE mandatory },
    ...
}

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

DCH-AddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfReadyTDD ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-
ReconfReadyTDD-IEs} }

```

```

DCH-Modify-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem-RL-ReconfReadyTDD
    PRESENCE mandatory },
  ...
}

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

DCH-ModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

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

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

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

-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

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

RadioLinkReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE
mandatory } |
  { ID id-RL-ReconfigurationFailureList-RL-ReconfFail
CRITICALITY ignore TYPE RL-ReconfigurationFailureList-RL-ReconfFail
PRESENCE optionalmandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
  ...
}

RL-ReconfigurationFailureList-RL-ReconfFail ::= RL-IE-ContainerList01 { {RL-
ReconfigurationFailure-RL-ReconfFail-IEs} }

RL-ReconfigurationFailure-RL-ReconfFail-IEs RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-RL-ReconfigurationFailure-RL-ReconfFail CRITICALITY ignore TYPE RL-
ReconfigurationFailure-RL-ReconfFail PRESENCE mandatory },
    ...
}

RL-ReconfigurationFailure-RL-ReconfFail ::= SEQUENCE {
    rL-ID RL-ID,
    cause Cause,
    iE-Extensions ProtocolExtensionContainer { {RL-ReconfigurationFailure-RL-
ReconfFail-ExtIEs} } OPTIONAL,
    ...
}

RL-ReconfigurationFailure-RL-ReconfFail-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

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

RadioLinkReconfigurationCancel-IEs RNSAP-PROTOCOL-IES ::= {
    ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

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

RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime CRITICALITY ignore TYPE AllowedQueuingTime
PRESENCE mandatoryoptional } |
    { ID id-UL-DPCH-Information CRITICALITY ignore TYPE UL-DPCH-Information-RL-
ReconfRqstFDD PRESENCE optional } |
    { ID id-DL-DPCH-Information CRITICALITY ignore TYPE DL-DPCH-Information-RL-
ReconfRqstFDD PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-ModifyList-RL-
ReconfRqstFDD PRESENCE mandatoryoptional } |
    { ID id-DCH-AddList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-AddList-RL-
ReconfRqstFDD PRESENCE mandatoryoptional } |
    { ID id-DCH-DeleteList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-DeleteList-RL-
ReconfRqstFDD PRESENCE mandatoryoptional },
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS TransportFormatCombinationSetTFCS OPTIONAL,
    meanBitRate MeanBitRate OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {UL-DPCH-Information-RL-
ReconfRqstFDD-ExtIEs} } OPTIONAL,

```

```

}
...
UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
...
DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
  tFCS TransportFormatCombinationSet tFCS OPTIONAL,
  tFCI-SignallingMode TFCI-SignallingMode OPTIONAL,
  meanBitRate MeanBitRate OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {DL-DPCH-Information-RL-
ReconfRqstFDD-ExtIEs} } OPTIONAL,
  ...
}
DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
...
DCH-ModifyList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-
ReconfRqstFDD-IEs} }

DCH-Modify-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-
ReconfRqstFDD PRESENCE mandatory },
  ...
}

DCH-ModifyItem-RL-ReconfRqstFDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  ul-TransportformatSet TransportFormatSet OPTIONAL,
  dl-TransportformatSet TransportFormatSet OPTIONAL,
  allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
  frameHandlingPriority FrameHandlingPriority OPTIONAL,
  ul-FP-Mode UL-FP-Mode OPTIONAL,
  toAWS ToAWS OPTIONAL,
  toAWE ToAWE OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstFDD-
ExtIEs} } OPTIONAL,
  ...
}

DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
...
DCH-AddList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfRqstFDD-
IEs} }

DCH-Add-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-AddItem-RL-
ReconfRqstFDD PRESENCE mandatory },
  ...
}

DCH-AddItem-RL-ReconfRqstFDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  rLC-Mode RLC-Mode,
  dCH-CombinationInd DCH-CombinationInd OPTIONAL,
  rLC-Mode RLC-Mode,
  ul-TransportformatSet TransportFormatSet,
  dl-TransportformatSet TransportFormatSet,
  allocationRetentionPriority AllocationRetentionPriority,
  frameHandlingPriority FrameHandlingPriority,
  payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
  ul-FP-Mode UL-FP-Mode,
  toAWS ToAWS,
  toAWE ToAWE,
  iE-Extensions ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstFDD-
ExtIEs} } OPTIONAL,
  ...
}

DCH-AddItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
...

```

```

DCH-DeleteList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList0 { {DCH-Delete-RL-
ReconfRqstFDD-IEs} }

DCH-Delete-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-DeleteItem-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-DeleteItem-RL-
ReconfRqstFDD PRESENCE mandatory },
  ...
}

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

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

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

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

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

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime CRITICALITY ignore TYPE AllowedQueuingTime
PRESENCE optional } |
  { ID id-UL-MeanBitRate CRITICALITY ignore TYPE MeanBitRate PRESENCE
optional } |
  { ID id-DL-MeanBitRate CRITICALITY ignore TYPE MeanBitRate PRESENCE
optional } |
  { ID id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD
CRITICALITY ignore TYPE UL-CCTrCH-InformationList-RL-ReconfRqstTDD
PRESENCE mandatoryoptional } |
  { ID id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD
CRITICALITY ignore TYPE DL-CCTrCH-InformationList-RL-ReconfRqstTDD
PRESENCE mandatoryoptional } |
  { ID id-DCH-ModifyList-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-ModifyList-RL-
ReconfRqstTDD PRESENCE mandatoryoptional } |
  { ID id-DCH-AddList-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-AddList-RL-
ReconfRqstTDD PRESENCE mandatoryoptional } |
  { ID id-DCH-DeleteList-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-DeleteList-RL-
ReconfRqstTDD PRESENCE mandatoryoptional },
  ...
}

UL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList0 { {UL-CCTrCH-
Information-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-Information-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-Information-RL-ReconfRqstTDD CRITICALITY ignore TYPE UL-CCTrCH-Information-
RL-ReconfRqstTDD PRESENCE mandatory },
  ...
}

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

UL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
DL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList0 { {DL-CCTrCH-
Information-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-Information-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-Information-RL-ReconfRqstTDD CRITICALITY ignore TYPE DL-CCTrCH-Information-
RL-ReconfRqstTDD PRESENCE mandatory },
  ...
}

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

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

DCH-ModifyList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-
ReconfRqstTDD-IEs} }

DCH-Modify-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-
ReconfRqstTDD PRESENCE mandatory },
  ...
}

DCH-ModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
  dCH-ID          DCH-ID,
  ul-CCTrCH-ID   CCTrCH-ID OPTIONAL,
  dl-CCTrCH-ID   CCTrCH-ID OPTIONAL,
  ul-TransportformatSet TransportFormatSet OPTIONAL,
  dl-TransportformatSet TransportFormatSet OPTIONAL,
  allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
  frameHandlingPriority FrameHandlingPriority OPTIONAL,
  ul-FP-Mode     UL-FP-Mode OPTIONAL,
  toAWS          ToAWS OPTIONAL,
  toAWE          ToAWE OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstTDD-
ExtIEs} } OPTIONAL,
  ...
}

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

DCH-AddList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfRqstTDD-
IEs} }

DCH-Add-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-AddItem-RL-
ReconfRqstTDD PRESENCE mandatory },
  ...
}

DCH-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
  dCH-ID          DCH-ID,
  rLC-Mode        RLC-Mode,
  ul-CCTrCH-ID   CCTrCH-ID,
  dl-CCTrCH-ID   CCTrCH-ID,
  dCH-CombinationInd DCH-CombinationInd OPTIONAL,
  ul-TransportformatSet TransportFormatSet,
  dl-TransportformatSet TransportFormatSet,
  allocationRetentionPriority AllocationRetentionPriority,
  frameHandlingPriority FrameHandlingPriority,
  ul-FP-Mode     UL-FP-Mode,
  toAWS          ToAWS,
  toAWE          ToAWE,
  iE-Extensions ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstTDD-
ExtIEs} } OPTIONAL,
  ...
}

```



```

}

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

DCH-DeleteList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList0 { {DCH-Delete-RL-
ReconfRqstTDD-IEs} }

DCH-Delete-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-DeleteItem-RL-ReconfRqstTDD      CRITICALITY ignore  TYPE DCH-DeleteItem-RL-
ReconfRqstTDD      PRESENCE mandatory },
    ...
}

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

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

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

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE-FDD
--
-- *****

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

RadioLinkReconfigurationResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseList-RL-ReconfRsp      CRITICALITY ignore  TYPE RL-
InformationResponseList-RL-ReconfRsp      PRESENCE optionalmandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-ReconfRsp ::= RL-IE-ContainerList1 { {RL-InformationResponse-RL-
ReconfRsp-IEs} }

RL-InformationResponse-RL-ReconfRsp-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfRsp      CRITICALITY ignore  TYPE RL-
InformationResponseItem-RL-ReconfRsp      PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
    rL-ID          RL-ID,
    max-UL-EbNo    UL-EbNo          OPTIONAL,
    min-UL-EbNo    UL-EbNo          OPTIONAL,
    dCHsToBeAdded  DCH-AddList-RL-ReconfRsp          OPTIONAL,
    dCHsToBeModified DCH-ModifyList-RL-ReconfRsp          OPTIONAL,
    iE-Extensions  ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
ReconfRsp-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfRsp ::= DCH-IE-ContainerList0 { {DCH-Add-RL-ReconfRsp-IEs} }

```

```

DCH-Add-RL-ReconfRsp-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem-RL-ReconfRsp CRITICALITY ignore TYPE DCH-AddItem-RL-ReconfRsp
    PRESENCE mandatory },
  ...
}

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

DCH-AddItem-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-ModifyList-RL-ReconfRsp ::= DCH-IE-ContainerList0 { {DCH-Modify-RL-ReconfRsp-IEs} }

DCH-Modify-RL-ReconfRsp-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem-RL-ReconfRsp CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfRsp
    PRESENCE mandatory },
  ...
}

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

DCH-ModifyItem-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

-----
-- RADIO LINK RECONFIGURATION RESPONSE TDD
-----

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

RadioLinkReconfigurationResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
  ...
}

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

-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

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

```

```

}
...
RadioLinkFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-FailureInd      CRITICALITY ignore  TYPE RL-InformationList-RL-
FailureInd      PRESENCE mandatory  },
  ...
}
| RL-InformationList-RL-FailureInd      ::= RL-IE-ContainerList_1 { {RL-Information-RL-
FailureInd-IEs} }

RL-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-FailureInd      CRITICALITY ignore  TYPE RL-Information-RL-
FailureInd      PRESENCE mandatory  },
  ...
}

RL-Information-RL-FailureInd ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions  ProtocolExtensionContainer { {RL-Information-RL-FailureInd-
ExtIEs} } OPTIONAL,
  ...
}

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

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

-- *****
--
-- RADIO LINK RESTORE INDICATION
--
-- *****

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

RadioLinkRestoreIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-RestoreInd      CRITICALITY ignore  TYPE RL-InformationList-RL-
RestoreInd      PRESENCE mandatory  },
  ...
}
| RL-InformationList-RL-RestoreInd      ::= RL-IE-ContainerList_1 { {RL-Information-RL-
RestoreInd-IEs} }

RL-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-RestoreInd      CRITICALITY ignore  TYPE RL-Information-RL-
RestoreInd      PRESENCE mandatory  },
  ...
}

RL-Information-RL-RestoreInd ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions  ProtocolExtensionContainer { {RL-Information-RL-RestoreInd-
ExtIEs} } OPTIONAL,
  ...
}

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

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

```

```

-- *****
--
-- DOWNLINK POWER CONTROL REQUEST
--
-- *****

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

DL-PowerControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-ProcedureScope-DL-PC-Rqst          CRITICALITY ignore  TYPE ProcedureScope-DL-PC-Rqst
    PRESENCE mandatory },
    ...
}

ProcedureScope-DL-PC-Rqst ::= CHOICE {
    allRLs                DL-Power,
    individualRLs         DL-ReferencePowerInformationList-DL-PC-Rqst,
    ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= RL-IE-ContainerList1 { DL-
ReferencePowerInformation-DL-PC-Rqst-IEs }

DL-ReferencePowerInformation-DL-PC-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformation-DL-PC-Rqst CRITICALITY ignore  TYPE DL-
ReferencePowerInformation-DL-PC-Rqst  PRESENCE mandatory },
    ...
}

DL-ReferencePowerInformation-DL-PC-Rqst ::= SEQUENCE {
    rL-ID                RL-ID,
    dl-ReferencePower    DL-Power,
    iE-Extensions       ProtocolExtensionContainer { {DL-ReferencePowerInformation-DL-
PC-Rqst-ExtIEs} } OPTIONAL,
    ...
}

DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-PowerControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST FDD
--
-- *****

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

PhysicalChannelReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-PhyChReconfRqstFDD  CRITICALITY ignore  TYPE RL-Information-
PhyChReconfRqstFDD  PRESENCE mandatory },
    ...
}

RL-Information-PhyChReconfRqstFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    dl-CodeInformations  DL-CodeInformationList-PhyChReconfRqstFDD,
    iE-Extensions       ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstFDD-
ExtIEs} } OPTIONAL,
    ...
}

```

```

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

DL-CodeInformationList-PhyChReconfRqstFDD ::= DL-Code-IE-ContainerList1 { {DL-CodeInformation-
PhyChReconfRqstFDD-IEs} }

DL-CodeInformation-PhyChReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CodeInformation-PhyChReconfRqstFDD CRITICALITY ignore TYPE DL-CodeInformation-
PhyChReconfRqstFDD PRESENCE mandatory },
    ...
}

DL-CodeInformation-PhyChReconfRqstFDD ::= SEQUENCE {
    dl-scramblingCode DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    iE-Extensions ProtocolExtensionContainer { {DL-CodeInformation-
PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CodeInformation-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****

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

PhysicalChannelReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-PhyChReconfRqstTDD CRITICALITY ignore TYPE RL-Information-
PhyChReconfRqstTDD PRESENCE mandatory },
    ...
}

RL-Information-PhyChReconfRqstTDD ::= SEQUENCE {
    rL-ID RL-ID,
    ul-CCTrCH-Information UL-CCTrCH-InformationList-PhyChReconfRqstTDD,
    dl-CCTrCH-Information DL-CCTrCH-InformationList-PhyChReconfRqstTDD,
    iE-Extensions ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstTDD-
ExtIEs} } OPTIONAL,
    ...
}

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

UL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= CCTrCH-IE-ContainerList1 { {UL-CCTrCH-
InformationList-PhyChReconfRqstTDD-IEs} }

UL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID CRITICALITY ignore TYPE CCTrCH-ID PRESENCE
mandatory } |
    { ID id-UL-DPCH-InformationList-PhyChReconfRqstTDD
CRITICALITY ignore TYPE UL-DPCH-InformationList-PhyChReconfRqstTDD
PRESENCE mandatory },
    ...
}

-- List items have same criticality as parent
UL-DPCH-InformationList-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID DPCH-ID,

```

```

tDD-ChannelisationCode          TDD-ChannelisationCode          OPTIONAL,
burstType                        BurstType                        OPTIONAL,
midambleShift                    MidambleShift                    OPTIONAL,
timeSlot                          TimeSlot                          OPTIONAL,
tDD-PhysicalChannelOffset        TDD-PhysicalChannelOffset        OPTIONAL,
repetitionPeriod                  RepetitionPeriod                  OPTIONAL,
repetitionLength                  RepetitionLength                  OPTIONAL,
tFCI-Presence                     TFCI-Presence                     OPTIONAL,
iE-Extensions                     ProtocolExtensionContainer { {UL-DPCH-InformationList-
PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= CCTrCH-IE-ContainerList1 { {DL-CCTrCH-
InformationList-PhyChReconfRqstTDD-IEs} }

DL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID                CRITICALITY ignore TYPE CCTrCH-ID                PRESENCE
mandatory } |
    { ID id-DL-DPCH-InformationList-PhyChReconfRqstTDD
CRITICALITY ignore TYPE DL-DPCH-InformationList-PhyChReconfRqstTDD
PRESENCE mandatory },
    ...
}

-- List items have same criticality as parent
DL-DPCH-InformationList-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID                          DPCH-ID,
    tDD-ChannelisationCode          TDD-ChannelisationCode          OPTIONAL,
    burstType                        BurstType                        OPTIONAL,
    midambleShift                    MidambleShift                    OPTIONAL,
    timeSlot                          TimeSlot                          OPTIONAL,
    tDD-PhysicalChannelOffset        TDD-PhysicalChannelOffset        OPTIONAL,
    repetitionPeriod                  RepetitionPeriod                  OPTIONAL,
    repetitionLength                  RepetitionLength                  OPTIONAL,
    tFCI-Presence                     TFCI-Presence                     OPTIONAL,
    iE-Extensions                     ProtocolExtensionContainer { {DL-DPCH-InformationList-
PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION COMMAND
--
-- *****

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

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

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

```

```

}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION FAILURE
--
-- *****

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

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

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

-- *****
--
-- UPLINK SIGNALLING TRANSFER INDICATION
--
-- *****

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

UplinkSignallingTransferIndication-IEs RNSAP-PROTOCOL-IES ::= {
    mandatory { ID id-UC-ID                CRITICALITY ignore TYPE UC-ID                PRESENCE
    { ID id-SAI                            CRITICALITY ignore TYPE SAI                PRESENCE mandatory
    { ID id-C-RNTI                          CRITICALITY ignore TYPE C-RNTI                PRESENCE
    mandatory } |
    { ID id-S-RNTI                          CRITICALITY ignore TYPE S-RNTI                PRESENCE
    mandatory } |
    { ID id-D-RNTI                          CRITICALITY ignore TYPE D-RNTI                PRESENCE
    optional } |
    { ID id-L3-Information                  CRITICALITY ignore TYPE L3-Information        PRESENCE
    mandatory } |
    { ID id-CN-PS-DomainIdentifier          CRITICALITY ignore TYPE CN-PS-DomainIdentifier
    PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier          CRITICALITY ignore TYPE CN-CS-DomainIdentifier
    PRESENCE optional } |
    { ID id-URA-ID                        CRITICALITY ignore TYPE URA-ID                PRESENCE
    mandatory } |
    { ID id-MultipleURAsIndicator           CRITICALITY ignore TYPE MultipleURAsIndicator
    PRESENCE mandatory } |
    { ID id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind
    CRITICALITY ignore TYPE RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind
    PRESENCE mandatoryoptional } ,
    ...
}

-- All RNC-IDs share same criticality!
RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind ::= SEQUENCE (SIZE (0+..maxRNCinURA)) OF
SEQUENCE {
    rNC-ID                            RNC-ID,
    iE-Extensions                      ProtocolExtensionContainer { {RNCsWithCellsInTheAccessedURA-
    List-UL-ST-Ind-ExtIEs} } OPTIONAL,
    ...
}

```

```

RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- DOWNLINK SIGNALLING TRANSFER REQUEST
--
-- *****

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

DownlinkSignallingTransferRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-C-ID                CRITICALITY ignore TYPE C-ID                PRESENCE
mandatory } |
    { ID id-D-RNTI              CRITICALITY ignore TYPE D-RNTI              PRESENCE
mandatory } |
    { ID id-L3-Information       CRITICALITY ignore TYPE L3-Information       PRESENCE
mandatory } |
    { ID id-D-RNTI-ReleaseIndication CRITICALITY ignore TYPE D-RNTI-ReleaseIndication
PRESENCE mandatory },
    ...
}

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

-- *****
--
-- RELOCATION COMMIT
--
-- *****

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

RelocationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI              CRITICALITY ignore TYPE D-RNTI              PRESENCE
mandatoryoptional } |
    { ID id-RANAP-RelocationInformation CRITICALITY ignore TYPE RANAP-RelocationInformation
PRESENCE mandatoryoptional },
    ...
}

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

-- *****
--
-- PAGING REQUEST
--
-- *****

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

PagingRequest-IEs RNSAP-PROTOCOL-IES ::= {

```



```

    { ID id-PagingArea-PagingRqst          CRITICALITY ignore  TYPE PagingArea-PagingRqst
      PRESENCE mandatory } |
    { ID id-SRNC-ID                        CRITICALITY ignore  TYPE SRNC-ID          PRESENCE
      mandatory } |
    { ID id-S-RNTI                         CRITICALITY ignore  TYPE S-RNTI          PRESENCE
      mandatory } |
    { ID id-DRX-Parameter                  CRITICALITY ignore  TYPE DRX-Parameter  PRESENCE
      mandatory },
    ...
  }

PagingArea-PagingRqst ::= CHOICE {
  uRA          URA-ID,
  cell        C-ID,
  ...
}

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

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****

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

DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore  TYPE MeasurementID          PRESENCE
    mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY ignore  TYPE
    DedicatedMeasurementObjectType-DM-Rqst PRESENCE mandatory } |
  { ID id-DedicatedMeasurementType          CRITICALITY ignore  TYPE DedicatedMeasurementType
    PRESENCE mandatory } |
  { ID id-MeasurementCharacteristics        CRITICALITY ignore  TYPE MeasurementCharacteristics
    PRESENCE mandatory } |
  { ID id-ReportCharacteristics            CRITICALITY ignore  TYPE ReportCharacteristics
    PRESENCE mandatory },
  ...
}

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
  rLs          RL-InformationList-DM-Rqst,
  ...
}

RL-InformationList-DM-Rqst ::= RL-IE-ContainerList1 { {RL-Information-DM-Rqst-IEs}

RL-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rqst          CRITICALITY ignore  TYPE RL-InformationItem-DM-Rqst
    PRESENCE mandatory },
  ...
}

RL-InformationItem-DM-Rqst ::= SEQUENCE {
  rL-ID          RL-ID,
  dPCH-ID        DPCH-ID          OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {RL-InformationItem-DM-Rqst-ExtIEs}
} OPTIONAL,
  ...
}

RL-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

```

```

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

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

DedicatedMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore  TYPE MeasurementID          PRESENCE
    mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rspns CRITICALITY ignore  TYPE
    DedicatedMeasurementObjectType-DM-Rspns PRESENCE mandatory } |
    { ID id-CFN                    CRITICALITY ignore  TYPE CFN                    PRESENCE
    mandatoryoptional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore  TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

DedicatedMeasurementObjectType-DM-Rspns ::= CHOICE {
    rLs                RL-InformationList-DM-Rspns,
    allRL              AllRL-Information-DM-Rspns,
    ...
}

RL-InformationList-DM-Rspns ::= RL-IE-ContainerList1 { {RL-Information-DM-Rspns-IEs}

RL-Information-DM-Rspns-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rspns CRITICALITY ignore  TYPE RL-InformationItem-DM-Rspns
    PRESENCE mandatory },
    ...
}

RL-InformationItem-DM-Rspns ::= SEQUENCE {
    rL-ID              RL-ID,
    dPCH-ID            DPCH-ID                OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    iE-Extensions      ProtocolExtensionContainer { {RL-InformationItem-DM-Rspns-
    ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllRL-Information-DM-Rspns ::= SEQUENCE {
    dedicatedMeasurementValue DedicatedMeasurementValue,
    iE-Extensions            ProtocolExtensionContainer { {AllRL-Information-DM-Rspns-ExtIEs}
} OPTIONAL,
    ...
}

AllRL-Information-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- DEDICATED MEASUREMENT INITIATION FAILURE
--
-- *****

DedicatedMeasurementInitiationFailure ::= SEQUENCE {

```

```

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

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

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

-- *****
--
-- DEDICATED MEASUREMENT REPORT
--
-- *****

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

DedicatedMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID                CRITICALITY ignore TYPE MeasurementID                PRESENCE
  mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rprt CRITICALITY ignore TYPE
  DedicatedMeasurementObjectType-DM-Rprt PRESENCE mandatory } |
  { ID id-CFN                          CRITICALITY ignore TYPE CFN                    PRESENCE optional },
  ...
}

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
  rLs                            RL-InformationList-DM-Rprt,
  allRL                            AllRL-Information-DM-Rprt,
  ...
}

| RL-InformationList-DM-Rprt                ::= RL-IE-ContainerList1 { {RL-Information-DM-Rprt-IEs}
}

RL-Information-DM-Rprt-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rprt        CRITICALITY ignore TYPE RL-InformationItem-DM-Rprt
  PRESENCE mandatory },
  ...
}

RL-InformationItem-DM-Rprt ::= SEQUENCE {
  rL-ID                            RL-ID,
  dPCH-ID                            DPCH-ID                OPTIONAL,
  dedicatedMeasurementValue          DedicatedMeasurementValue,
  iE-Extensions                      ProtocolExtensionContainer { {RL-InformationItem-DM-Rprt-ExtIEs}
} OPTIONAL,
  ...
}

RL-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

AllRL-Information-DM-Rprt ::= SEQUENCE {
  dedicatedMeasurementValue          DedicatedMeasurementValue,
  iE-Extensions                      ProtocolExtensionContainer { {AllRL-Information-DM-Rprt-ExtIEs}
} OPTIONAL,
  ...
}

```

```

AllRL-Information-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

-- *****
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
--
-- *****

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

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

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

-- *****
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
-- *****

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

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

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

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST
--
-- *****

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

CommonTransportChannelResourcesReleaseRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI                CRITICALITY ignore  TYPE D-RNTI                PRESENCE
mandatory  } |
  { ID id-C-RNTI                CRITICALITY ignore  TYPE C-RNTI                PRESENCE
optional   },
  ...
}

```

```

}

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

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES REQUEST
--
-- *****

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

CommonTransportChannelResourcesRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE
  mandatory } |
  { ID id-TransportBearerRequestIndicator CRITICALITY ignore TYPE
  TransportBearerRequestIndicator PRESENCE mandatory } |
  { ID id-TransportBearerID CRITICALITY ignore TYPE TransportBearerID
  PRESENCE mandatory },
  ...
}

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

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE FDD
--
-- *****

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

CommonTransportChannelResourcesResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE
  mandatory } |
  { ID id-FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspFDD CRITICALITY ignore TYPE FACH-
  InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspFDD PRESENCE mandatory } |
  { ID id-FACH-InfoForOptionals-CCPCH-CTCH-ResourceRspFDD CRITICALITY ignore TYPE FACH-
  InfoForOptionals-CCPCH-CTCH-ResourceRspFDD PRESENCE optional } |
  { ID id-TransportLayerAddress CRITICALITY ignore TYPE TransportLayerAddress
  PRESENCE optional } |
  { ID id-BindingID          CRITICALITY ignore TYPE BindingID          PRESENCE
  optional } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
  PRESENCE optional },
  ...
}

FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspFDD ::= SEQUENCE {
  priorityIndicatorAndInitialWindowSizes PriorityIndicatorAndInitialWindowSizeList-CTCH-
  ResourceRspFDD,
  IE-Extensions          ProtocolExtensionContainer { {FACH-InfoForS-CCPCH-
  CoupledToPRACH-CTCH-ResourceRspFDD-ExtIEs} } OPTIONAL,
  ...
}

FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

PriorityIndicatorAndInitialWindowSizeList-CTCH-ResourceRspFDD ::= SEQUENCE (SIZE (1..16)) OF
SEQUENCE {

```

```

    fACH-PriorityIndicator          FACH-PriorityIndicator,
    mAC-c-SDU-Lengths              MAC-c-SDU-LengthList-CTCH-ResourceRspFDD,
    fACH-InitialWindowSize         FACH-InitialWindowSize,
    iE-Extensions                  ProtocolExtensionContainer {
{PriorityIndicatorAndInitialWindowSizeList-CTCH-ResourceRspFDD-ExtIEs} } OPTIONAL,
    ...
}

PriorityIndicatorAndInitialWindowSizeList-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MAC-c-SDU-LengthList-CTCH-ResourceRspFDD ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
SEQUENCE {
    mAC-c-SDU-Length              MAC-c-SDU-Length,
    iE-Extensions                 ProtocolExtensionContainer { {MAC-c-SDU-LengthList-CTCH-
ResourceRspFDD-ExtIEs} } OPTIONAL,
    ...
}

MAC-c-SDU-LengthList-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-InfoForOptionals-CCPCH-CTCH-ResourceRspFDD ::= SEQUENCE {
    fDD-S-CCPCH-Offset            FDD-S-CCPCH-Offset,
    dl-ScramblingCode             DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    dl-TFCS                       TransportFormatCombinationSetTFCS,
    secondaryCCPCHs-SlotFormat    SecondaryCCPCH-SlotFormatList,
    pilotBitsUsedIndicator        PilotBitsUsedIndicator,
    multiplexingPosition          MultiplexingPosition,
    sTTDSDT-Indicator            STTSDT-Indicator,
    priorityIndicatorAndInitialWindowSizeList PriorityIndicatorAndInitialWindowSizeList-option-
CTCH-ResourceRspFDD,
    fACH-DataFrameSize            FACH-DataFrameSize,
    fACH-InitialWindowSize        FACH-InitialWindowSize,
    iE-Extensions                 ProtocolExtensionContainer { {FACH-InfoForOptionals-CCPCH-CTCH-
ResourceRspFDD-ExtIEs} } OPTIONAL,
    ...
}

FACH-InfoForOptionals-CCPCH-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PriorityIndicatorAndInitialWindowSizeList-option-CTCH-ResourceRspFDD ::= SEQUENCE (SIZE (1..16)) OF
SEQUENCE {
    fACH-PriorityIndicator          FACH-PriorityIndicator,
    mAC-c-SDU-Lengths              MAC-c-SDU-LengthList-option-CTCH-ResourceRspFDD,
    fACH-InitialWindowSize         FACH-InitialWindowSize,
    iE-Extensions                  ProtocolExtensionContainer {
{PriorityIndicatorAndInitialWindowSizeList-option-CTCH-ResourceRspFDD-ExtIEs} } OPTIONAL,
    ...
}

PriorityIndicatorAndInitialWindowSizeList-option-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION
::= {
    ...
}

MAC-c-SDU-LengthList-option-CTCH-ResourceRspFDD ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
SEQUENCE {
    mAC-c-SDU-Length              MAC-c-SDU-Length,
    iE-Extensions                 ProtocolExtensionContainer { {MAC-c-SDU-LengthList-option-
CTCH-ResourceRspFDD-ExtIEs} } OPTIONAL,
    ...
}

MAC-c-SDU-LengthList-option-CTCH-ResourceRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCCPCH-List ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF
SEQUENCE {
    tDD-ChannelisationCode         TDD-ChannelisationCode,
    timeSlot                       TimeSlot,
    burstType                       BurstType,
    midambleShift                  MidambleShift,

```

```

offset Offset,
repetitionPeriod RepetitionPeriod,
repetitionLength RepetitionLength,
iE-Extensions ProtocolExtensionContainer { {SecondaryCCPCH-List-ExtIEs} }
OPTIONAL,
...
}

SecondaryCCPCH-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

-- *****
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE TDD
-- *****

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

CommonTransportChannelResourcesResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI CRITICALITY ignore TYPE S-RNTI PRESENCE
mandatory } |
    { ID id-FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspTDD CRITICALITY ignore TYPE FACH-
InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspTDD PRESENCE mandatoryoptional } |
    { ID id-FACH-InfoForOptionalGroupS-CCPCH-CTCH-ResourceRspTDD CRITICALITY ignore TYPE FACH-
InfoForOptionalGroupOfS-CCPCH-CTCH-ResourceRspTDD PRESENCE optional } |
    { ID id-TransportLayerAddress CRITICALITY ignore TYPE TransportLayerAddress
PRESENCE optional } |
    { ID id-BindingID CRITICALITY ignore TYPE BindingID PRESENCE
optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspTDD ::= SEQUENCE {
    priorityIndicatorAndInitialWindowSize PriorityIndicatorAndInitialWindowSizeList-CTCH-
ResourceRspTDD,
    iE-Extensions ProtocolExtensionContainer { {FACH-InfoForS-CCPCH-
CoupledToPRACH-CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
    ...
}

FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

PriorityIndicatorAndInitialWindowSizeList-CTCH-ResourceRspTDD ::= SEQUENCE (SIZE (1..16)) OF
SEQUENCE {
    fACH-PriorityIndicator FACH-PriorityIndicator,
    mAC-c-SDU-Lengths MAC-c-SDU-LengthList-CTCH-ResourceRspTDD,
    fACH-InitialWindowSize FACH-InitialWindowSize,
    iE-Extensions ProtocolExtensionContainer {
{PriorityIndicatorAndInitialWindowSizeList-CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
    ...
}

PriorityIndicatorAndInitialWindowSizeList-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

MAC-c-SDU-LengthList-CTCH-ResourceRspTDD ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
SEQUENCE {
    mAC-c-SDU-Length MAC-c-SDU-Length,
    iE-Extensions ProtocolExtensionContainer { {MAC-c-SDU-LengthList-CTCH-
ResourceRspTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

}
MAC-c-SDU-LengthList-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

FACH-InfoForOptionalGroupOfS-CCPCH-CTCH-ResourceRspTDD ::= SEQUENCE {
  dl-TFCS                               TransportFormatCombinationSetTFCS,
  secondaryCCPCHs                       SecondaryCCPCH-TDD-List-CTCH-ResourceRspTDD,
  iE-Extensions                         ProtocolExtensionContainer { {FACH-InfoForOptionalGroupOfS-
CCPCH-CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
  ...
}

FACH-InfoForOptionalGroupOfS-CCPCH-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

SecondaryCCPCH-TDD-List-CTCH-ResourceRspTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF
SEQUENCE {
  tDD-ChannelisationCode                TDD-ChannelisationCode,
  timeSlot                               Timeslot,
  burstType                              BurstType,
  midambleShift                         MidambleShift,
  tDD-PhysicalChannelOffset             TDD-PhysicalChannelOffset,
  repetitionPeriod                      RepetitionPeriod,
  repetitionLength                      RepetitionLength,
  sTTDSPT-Indicatorion              sTTDSPT-Indicatorion,
  priorityIndicatorAndInitialWindowSizeList PriorityIndicatorAndInitialWindowSizeList-CTCH-
ResourceRspTDD,
  iE-Extensions                         ProtocolExtensionContainer { {SecondaryCCPCH-TDD-List-CTCH-
ResourceRspTDD-ExtIEs} } OPTIONAL,
  ...
}

SecondaryCCPCH-TDD-List-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

PriorityIndicatorAndInitialWindowSizeList-option-CTCH-ResourceRspTDD ::= SEQUENCE (SIZE (1..16)) OF
SEQUENCE {
  fACH-PriorityIndicator                FACH-PriorityIndicator,
  mAC-c-SDU-Lengths                    MAC-c-SDU-LengthList-option-CTCH-ResourceRspTDD,
  fACH-InitialWindowSize                FACH-InitialWindowSize,
  iE-Extensions                        ProtocolExtensionContainer {
{PriorityIndicatorAndInitialWindowSizeList-option-CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
  ...
}

PriorityIndicatorAndInitialWindowSizeList-option-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION
::= {
  ...
}

MAC-c-SDU-LengthList-option-CTCH-ResourceRspTDD ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
SEQUENCE {
  mAC-c-SDU-Length                    MAC-c-SDU-Length,
  iE-Extensions                        ProtocolExtensionContainer { {MAC-c-SDU-LengthList-option-
CTCH-ResourceRspTDD-ExtIEs} } OPTIONAL,
  ...
}

MAC-c-SDU-LengthList-option-CTCH-ResourceRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES FAILURE
--
-- *****

CommonTransportChannelResourcesFailure ::= SEQUENCE {

```



```

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

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

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

-- *****
--
-- COMPRESSED MODE PREPARE
--
-- *****

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

CompressedModePrepare-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-TGPI          CRITICALITY ignore TYPE GapPeriod          PRESENCE
mandatory } |
  { ID id-TGP2          CRITICALITY ignore TYPE GapPeriod          PRESENCE
optional } |
  { ID id-TGL          CRITICALITY ignore TYPE TGL          PRESENCE mandatory
} |
  { ID id-TGD          CRITICALITY ignore TYPE TGD          PRESENCE mandatory
} |
  { ID id-PD          CRITICALITY ignore TYPE PD          PRESENCE mandatory
} |
  { ID id-UL-DL-CompressedModeSelection CRITICALITY ignore TYPE UL-DL-
CompressedModeSelection PRESENCE mandatory } |
  { ID id-CompressedModeMethod CRITICALITY ignore TYPE CompressedModeMethod
  PRESENCE mandatory } |
  { ID id-GapPositionMode CRITICALITY ignore TYPE GapPositionMode
  PRESENCE mandatory } |
  { ID id-SN          CRITICALITY ignore TYPE SN          PRESENCE conditional
-- This IE is present only if "GapPositionMode" equals to "flexible" --
} |
  { ID id-DL-FrameType CRITICALITY ignore TYPE DL-FrameType          PRESENCE
mandatory } |
  { ID id-ScramblingCodeChange CRITICALITY ignore TYPE ScramblingCodeChange
  PRESENCE conditional
-- This IE is present only if "CompressedModeMethod" equals to "SF/2" --
} |
  { ID id-PowerControlMode CRITICALITY ignore TYPE PowerControlMode
  PRESENCE mandatory } |
  { ID id-PowerResumeMode CRITICALITY ignore TYPE PowerResumeMode
  PRESENCE mandatory } |
  { ID id-UL-DeltaEbNo CRITICALITY ignore TYPE UL-DeltaEbNo
  PRESENCE mandatory } |
  { ID id-UL-DeltaEbNoAfter CRITICALITY ignore TYPE UL-DeltaEbNoAfter
  PRESENCE mandatory },
  ...
}

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

-- *****
--
-- COMPRESSED MODE READY

```

```

--
-- *****

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

CompressedModeReady-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

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

-- *****
--
-- COMPRESSED MODE FAILURE
--
-- *****

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

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

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

-- *****
--
-- COMPRESSED MODE COMMIT
--
-- *****

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

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

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

-- *****
--
-- COMPRESSED MODE CANCEL
--
-- *****

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

```

```

}
...
CompressedModeCancel-IEs RNSAP-PROTOCOL-IES ::= {
}
...
CompressedModeCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
}
...
-- *****
--
-- ERROR INDICATION
--
-- *****

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

ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause                CRITICALITY ignore TYPE Cause                PRESENCE
conditional
    -- At least either of Cause IE or Criticality IE shall be present --
    } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE conditional
    -- At least either of Cause IE or Criticality IE shall be present --
    },
    ...
}

ErrorIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
}
...
-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
    privateExtensions          PrivateExtensionContainer {{PrivateExtensions}},
    ...
}

PrivateExtensions RNSAP-PRIVATE-EXTENSION ::= {
}
...
END

```

### 9.3.4 Information Elements Definitions

```

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

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxCTFC-1,
    maxTTI-Count
FROM RNSAP-Constants

```

```

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

    ProtocolExtensionContainer{,
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

AllocationRetentionPriority ::= FrameHandlingPriority

AllowedQueuingTime ::= INTEGER (0..60)
-- seconds

-- B

*** NOTE: Size in tabular 1..4,...
BindingID ::= OCTET STRING (SIZE (1..4MAX,...))

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

BurstType ::= ENUMERATED {
    type1 (1),
    type2 (2)
}

-- C

Cause ::= CHOICE {
    radioNetwork CauseRadioNetwork,
transportTransmissionNetwork CauseTransportTransmissionNetwork,
    protocol CauseProtocol,
    misc CauseMisc,
    ...
}

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

CauseProtocol ::= ENUMERATED {
    transaction-not-allowed,
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
message-not-compatible-with-receiver-state,
semantic-error,
    unspecified,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    measurement-not-supported-for-the-object,
    macrodiversity-combining-not-possible,
    reconfiguration-not-allowed,
requested-configuration-not-supported,
synchronisation-failure,
    unspecified,
    ...
}

```

```

CauseTransportTransmissionNetwork ::= ENUMERATED {
    transmission-link-failure,
    transmission-port-not-available,
    unspecified,
    ...
}

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

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

CellParameterID ::= INTEGER (0..127)

CFN ::= INTEGER (0..255)

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

-- ** TODO **
ChipOffset ::= INTEGER (0..38399)

CodingRate ::= ENUMERATED {
    half,
    third--,
    -- ...
}

CompressedModeMethod ::= ENUMERATED {
    none,
    puncturing,
    sF2,
    gating
}

CPICH-EcIo ::= INTEGER

CRC-Size ::= INTEGER-ENUMERATED {(0|8|12|16|24)
    v0,
    v8,
    v12,
    v16,
    v24
}

CriticalityDiagnostics ::= SEQUENCE {
    procedureCode ProcedureCode OPTIONAL,
    triggeringMessage TriggeringMessage OPTIONAL,
    criticalityResponse Criticality OPTIONAL,
    transactionID TransactionID OPTIONAL,
    iEsCriticalityResponses CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

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

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        criticalityResponse Criticality,
        iE-ID ProtocolIE-ID,
        iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} }
    } OPTIONAL,
    ...
}

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

-- ** TODO **
CTFC ::= INTEGER (0..maxCTFC-1)

```

```

See formula (must be resolved)
CN-CS-DomainIdentifier ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
    LAC              LAC,
    iE-Extensions   ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs} } OPTIONAL,
    LAC              LAC
}

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

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

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

**TODO**
CPICH-Power ::= INTEGER

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

-- D

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

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

DedicatedMeasurementObjectType ::= ENUMERATED {
    rl,
    all-rl,
    ...
}

** OR:
DedicatedMeasurementObjectType ::= INTEGER {
    rL(0),
    allRL(1)
    } (0..255)
**

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rSCP,
    ...
}

timeslotTSCP is used by TDD only

** OR:
DedicatedMeasurementType ::= INTEGER {
    sIR(0),
    sIR-Error(1),
    transmittedCodePower(2),
    rSCP(3)
    } (0..255)
**

** NOTE: Extensibility added **
**TODO**

DedicatedMeasurementValue ::= SEQUENCE {
    sIR-Value          SealedSIR-Value          OPTIONAL,
    sIR-ErrorValue     SealedSIR-ErrorValue     OPTIONAL,
    transmittedCodePowerValue SealedTransmittedCodePowerValue OPTIONAL, -- Relative to CPICH
    rSCP               TBD                     OPTIONAL, -- TDD only
    iE-Extensions     ProtocolExtensionContainer { {DedicatedMeasurementValue-ExtIEs} }
OPTIONAL,
    ...
}

```

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

```
--- ** TODO **
DiversityControlField ::= INTEGERENUMERATED {
  may,
  must,
  must-not
}
```

```
--- ** TODO **
DiversityMode ::= INTEGERENUMERATED {
  none,
  sTTD,
  closedLoopModel1,
  closedLoopMode2
}
```

```
--- ** TODO **
DL-ChannelisationCode ::= INTEGER
```

```
--- ** TODO **
DL-DPCCH-SlotFormat ::= INTEGER
```

```
--- ** TODO **
DL-DPCH-SlotFormatNumber ::= INTEGER (0..16)
```

```
DL-EbNo ::= ScaledUL-EbNo
```

```
DL-EbNoTarget ::= ScaledUL-EbNo
```

```
--- ** TODO **
DL-Power ::= INTEGER
```

```
D-RNTI ::= INTEGER (0..10485756)
```

```
--- ** OR:
D-RNTI ::= BIT STRING (SIZE (20))
--- **
```

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

```
--- ** TODO **
DL-ScramblingCode ::= INTEGER (0..15)
```

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

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

```
-- **TODO**
DRX-Parameter ::= TBD
```

```
--- **TODO**
BSCH-TransportFormatCombinationSet ::= INTEGER
```

```
--- **TODO**
BSCH-TFS ::= INTEGER
```

```
--- **TODO**
D-FieldLength ::= INTEGERENUMERATED {
  v1,
  v2
}
```

```
-- E
```

```

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

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

EventB ::= SEQUENCE {
    measurementTreshhold      MeasurementThreshold,
    measurementHysteresisTime ScaledMeasurementHysteresisTime      OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {EventB-ExtIEs} } OPTIONAL,
    ...
}

EventC ::= SEQUENCE {
    measurementIncreaseThreshold MeasurementIncreaseThreshold,
    measurementChangeTime      ScaledMeasurementChangeTime,
    ...
}

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

EventD ::= SEQUENCE {
    measurementDecreaseThreshold MeasurementDecreaseThreshold,
    measurementChangeTime      ScaledMeasurementChangeTime,
    iE-Extensions              ProtocolExtensionContainer { {EventD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

-- F

FACH-DataFrameSize ::= INTEGER (1..5000)
---Size of data frame in number of bits

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

---** TODO **
FACH-InfoForOptionals-CCPCH ::= INTEGER
---** TODO **

```



```

FACH-InfoForS-CCPCH-CoupledToPRACH ::= INTEGER

---** TODO **
FDD-DL-ChannelisationCodeNumber ::= INTEGER (0..255)

---** TODO **
FDD-FL-ChannelisationCodeNumber ::= INTEGER

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

FACH-PriorityIndicator ::= INTEGER { lowest(0), highest(15) } (0..15)
FrameHandlingPriority ::= INTEGER { lowest(0), highest(15) } (0..15)
FrameOffset ::= INTEGER (0..255)
-- Frames
-- G

GapPositionMode ::= ENUMERATED {
    fixed,
    flexible
}

GapPeriod ::= INTEGER (0..255)

-- H
-- I

---**TODO**
InitialDL-TX-Power ::= INTEGER

-- J
-- K
-- L

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

---** TODO **
L3-Information ::= INTEGERBIT STRING

-- M

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

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

---**TODO**
MACd-MACsh-TransportFormatSet ::= INTEGER

-- #TBD#
---**NOTE: extensibility**
MeasurementCharacteristics ::= SEQUENCE {
    measurementFrequency TBD,
    averagingDuration TBD,
    iE-Extensions ProtocolExtensionContainer { {MeasurementCharacteristics-ExtIEs} }
OPTIONAL,
    ...
}

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

---** TODO **
MeanBitRate ::= INTEGER (1..2000)

MeasurementID ::= INTEGER (0..10485756)
---**OR:
MeasurementID ::= BIT STRING (SIZE (20))
---

MultipleURAsIndicator ::= ENUMERATED {
    multiple-URAs-exist,

```

```

    single-URA-exists,
multiple-URAs-exist
}

** TODO **
MCC-Digit ::= OCTET-STRING (SIZE (3))
FFS
Reference: 24.008

** TODO **
MNC-Digit ::= OCTET-STRING (SIZE (3))
FFS
Reference: 24.008

ScaledMeasurementChangeTime ::= INTEGER (1..61000)
-- ValueMeasurementChangeTime = ScaledThe MeasurementChangeTime * 10 gives the MeasurementChangeTime
-- in number of 10 ms periods
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10 ms

** TODO **
MeasurementDecreaseThreshold ::= TBDINTEGER

ScaledMeasurementHysteresisTime ::= INTEGER (1..61000)
-- ValueMeasurementHysteresisTime = ScaledThe MeasurementHysteresisTime * 10 gives the
-- MeasurementHysteresisTime in number of 10 ms periods
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10ms

** TODO **
MeasurementIncreaseThreshold ::= TBDINTEGER

** TODO **
MeasurementThreshold ::= TBDINTEGER

MidambleShift ::= INTEGER (0..15)

MinUL-ChannelisationCodeLength ::= INTEGERENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256
}

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- N

NrOfTransportBlocks ::= INTEGER (0..4095)

-- O

Offset ::= INTEGER (0..63)

-- P

PD ::= INTEGER (0..2047, ...)

PayloadCRC-PresenceIndicator ::= ENUMERATED {
crc-included,
crc-not-included,
cre-included,
    ...
}

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

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

```

```

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


** TODO **
PilotBitsUsedIndicator ::= INTEGERENUMERATED {
  pilot-bits-used,
  pilot-bits-not-used
}

** TODO **
PLMN-ID ::= OCTET STRING (SIZE(3))SEQUENCE {
  MCC-digit MCC-Digit,
  IE-Extensions ProtocolExtensionContainer { {PLMN-ID-ExtIEs} } OPTIONAL,
  MNC-digit MNC-Digit
}
FFS

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

PowerControlMode ::= ENUMERATED {
  v0,
  v1,
  ...
}

PowerOffset ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
  v0,
  v1,
  ...
}

-- ** TODO **
PrimaryCPICH-Power ::= INTEGER

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


** TODO **
PrimaryCCPCH-RSCP ::= INTEGER (0-115.91-25)
-- Unit dBm, Range -115dBm .. -25dBm, Step +1dBm
referAccording to mapping in 25.225, 25.215


PrimaryScramblingCode ::= ScramblingCodeINTEGER (0..511)

PropagationDelay ::= INTEGER (0..255)

SyncCase ::= ENUMERATED {
  case1,
  case2,
  case3-- ,
  ...
}


** TODO **
PSCH-CCPCH-TimeSlot ::= TimeSlot

** TODO **
PSCH-PCCPCH-TimeSlot ::= TimeSlot

** TODO **
P-CPICH-Power ::= INTEGER

PunctureLimit ::= INTEGER (0..100)
-- Unit is %

-- Q
-- R


** TODO **
RAC ::= INTEGEROCTET STRING (SIZE(1))

** TODO **
OCTET STRING?


```

```

RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

RepetitionLength ::= INTEGER (1..63)

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

---This is changed from the tabular format because it seems that
---this is what is wanted.
ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF--,
-- ...
}

---Changed
ReportPeriodicity ::= CHOICE {
    per-msec          INTEGER (1..6±000),
--- The Report Periodicity gives the reporting periodicity in number of 10 ms periods.
--- E.g. value 6000 means 60000ms (i.e. 1min)
--- Unit ms, Step 10ms
    min                INTEGER (1..60)
--- Unit min, Step 1min
}

RLC-Mode ::= ENUMERATED {
    acknowledged-mode,
    unacknowledged-mode,
    transparent-mode
}

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

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

-- S

---Changed BIT STRING --> OCTET STRING
SAC ::= OCTET STRING (SIZE (2))

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

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

---** TODO **
ScramblingCode ::= INTEGER

ScramblingCodeChange ::= ENUMERATED {
code-change,
    no-code-change_7,
code-change
}

SealedSIR-ErrorValue ::= INTEGER (-100..100)
--- SealedSIR-ErrorValue --- The SIR-ErrorValue /*-10 gives the SIR-ErrorValue in number of 0.1 dB

```

```

-- steps
-- E.g. value 100 means 10dB
-- If SIR-ErrorValue <= -10 ScaledSIR-ErrorValue shall be set to -100
-- If SIR-ErrorValue >= 10 ScaledSIR-ErrorValue shall be set to 100
-- SIR-ErrorValueUnit is dB. sStep 0.1 dB

ScaledSIR-Value ::= INTEGER (-100..200)
-- ScaledSIR-Value--The SIR-Value *-10 gives the SIR-Value in number of 0.1 dB steps.
-- E.g. value 200 means 20dB
-- SIR-ValueUnit dB. sStep 0.1 dB

ScaledTransmittedCodePowerValue ::= INTEGER (-350..150)
-- ScaledTransmittedCodePowerValue--The TransmittedCodePowerValue *-10 gives the Transmitted Code
-- Power in number of 0.1 dB steps.
-- E.g. value 150 means 15dB
-- TransmittedCodePowerValueUnit dB. sStep 0.1 dB

-- ** TODO **
SharedChannelType ::= INTEGER

-- ** TODO **
SecondaryCCPCH-SlotFormat ::= INTEGER (0..178)
-- refer to 25.211

SN ::= TimeSlot

SpreadingFactorOfChannelisationCode ::= ENUMERATED {
  v256,
  v128,
  v64,
  v32,
  v16,
  v8,
  v4,
  v2,
  v1
}

-- Changed
S-FieldLength ::= INTEGER (1..2)ENUMERATED {
  v1,
  v2
}

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

-- ** TODO **
SRNC-ID ::= INTEGER

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

SSDT-CellID-Length ::= ENUMERATED {
  short,
  medium,
  long
}

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

SSDT-SupportIndicator ::= ENUMERATED {
  sSDT-supported,
  sSDT-not-supported_7,
  sSDT-supported
}

```

```

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

-- T

-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)ENUMERATED {
    chCode1div1,
    chCode2div1,
    chCode2div2,
    chCode4div1,
    chCode4div2,
    chCode4div3,
    chCode4div4,
    chCode8div1,
    chCode8div2,
    chCode8div3,
    chCode8div4,
    chCode8div5,
    chCode8div6,
    chCode8div7,
    chCode8div8,
    chCode16div1,
    chCode16div2,
    chCode16div3,
    chCode16div4,
    chCode16div5,
    chCode16div6,
    chCode16div7,
    chCode16div8,
    chCode16div9,
    chCode16div10,
    chCode16div11,
    chCode16div12,
    chCode16div13,
    chCode16div14,
    chCode16div15,
    chCode16div16,
    ...
}

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

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

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

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

-- ** TODO **
TimeReference ::= INTEGER
TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,

```

```

    one
}
TGD ::= INTEGER (0..255)
TGL ::= INTEGER (3| 4| 7| 10| 14)
TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
-- ...
}
TransportBearerID ::= INTEGER (0..4095)
Compare title and IE name in table TransportBearerRequestIndicator vs-
FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)ENUMERATED {
    bearer-requested,
    bearer-not-requested
}
TransportBlockSize ::= INTEGER (1..5000)
-- Unit is bits
TransportFormatCombinationSetTFCS ::= SEQUENCE (SIZE (1..maxNrOfTFCS)) OF
    SEQUENCE {
        cTFC CTFC,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatCombinationSetTFCS-
ExtIEs} } OPTIONAL,
        ...
    }
TransportFormatCombinationSetTFCS-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
TransportFormatSet ::= SEQUENCE {
    dynamicParts TransportFormatSet-DynamicPartList,
    semi-staticPart TransportFormatSet-Semi-staticPart,
    iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}
TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEQUENCE {
        nrOfTransportBlocks NrOfTransportBlocks,
        transportBlockSize TransportBlockSize OPTIONAL
        -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
        mode TransportFormatSet-ModeDP,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-
ExtIEs} } OPTIONAL,
        ...
    }
TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
TransportFormatSet-ModeDP ::= CHOICE {
    tdd TransmissionTimeIntervalList,
    -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
    ...
}
TransmissionTimeIntervalList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
    SEQUENCE {
        transmissionTimeInterval TransmissionTimeInterval,
        iE-Extensions ProtocolExtensionContainer { {TransmissionTimeIntervalList-ExtIEs} }
OPTIONAL,
        ...
    }

```

```

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

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

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

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

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

TransportLayerAddress ::= BIT STRING (SIZE(1..160, ...))
TransportLayerAddress ::= OCTET STRING (SIZE(1..20, ...))

-- U

UARFCN ::= INTEGER (0..698, ...)

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

UL-DeltaEbNo ::= INTEGER (-60..100)
-- Value -- The UL-Delta-EbNo / 10 gives the UL-Delta-EbNo in number of 0.1 dB steps.
-- E.g. Value 100 means 10 dB
-- Unit dB. Step 0.1 dB.

UL-DeltaEbNoAfter ::= INTEGER (-60..100)
-- Value -- The UL-Delta-EbNo-After / 10 gives the UL-Delta-EbNo-After in number of 0.1 dB steps.
-- E.g. Value 100 means 10 dB
-- Unit dB. Step 0.1 dB.

-- ** TODO **
UL-EbNo ::= INTEGER

-- ** TODO **
UL-EbNoTarget ::= UL-EbNoINTEGER

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

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

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

SealedUL-EbNo ::= INTEGER (0..255)

```



```
UL-EbNo = ScaledUL-EbNo / 10
```

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

```
ScaledUL-InterferenceLevel ::= INTEGER (-1280..-600)
```

```
ValueUL-InterferenceLevel -- The UL-InterferenceLevel --10gives the UL-InterferenceLevel in number
-- of 0.1 dBm steps
-- E.g. value -600 means -60 dBm
-- Unit dBm, Step 0.1 dBm
```

```
Relation to the ScramblingCode??
```

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

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

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

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

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

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

```
END
```

## 9.3.5 Common Definitions

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

```
RNSAP-CommonDataTypes -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=
```

```
BEGIN
```

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

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

```
PrivateExtensionID ::= CHOICE {
    local          INTEGER (0..65535),
    global         OBJECT IDENTIFIER
}
```

```
ProcedureCode ::= INTEGER (0..255)
```

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

```
ProtocolExtensionID ::= INTEGER (0..65535)
```

```
ProtocolIE-ID ::= INTEGER (0..65535)
```

```
TransactionID ::= INTEGER (0..65535)
```

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

```
END
```

## 9.3.6 Constant Definitions

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

RNSAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

id-commonTransportChannelResourcesInitiationFDD          INTEGER ::= 0
id-commonTransportChannelResourcesInitiationTDD          INTEGER ::= 1
id-commonTransportChannelResourcesRelease                INTEGER ::= 2
id-compressedModeCancellationFDD                        INTEGER ::= 3
id-compressedModeCommitFDD                             INTEGER ::= 4
id-compressedModePrepareFDD                             INTEGER ::= 5
id-downlinkPowerControl                                 INTEGER ::= 6
id-downlinkSignallingTransfer                           INTEGER ::= 7
id-errorIndication                                     INTEGER ::= 8
id-measurementFailure                                  INTEGER ::= 9
id-measurementInitiation                               INTEGER ::= 10
id-measurementReporting                                 INTEGER ::= 11
id-measurementTermination                              INTEGER ::= 12
id-pagingRequest                                       INTEGER ::= 13
id-physicalChannelReconfiguration                       INTEGER ::= 14
id-privateMessage                                       INTEGER ::= 15
id-radioLinkAddition                                   INTEGER ::= 16
id-radioLinkDeletion                                   INTEGER ::= 17
id-radioLinkFailure                                    INTEGER ::= 18
id-radioLinkRestoration                                INTEGER ::= 19
id-radioLinkSetup                                       INTEGER ::= 20
id-srnsRelocationCommit                                INTEGER ::= 21
id-synchronisedRadioLinkReconfigurationCancellation     INTEGER ::= 22
id-synchronisedRadioLinkReconfigurationCommit          INTEGER ::= 23
id-synchronisedRadioLinkReconfigurationPrepare         INTEGER ::= 24
id-unSynchronisedRadioLinkReconfiguration              INTEGER ::= 25
id-uplinkSignallingTransfer                             INTEGER ::= 26

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

maxPrivateExtensions          INTEGER ::= 65535
maxProtocolExtensions        INTEGER ::= 65535
maxProtocolIEs                INTEGER ::= 65535

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

maxRateMatching              INTEGER ::= 10
maxNrOfTFCs                  INTEGER ::= 10
maxNrOfTFs                   INTEGER ::= 10
maxNoOfDL-Codes             INTEGER ::= 10
maxNrOfCCTrCHs              INTEGER ::= 10
maxNrOfDCHs                  INTEGER ::= 10
maxNrOfDL-Codes              INTEGER ::= 10
maxNrOfDPCHs                 INTEGER ::= 10
maxNrOfErrors                INTEGER ::= 10
```

```

maxNrOfFACH-FD-Size                INTEGER ::= 10
maxNrOfFDD-Neighbours              INTEGER ::= 10
maxNrOfMACcSDU-Length              INTEGER ::= 10
maxNrOfTDD-Neighbours              INTEGER ::= 10
maxNrOfRLs                          INTEGER ::= 10
maxNrOfRLs-1                       INTEGER ::= 10
maxNrOfRLs-2                       INTEGER ::= 10
maxNrOfSCCPCHs                     INTEGER ::= 10
maxRNCinURA                       INTEGER ::= 10
maxTTI-Count                        INTEGER ::= 10
maxCTFC-1                          INTEGER ::= 10

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

id-AllowedQueuingTime               INTEGER ::= 0
id-BindingID                        INTEGER ::= 1
id-C-ID                             INTEGER ::= 2
id-C-RNTI                           INTEGER ::= 3
id-CCTrCH-ID                        INTEGER ::= 4
id-CFN                              INTEGER ::= 5
id-CN-CS-DomainIdentifier           INTEGER ::= 6
id-CN-PS-DomainIdentifier           INTEGER ::= 7
id-Cause                            INTEGER ::= 8
id-CompressedModeMethod             INTEGER ::= 9
id-D-RNTI                           INTEGER ::= 10
id-D-RNTI-ReleaseIndication         INTEGER ::= 11
id-DCH-AddItem                      INTEGER ::= 12
id-DCH-AddItem-RL-ReconfPrepFDD     INTEGER ::= 13
id-DCH-AddItem-RL-ReconfPrepTDD     INTEGER ::= 14
id-DCH-AddItem-RL-ReconfReadyFDD    INTEGER ::= 15
id-DCH-AddItem-RL-ReconfRqstFDD     INTEGER ::= 16
id-DCH-AddItem-RL-ReconfRqstTDD     INTEGER ::= 17
id-DCH-AddList-RL-ReconfPrepFDD     INTEGER ::= 18
id-DCH-AddList-RL-ReconfPrepTDD     INTEGER ::= 19
id-DCH-AddList-RL-ReconfRqstFDD     INTEGER ::= 20
id-DCH-AddList-RL-ReconfRqstTDD     INTEGER ::= 21
id-DCH-DeleteItem-RL-ReconfPrepFDD  INTEGER ::= 22
id-DCH-DeleteItem-RL-ReconfPrepTDD  INTEGER ::= 23
id-DCH-DeleteItem-RL-ReconfRqstFDD  INTEGER ::= 24
id-DCH-DeleteItem-RL-ReconfRqstTDD  INTEGER ::= 25
id-DCH-DeleteList-RL-ReconfPrepFDD  INTEGER ::= 26
id-DCH-DeleteList-RL-ReconfPrepTDD  INTEGER ::= 27
id-DCH-DeleteList-RL-ReconfRqstFDD  INTEGER ::= 28
id-DCH-DeleteList-RL-ReconfRqstTDD  INTEGER ::= 29
id-DCH-Information-RL-SetupReqstFDD  INTEGER ::= 30
id-DCH-InformationItem-RL-SetupReqstFDD  INTEGER ::= 31
id-DCH-InformationItem-RL-SetupReqstTDD  INTEGER ::= 32
id-DCH-InformationList-RL-SetupReqstTDD  INTEGER ::= 33
id-DCH-ModifyItem                   INTEGER ::= 34
id-DCH-ModifyItem-RL-ReconfPrepFDD  INTEGER ::= 35
id-DCH-ModifyItem-RL-ReconfPrepTDD  INTEGER ::= 36
id-DCH-ModifyItem-RL-ReconfReadyFDD  INTEGER ::= 37
id-DCH-ModifyItem-RL-ReconfRqstFDD  INTEGER ::= 38
id-DCH-ModifyItem-RL-ReconfRqstTDD  INTEGER ::= 39
id-DCH-ModifyList-RL-ReconfPrepFDD  INTEGER ::= 40
id-DCH-ModifyList-RL-ReconfPrepTDD  INTEGER ::= 41
id-DCH-ModifyList-RL-ReconfRqstFDD  INTEGER ::= 42
id-DCH-ModifyList-RL-ReconfRqstTDD  INTEGER ::= 43
id-DL-CCTrCH-Information-RL-ReconfPrepTDD  INTEGER ::= 44
id-DL-CCTrCH-Information-RL-ReconfRqstTDD  INTEGER ::= 45
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD  INTEGER ::= 46
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD  INTEGER ::= 47
id-DL-CCTrChInformationItem-RL-SetupReqstTDD  INTEGER ::= 48
id-DL-CCTrChInformationList-RL-SetupReqstTDD  INTEGER ::= 49
id-DL-CodeInformation-PhyChReconfRqstFDD  INTEGER ::= 50
id-DL-DPCH-Information              INTEGER ::= 51
id-DL-DPCH-Information-RL-SetupReqstFDD  INTEGER ::= 52
id-DL-DPCH-InformationList-PhyChReconfRqstTDD  INTEGER ::= 53
id-DL-DPCH-InformationList-RL-ReconfReadyTDD  INTEGER ::= 54
id-DL-EbNoTarget                    INTEGER ::= 55
id-DL-FrameType                     INTEGER ::= 56
id-DL-MeanBitRate                   INTEGER ::= 57
id-DL-ReferencePowerInformation-DL-PC-Rqst  INTEGER ::= 58
id-DRX-Parameter                    INTEGER ::= 59

```

|   |                 |
|---|-----------------|
| id-DedicatedMeasurementObjectType-DM-Rprt                     | INTEGER ::= 60  |
| id-DedicatedMeasurementObjectType-DM-Rqst                     | INTEGER ::= 61  |
| id-DedicatedMeasurementObjectType-DM-Rspns                    | INTEGER ::= 62  |
| id-FACH-InfoForOptionalGroupS-CCPCH-CTCH-ResourceRspFDD       | INTEGER ::= 63  |
| id-FACH-InfoForOptionalS-CCPCH-CTCH-ResourceRspTDD            | INTEGER ::= 64  |
| id-FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspFDD     | INTEGER ::= 65  |
| id-GapPositionMode  | INTEGER ::= 66  |
| id-L3-Information   | INTEGER ::= 67  |
| id-MeasurementCharacteristics                                 | INTEGER ::= 68  |
| id-MeasurementID  | INTEGER ::= 69  |
| id-MultipleURAsIndicator                                      | INTEGER ::= 70  |
| id-PD   | INTEGER ::= 71  |
| id-PagingArea-PagingRqst                                      | INTEGER ::= 72  |
| id-PowerControlMode   | INTEGER ::= 73  |
| id-PowerResumeMode  | INTEGER ::= 74  |
| id-ProcedureScope-DL-PC-Rqst                                  | INTEGER ::= 75  |
| id-RANAP-RelocationInformation                                | INTEGER ::= 76  |
| id-RL-Information-PhyChReconfRqstFDD                          | INTEGER ::= 77  |
| id-RL-Information-PhyChReconfRqstTDD                          | INTEGER ::= 78  |
| id-RL-Information-RL-AdditionRqstFDD                          | INTEGER ::= 79  |
| id-RL-Information-RL-AdditionRqstTDD                          | INTEGER ::= 80  |
| id-RL-Information-RL-DeletionRqst                             | INTEGER ::= 81  |
| id-RL-Information-RL-FailureInd                               | INTEGER ::= 82  |
| id-RL-Information-RL-ReconfPrepFDD                            | INTEGER ::= 83  |
| id-RL-Information-RL-RestoreInd                               | INTEGER ::= 84  |
| id-RL-Information-RL-SetupReeqstFDD                           | INTEGER ::= 85  |
| id-RL-Information-RL-SetupReeqstTDD                           | INTEGER ::= 86  |
| id-RL-InformationItem-DM-Rprt                                 | INTEGER ::= 87  |
| id-RL-InformationItem-DM-Rqst                                 | INTEGER ::= 88  |
| id-RL-InformationItem-DM-Rspns                                | INTEGER ::= 89  |
| id-RL-InformationItem-RL-SetupReeqstFDD                       | INTEGER ::= 90  |
| id-RL-InformationList-RL-AdditionRqstFDD                      | INTEGER ::= 91  |
| id-RL-InformationList-RL-DeletionRqst                         | INTEGER ::= 92  |
| id-RL-InformationList-RL-FailureInd                           | INTEGER ::= 93  |
| id-RL-InformationList-RL-ReconfPrepFDD                        | INTEGER ::= 94  |
| id-RL-InformationList-RL-RestoreInd                           | INTEGER ::= 95  |
| id-RL-InformationResponse-RL-AdditionRspTDD                   | INTEGER ::= 96  |
| id-RL-InformationResponse-RL-ReconfReadyTDD                   | INTEGER ::= 97  |
| id-RL-InformationResponse-RL-SetupRspTDD                      | INTEGER ::= 98  |
| id-RL-InformationResponseItem-RL-AdditionRspFDD               | INTEGER ::= 99  |
| id-RL-InformationResponseItem-RL-ReconfReadyFDD               | INTEGER ::= 100 |
| id-RL-InformationResponseItem-RL-SetupRspFDD                  | INTEGER ::= 101 |
| id-RL-InformationResponseList-RL-AdditionRspFDD               | INTEGER ::= 102 |
| id-RL-InformationResponseList-RL-ReconfReadyFDD               | INTEGER ::= 103 |
| id-RL-InformationResponseList-RL-SetupRspFDD                  | INTEGER ::= 104 |
| id-RL-ReconfigurationFailure-RL-ReconfFail                    | INTEGER ::= 105 |
| id-RL-ReconfigurationFailureList-RL-ReconfFail                | INTEGER ::= 106 |
| id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind               | INTEGER ::= 107 |
| id-ReportCharacteristics                                      | INTEGER ::= 108 |
| id-S-RNTI   | INTEGER ::= 109 |
| id-SAI  | INTEGER ::= 110 |
| id-SN   | INTEGER ::= 111 |
| id-SRNC-ID  | INTEGER ::= 112 |
| id-ScramblingCodeChange                                       | INTEGER ::= 113 |
| id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD     | INTEGER ::= 114 |
| id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD        | INTEGER ::= 115 |
| id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD | INTEGER ::= 116 |
| id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD    | INTEGER ::= 117 |
| id-TGD  | INTEGER ::= 118 |
| id-TGL  | INTEGER ::= 119 |
| id-TGP1   | INTEGER ::= 120 |
| id-TGP2   | INTEGER ::= 121 |
| id-TransportBearerID  | INTEGER ::= 122 |
| id-TransportBearerRequestIndicator                            | INTEGER ::= 123 |
| id-TransportLayerAddress                                      | INTEGER ::= 124 |
| id-UC-ID  | INTEGER ::= 125 |
| id-UL-CCTrCH-Information-RL-ReconfPrepTDD                     | INTEGER ::= 126 |
| id-UL-CCTrCH-Information-RL-ReconfRqstTDD                     | INTEGER ::= 127 |
| id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD                 | INTEGER ::= 128 |
| id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD                 | INTEGER ::= 129 |
| id-UL-CCTrChInformationItem-RL-SetupReeqstTDD                 | INTEGER ::= 130 |
| id-UL-CCTrChInformationList-RL-SetupReeqstTDD                 | INTEGER ::= 131 |
| id-UL-DL-CompressedModeSelection                              | INTEGER ::= 132 |
| id-UL-DPCH-Information  | INTEGER ::= 133 |
| id-UL-DPCH-Information-RL-SetupReeqstFDD                      | INTEGER ::= 134 |
| id-UL-DPCH-InformationList-PhyChReconfRqstTDD                 | INTEGER ::= 135 |
| id-UL-DPCH-InformationList-RL-ReconfReadyTDD                  | INTEGER ::= 136 |
| id-UL-DeltaEbNo   | INTEGER ::= 137 |

```

id-UL-DeltaEbNoAfter                INTEGER ::= 138
id-UL-EbNoTarget                    INTEGER ::= 139
id-UL-MeanBitRate                   INTEGER ::= 140
id-URA-ID                           INTEGER ::= 141
id-UnsuccessfulRL-InformationResponse    INTEGER ::= 142
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD    INTEGER ::= 143
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD      INTEGER ::= 144
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD      INTEGER ::= 145
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD    INTEGER ::= 146
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD    INTEGER ::= 147
id-CriticalityDiagnostics            INTEGER ::= 148
id-DCH-AddItem-RL-ReconfReadyTDD    INTEGER ::= 149
id-DCH-AddItem-RL-ReconfRsp         INTEGER ::= 150
id-DCH-ModifyItem-RL-ReconfReadyTDD  INTEGER ::= 151
id-DCH-ModifyItem-RL-ReconfRsp      INTEGER ::= 152
id-DedicatedMeasurementType         INTEGER ::= 153
id-FACH-InfoForS-CCPCH-CoupledToPRACH-CTCH-ResourceRspTDD    INTEGER ::= 154
id-MaxUL-EbNo                       INTEGER ::= 155
id-MinUL-EbNo                       INTEGER ::= 156
id-RL-InformationResponseItem-RL-ReconfRsp    INTEGER ::= 157
id-RL-InformationResponseList-RL-ReconfRsp    INTEGER ::= 158
    
```

END

### 9.3.7 Container Definitions

```

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

RNSAP-Containers -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    Criticality,
    Presence,
    PrivateExtensionID,
    ProtocolExtensionID,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes

    maxPrivateExtensions,
    maxProtocolExtensions,
    maxProtocolIEs
FROM RNSAP-Constants;

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

RNSAP-PROTOCOL-IES ::= CLASS {
    &id                ProtocolIE-ID                UNIQUE,
    &criticality        Criticality,
    &Value,
    &presence           Presence
}
WITH SYNTAX {
    ID                &id
    CRITICALITY        &criticality
    TYPE                &Value
    PRESENCE           &presence
}

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

```

--
-- *****
RNSAP-PROTOCOL-IES-PAIR ::= CLASS {
    &id          ProtocolIE-ID          UNIQUE,
    &firstCriticality  Criticality,
    &FirstValue,
    &secondCriticality  Criticality,
    &SecondValue,
    &presence          Presence
}
WITH SYNTAX {
    ID          &id
    FIRST CRITICALITY  &firstCriticality
    FIRST TYPE      &FirstValue
    SECOND CRITICALITY  &secondCriticality
    SECOND TYPE      &SecondValue
    PRESENCE        &presence
}
-- *****
--
-- Class Definition for Protocol Extensions
--
-- *****

RNSAP-PROTOCOL-EXTENSION ::= CLASS {
    &id          ProtocolExtensionID    UNIQUE,
    &criticality  Criticality,
    &Extension
}
WITH SYNTAX {
    ID          &id
    CRITICALITY  &criticality
    EXTENSION    &Extension
}
-- *****
--
-- Class Definition for Private Extensions
--
-- *****

RNSAP-PRIVATE-EXTENSION ::= CLASS {
    &id          PrivateExtensionID,
    &criticality  Criticality,
    &Extension
}
WITH SYNTAX {
    ID          &id
    CRITICALITY  &criticality
    EXTENSION    &Extension
}
-- *****
--
-- Container for Protocol IEs
--
-- *****

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

ProtocolIE-Field {RNSAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
    id          RNSAP-PROTOCOL-IES.&id          ({IEsSetParam}),
    criticality RNSAP-PROTOCOL-IES.&criticality  ({IEsSetParam}{@id}),
    value       RNSAP-PROTOCOL-IES.&Value       ({IEsSetParam}{@id})
}
-- *****
--
-- Container for Protocol IE Pairs
--
-- *****

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

```

```

ProtocolIE-FieldPair {{IEsSetParam}}

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

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

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

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

-- *****
--
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
    SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
        ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
    id                RNSAP-PROTOCOL-EXTENSION.&id                ({ExtensionSetParam}),
    criticality        RNSAP-PROTOCOL-EXTENSION.&criticality        ({ExtensionSetParam}{@id}),
    extensionValue     RNSAP-PROTOCOL-EXTENSION.&Extension         ({ExtensionSetParam}{@id})
}

-- *****
--
-- Container for Private Extensions
--
-- *****

PrivateExtensionContainer {RNSAP-PRIVATE-EXTENSION : ExtensionSetParam} ::=
    SEQUENCE (SIZE (1..maxPrivateExtensions)) OF
        PrivateExtensionField {{ExtensionSetParam}}

PrivateExtensionField {RNSAP-PRIVATE-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
    id                RNSAP-PRIVATE-EXTENSION.&id                ({ExtensionSetParam}),
    criticality        RNSAP-PRIVATE-EXTENSION.&criticality        ({ExtensionSetParam}{@id}),
    extensionValue     RNSAP-PRIVATE-EXTENSION.&Extension         ({ExtensionSetParam}{@id})
}

END

```

**CHANGE REQUEST**

*Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.*

**25.423 CR 020r1**

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**  
list expected approval meeting # here

for approval   
for information

Strategic   
non-strategic  (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

**Proposed change affects:** (U)SIM  ME  UTRAN / Radio  Core Network   
(at least one should be marked with an X)

**Source:** RAN-WG3 **Date:** 28<sup>th</sup> Feb. – 3<sup>rd</sup> March 2000

**Subject:** Introduction of Radio Link Set in RNSAP

**Work item:**

**Category:** F Correction  **Release:** Phase 2   
A Corresponds to a correction in an earlier release  Release 96   
(only one category shall be marked with an X) B Addition of feature  Release 97   
C Functional modification of feature  Release 98   
D Editorial modification  Release 99   
Release 00

**Reason for change:** The existing NBAP and RNSAP protocols does currently not provide the SRNC with information on grouping of RLS other than whether or not there is a combination of RLS resulting in a combined data stream in the user plane.  
However, for some cases of the Uu interface there exist another grouping, i.e. softer combining. This CR introduces a definition of softer combined RLS (Radio Link Set) and also introduces the necessary changes to cope with softer combined RLS:  
a) Information from Node B to the CRNC on which RLS that are belonging to one RL Set and consequently are having common generation of TPC commands in the DL.  
b) Initiation and reporting of measurements on RLS as well as on RL Sets (both for individual RLS or RL Sets and for ALL RLS or ALL RL Sets, ALL =Current and Future).  
c) Reporting of in-sync and out-of-sync based on RL Sets.

**Clauses affected:** 3, 8.3.1.2, 8.3.2.2, 8.3.9.2, 8.3.10.2, 8.3.11.2, 9.1.4.1, 9.1.5.1, 9.1.7.1, 9.1.8.1, 9.1.18, 9.1.19, 9.1.28, 9.1.29, 9.1.31, 9.2.1.15, 9.2.2.x, 9.3.3, 9.3.4, and 9.3.6.

**Other specs affected:** Other 3G core specifications  → List of CRs: 25.433 v3.0.0 CR-033r1  
Other GSM core specifications  → List of CRs:  
MS test specifications  → List of CRs:  
BSS test specifications  → List of CRs:  
O&M specifications  → List of CRs:

**Other comments:**



---

## 3 Definitions, symbols and abbreviations

### 3.1 Definitions

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

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

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

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

Successful

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

Unsuccessful

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

Class 2 EPs are considered always successful.

**Radio Link Set:** A set of one or more Radio Links that has a common generation of Transmit Power Control (TPC) commands in the DL.

### 3.2 Symbols

No special symbols are defined in this document.

### 3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

|        |                                    |
|--------|------------------------------------|
| ASN.1  | Abstract Syntax Notation One       |
| ATM    | Asynchronous Transfer Mode         |
| BCCH   | Broadcast Control Channel          |
| BLER   | Block Error Rate                   |
| CCPCH  | Common Control Physical Channel    |
| CCTrCH | Coded Composite Transport Channel  |
| CFN    | Connection Frame Number            |
| CN     | Core Network                       |
| CRNC   | Controlling RNC                    |
| CPICH  | Common Pilot Channel               |
| DCH    | Dedicated Channel                  |
| DL     | Downlink                           |
| DPCCH  | Dedicated Physical Control Channel |
| DPCH   | Dedicated Physical Channel         |
| DRNC   | Drift RNC                          |
| DRNS   | Drift RNS                          |
| DRX    | Discontinuous Reception            |
| DSCH   | Downlink Shared Channel            |

|            |  |
|------------|--|
| FN         | Frame Number                                 |
| FP         | Frame Protocol                               |
| MAC        | Medium Access Control                        |
| PDU        | Protocol Data Unit                           |
| PSCH       | Physical Synchronisation Channel             |
| RAB        | Radio Access Bearer                          |
| RL         | Radio Link                                   |
| <u>RLS</u> | <u>Radio Link Set</u>                        |
| RLC        | Radio Link Control                           |
| RNS        | Radio Network Subsystem                      |
| RNSAP      | Radio Network Subsystem Application Part     |
| RNTI       | Radio Network Temporary Identifier           |
| RRC        | Radio Resource Control                       |
| RSCP       | Received Signal Code Power                   |
| SFN        | System Frame Number                          |
| SRNC       | Serving RNC                                  |
| SRNS       | Serving RNS                                  |
| SSDT       | Site Selection Diversity Transmit            |
| TFCI       | Transport Format Combination Indicator       |
| TFCS       | Transport Format Combination Set             |
| TFS        | Transport Format Set                         |
| <u>TPC</u> | <u>Transmit Power Control</u>                |
| UARFCN     | UMTS Absolute Radio Frequency Channel Number |
| UE         | User Equipment                               |
| UL         | Uplink                                       |
| URA        | UTRAN Registration Area                      |
| UTRAN      | UMTS Terrestrial Radio Access Network        |

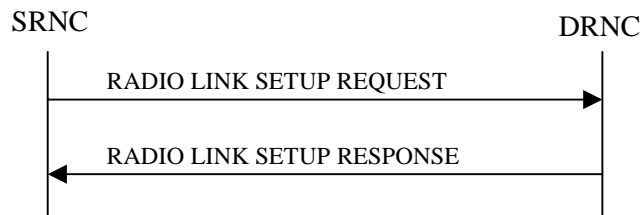
## 8.3.1 Radio Link Setup

### 8.3.1.1 General

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

This procedure shall use the connection-oriented service of the signalling bearer.

### 8.3.1.2 Successful Operation



**Figure 1: Radio Link Setup procedure: Successful Operation**

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

The message is also used to establish the connection-oriented service of the signalling bearer in the DRNC. The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The Diversity Control Field indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When an RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

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

If the *Initial DL TX Power* IE and *UL Eb/No Target* IE [FDD] are present in the message, the DRNS shall use the indicated DL TX Power and UL Eb/No Target [FDD] as initial value.

If the *Primary CPICH Eb/No* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] is present, the DRNC should use them when deciding the Initial DL TX Power.

If the RADIO LINK SETUP REQUEST message includes the *DCH Combination Indicator* IE for a DCH, the DRNS shall treat all DCHs with the same value of this IE as a set of co-ordinated DCHs. The included *RLC Mode* IE of the DCH may be used by the DRNS to optimise the power control.

The *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH as the new DCH FP Mode in the Uplink of the user plane for this DCH.

The DRNS shall use the included *ToAWS* IE for a DCH as the new Time of Arrival Window Start Point in the user plane for this DCH.

The DRNS shall use the included *ToAWE* IE for a DCH as the new Time of Arrival Window End Point in the user plane for this DCH.

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

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

If the *Initial DL TX Power* and the *UL Eb/No Target* IEs are not present in the RADIO LINK SETUP REQUEST message, then DRNC shall include the suggested initial UL Eb/No Target and the DL Eb/No Target in the RADIO LINK SETUP RESPONSE message.

[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.]

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

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

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

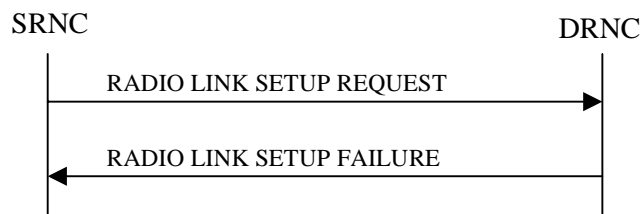
[FDD - Irrespective of SSdT activation, the DRNS shall include in the RADIO LINK SETUP RESPONSE message an indication concerning the capability to support SSdT on this RL. Only if the RADIO LINK SETUP REQUEST message requested SSdT activation and the RADIO LINK SETUP RESPONSE message indicates that the SSdT capability is supported for this RL, SSdT is activated in the DRNS.]

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id) and information of the neighbouring cells to the cell(s) where the radio link(s) are added.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC, CN domain nodes) of the RNC controlling the neighbouring cell.

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received the DRNC shall include the node identifications of the CN Domain nodes that the RNC is connected to (using LAC and RAC of the current cell), and the D-RNTI in the RADIO LINK SETUP RESPONSE message.

### 8.3.1.3 Unsuccessful Operation



**Figure 2: Radio Link Setup procedure: Unsuccessful Operation**

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

Typical cause values are:

**Radio Network Layer Causes:**

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Requested Configuration not Supported
- Cell not Available
- Power Level not Supported

**Transport Layer Causes:**

- Transport Link Failure

**Protocol Causes:**

- Transaction not Allowed

**Miscellaneous Causes:**

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

**8.3.1.4 Abnormal Conditions**

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

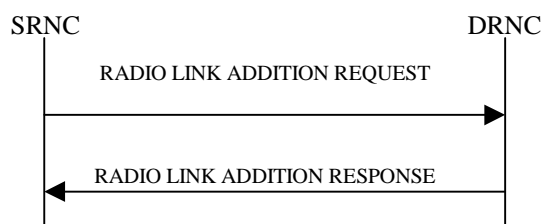
## 8.3.2 Radio Link Addition

### 8.3.2.1 General

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

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

### 8.3.2.2 Successful Operation



**Figure 3: Radio Link Addition procedure: Successful Operation**

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

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

[FDD - The Diversity Control Field indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the *Primary CCPCH Ec/Io* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] measured by the UE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power. If the *Primary CCPCH Ec/Io* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.

[FDD - The DRNS shall use the provided UL Eb/No Target value as the current target for the inner-loop power control.]

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

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

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

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

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

In the case of combining an RL with existing RL(s) the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that the RL is combined. In this case the Reference RL ID shall be included to indicate one of the existing RLs that the new RL is combined with.

In the case of not combining an RL with existing RL(s), the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both

the Transport Layer Address and the binding ID for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message.

In case of co-ordinated DCH, the binding ID and the transport address shall be included for only one of the co-ordinated DCHs.

[FDD - Irrespective of SSdT activation, the DRNS shall include in the RADIO LINK ADDITION RESPONSE message an indication concerning the capability to support SSdT on this RL. Only if the RADIO LINK ADDITION REQUEST message requested SSdT activation and the RADIO LINK ADDITION RESPONSE message indicates that the SSdT capability is supported for this RL, SSdT is activated in the DRNS.]

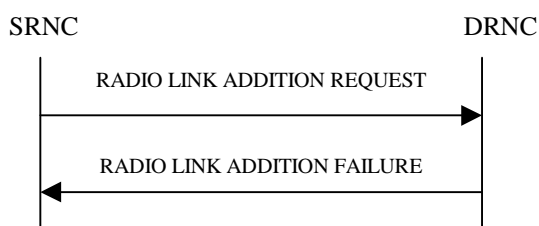
For any cell neighbouring of a cell in which a RL was added, the DRNC shall provide in the RADIO LINK ADDITION RESPONSE message the UTRAN Cell Identifier (UC-Id), the Frequency Number, the Primary Scrambling Code and the node identification of CN nodes connected to the RNC controlling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the CPICH Power level and Frame Offset of the neighbouring cell.

The DRNC shall also provide the configured uplink Maximum Eb/No and UL Minimum Eb/No 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 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.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the Iur user plane as specified in ref. [Error! Reference source not found.].

### 8.3.2.3 Unsuccessful Operation



**Figure 4: Radio Link Addition procedure: Unsuccessful Operation**

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

If some RL(s) were established successfully, the DRNC shall indicate this in the RADIO LINK ADDITION FAILURE message in the same way as in the RADIO LINK ADDITION RESPONSE message.

Typical cause values are:

#### Radio Network Layer Causes:

- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Cell not Available
- Power Level not Supported

#### Transport Layer Causes:

- Transport Link Failure

**Miscellaneous Causes:**

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

**8.3.2.4 Abnormal Conditions**

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## 8.3.9 Radio Link Failure

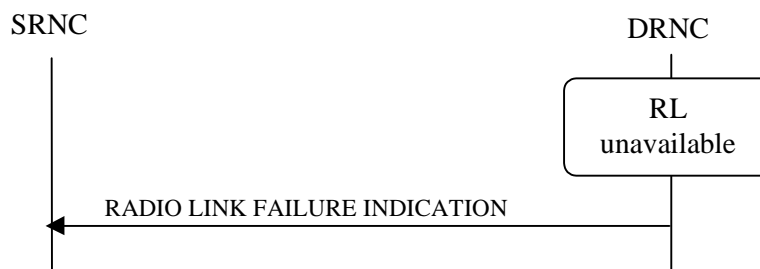
### 8.3.9.1 General

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

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

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

### 8.3.9.2 Successful Operation



**Figure 5: RL Failure procedure, Successful Operation**

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

[FDD - When the RL Failure procedure is used to notify the non achievement or loss of UL synchronisation: the message shall be sent when the UL synchronisation of ~~the newly established radio-Radio link~~ Link Set(s) is not achieved after any of the procedures RL Setup or RL Addition. The message shall also be sent if the UL synchronisation it is lost during an active connection.]

[TDD - When the RL Failure procedure is used to notify the non achievement or loss of UL synchronisation: the message shall be sent when the UL synchronisation of newly established Radio Link is not achieved after any of the procedures RL Setup or RL Addition. The message shall also be sent if the UL synchronisation it is lost during an active connection.]

Typical cause values are:

#### Radio Network Layer Causes:

- Synchronisation Failure

#### Miscellaneous Causes:

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

### 8.3.9.3 Abnormal Conditions

-

## 8.3.10 Radio Link Restoration

### 8.3.10.1 General

This procedure is used to notify of re-establishment of UL synchronisation after that the RL Failure procedure has been used to notify the loss of the synchronisation.

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

The DRNC may initiate the Radio Link Restoration procedure after establishing a Radio Link.

### 8.3.10.2 Successful Operation



**Figure 6: RL Restoration procedure, Successful Operation**

If the UL synchronisation is re-established, the DRNC shall send the RADIO LINK RESTORE INDICATION message to the SRNC. FDD - The message shall be sent only if the RL Failure procedure has been previously used to notify the loss of UL synchronisation of the same Radio Link Set(s). TDD - The message shall be sent only if the RL Failure procedure has been previously used to notify the loss of UL synchronisation of the same Radio Link (s)., ~~and if the message~~ shall not be sent if a RL Deletion procedure have been activated in the DRNC after the RL Failure has been sent.

### 8.3.10.3 Abnormal Conditions

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### 8.3.11 Measurement Initiation

[Editor's note: According to TSGR#5 (99)564, the following measurements shall also be considered:

- \* Time of Arrival
- \* Frequency Offset
- \* Round Trip Time
- \* RX Timing Deviation

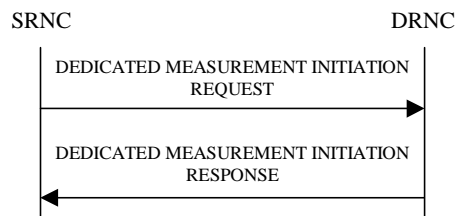
Whether these measurements shall be dedicated or common measurements have so far not been considered by TSG RAN WG3 and are thus not incorporated.]

#### 8.3.11.1 General

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

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

#### 8.3.11.2 Successful Operation



**Figure 7: Measurement Initiation procedure, Successful Operation**

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

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

If no RL Information is provided in the *Dedicated Measurement Object IE*, the measurement reports shall give the aggregated result for all radio links within the requested UE Context. If RL Information is provided in the request, the measurement request shall apply for the requested radio links individually.

If the *Dedicated Measurement Object IE* is set to "RL", the measurement reports shall give the measurement result for each of the indicated Radio Links.

[FDD - If the *Dedicated Measurement Object IE* is set to "RLS", the measurement reports shall give the measurement result for each of the indicated Radio Link Sets.]

If the *Dedicated Measurement Object IE* is set to "ALL RL", the measurement reports shall give the measurement result for each of the current and future Radio Links within the UE Context.

[FDD - If the *Dedicated Measurement Object IE* is set to "ALL RLS", the measurement reports shall give the measurement result for each of the existing and future Radio Link Sets within the UE Context.]

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

If the *Report Characteristics IE* indicates 'On-Demand', the DRNS shall report the measurement result immediately.

If the *Report Characteristics IE* indicates 'Periodic', the DRNS shall periodically initiate a Measurement Report procedure for this measurement, with the requested report frequency.

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

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

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

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

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

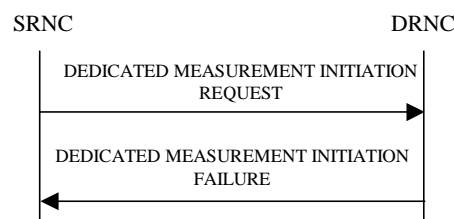
If the *Report Characteristics* IE indicates 'Event F', the DRNS shall initiate a Measurement Reporting procedure when the measured entity falls below the 'Measurement Threshold 1' and stays there for the 'Measurement Hysteresis Time' (Report A). The DRNS shall also initiate a Measurement Reporting procedure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

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

If the DRNS was able to initiate the measurement requested by the SRNS it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message using the connection-oriented service of the signalling bearer. The message shall include the same Measurement Id that was used in the measurement request.

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

### 8.3.11.3 Unsuccessful Operation



**Figure 8: Measurement Initiation procedure, Unsuccessful Operation**

If the requested measurement can not be initiated, the DRNC shall send a DEDICATED MEASUREMENT INITIATION FAILURE message using the connection-oriented service of the signalling bearer. The message shall include the same Measurement Id that was used in the measurement request and the *Cause* IE set to an appropriate value.

Typical cause values are:

#### **Radio Network Layer Causes:**

- Measurement not Supported For The Object

**Miscellaneous Causes:**

- Control Processing Overload
- HW Failure

**8.3.11.4 Abnormal Conditions**

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## 9.1.4 RADIO LINK SETUP RESPONSE

## 9.1.4.1 FDD Message

| IE/Group Name                                | Presence     | Range                      | IE type and reference | Semantics description                                       |
|--|--------------|----------------------------|-----------------------|---|
| Message Type                                 | M            |                            |                       |   |
| Transaction ID                               | M            |                            |                       |   |
| D-RNTI                                       | O            |                            |                       |   |
| CN PS Domain Identifier                      | O            |                            |                       |   |
| CN CS Domain Identifier                      | O            |                            |                       |   |
| <b>RL Information Response</b>               |              | 1..<maxnoofRLs>            |                       |   |
| RL ID  | M            |                            |                       |   |
| <u>RL Set ID</u>                             | <u>M</u>     |                            |                       |   |
| SAI  | M            |                            |                       |   |
| UL Interference Level                        | M            |                            |                       |   |
| <b>DL Code Information</b>                   |              | 1..<maxnoofDLCode s>       |                       |   |
| DL Scrambling Code                           | M            |                            |                       |   |
| FDD DL Channelisation Code Number            | M            |                            |                       |   |
| Diversity Indication                         | C-NotFirstRL |                            |                       |   |
| <i>CHOICE diversity Indication Combining</i> |              |                            |                       |   |
| RL ID  | M            |                            |                       | Reference RL ID for the combining                           |
| <i>Non Combining or IE not present</i>       |              |                            |                       | "IE not present" is equivalent to "First RL".               |
| <b>DCH Information Response</b>              |              | 0..<maxnoofDCHs >          |                       | Only one DCH per set of co-ordinated DCHs shall be included |
| DCH ID                                       | M            |                            |                       |   |
| Binding ID                                   | M            |                            |                       |   |
| Transport Layer Address                      | M            |                            |                       |   |
| SSDT Support Indicator                       | M            |                            |                       |   |
| Maximum Uplink Eb/No                         | M            |                            | Uplink Eb/No          |   |
| Minimum Uplink Eb/No                         | M            |                            | Uplink Eb/No          |   |
| <b>Neighbouring FDD Cell Information</b>     |              | 0..<maxnoofFDDn eighbours> |                       |   |
| UC-Id  | M            |                            |                       |   |
| CN PS Domain Identifier                      | O            |                            |                       |   |
| CN CS Domain Identifier                      | O            |                            |                       |   |
| UARFCN                                       | M            |                            |                       |   |
| Frame Offset                                 | O            |                            |                       |   |
| Primary Scrambling Code                      | M            |                            |                       |   |
| Primary CPICH Power                          | O            |                            |                       |   |
| <b>Neighbouring TDD Cell Information</b>     | O            | 0..<maxnoofTDDn eighbours> |                       |   |
| UC-Id  | M            |                            |                       |   |
| CN PS Domain Identifier                      | O            |                            |                       |   |
| CN CS Domain Identifier                      | O            |                            |                       |   |
| UARFCN                                       | M            |                            |                       |   |
| Frame Offset                                 | O            |                            |                       |   |
| Cell Parameter ID                            | M            |                            |                       |   |
| Sync Case                                    | M            |                            |                       |   |
| Time Slot                                    | C-Case1      |                            |                       |   |
| PSCH Time Slot                               | C-Case2&3    |                            |                       |   |
| Uplink Eb/No Target                          | O            |                            | Uplink                |   |

|                         |   |  |       |  |
|-------------------------|---|--|-------|--|
|                         |   |  | Eb/No |  |
| Downlink Eb/No Target   | O |  |       |  |
| Criticality Diagnostics | O |  |       |  |

| Condition  | Explanation  |
|------------|--|
| IfComb     | This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.     |
| IfNotComb  | This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B. |
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information                   |
| Case1      | This IE is present only if Sync Case = Case1.  |
| Case2&3    | This IE is present only if Sync Case = Case2 or Case3.                                       |

| Range bound          | Explanation   |
|----------------------|---|
| MaxnoofRLs           | Maximum no. of RLs for one UE.                        |
| MaxnoofDCHs          | Maximum no. of DCHs for one UE.                       |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell. |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell. |

## 9.1.5 RADIO LINK SETUP FAILURE

### 9.1.5.1 FDD Message

| IE/Group Name                                | Presence  | Range                | IE type and reference | Semantics description  |
|--|-----------|----------------------|-----------------------|--|
| Message Type                                 | M         |                      |                       |  |
| Transaction ID                               | M         |                      |                       |  |
| D-RNTI                                       | O         |                      |                       |  |
| CN PS Domain Identifier                      | O         |                      |                       |  |
| CN CS Domain Identifier                      | O         |                      |                       |  |
| <b>Unsuccessful RL Information Response</b>  |           | 1...<maxnoofRLs>     |                       |  |
| RL ID  | M         |                      |                       |  |
| Cause  | M         |                      |                       |  |
| <b>Successful RL Information Response</b>    |           | 0..<maxnoofRLs-1>    |                       |  |
| RL ID  | M         |                      |                       |  |
| <b>RL Set ID</b>                             | <b>M</b>  |                      |                       |  |
| SAI  | M         |                      |                       |  |
| UL Interference Level                        | M         |                      |                       |  |
| <b>DL Code Information</b>                   |           | 1..<maxnoofDL Codes> |                       |  |
| DL Scrambling Code                           | M         |                      |                       |  |
| FDD DL Channelisation Code Number            | M         |                      |                       |  |
| Diversity Indication                         | M         |                      |                       |  |
| CHOICE <i>diversity Indication Combining</i> |           |                      |                       |  |
| RL ID  | M         |                      |                       | Reference RL ID for the combining                            |
| <i>Non Combining or IE not present</i>       |           |                      |                       | "IE not present" is equivalent to "First RL".                |
| <b>DCH Information Response</b>              |           | 0..<maxnoofDCHs>     |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                       | M         |                      |                       |  |
| Binding ID                                   | M         |                      |                       |  |
| Transport Layer Address                      | M         |                      |                       |  |
| SSDT Support Indicator                       | M         |                      |                       |  |
| <b>Neighbouring FDD Cell Information</b>     | O         |                      |                       |  |
| UC-Id  | M         |                      |                       |  |
| CN PS Domain Identifier                      | O         |                      |                       |  |
| CN CS Domain Identifier                      | O         |                      |                       |  |
| UARFCN                                       | M         |                      |                       |  |
| Frame Offset                                 | O         |                      |                       |  |
| Primary Scrambling Code                      | M         |                      |                       |  |
| Primary CPICH Power                          | O         |                      |                       |  |
| <b>Neighbouring TDD Cell Information</b>     | O         |                      |                       |  |
| UC-Id  | M         |                      |                       |  |
| CN PS Domain Identifier                      | O         |                      |                       |  |
| CN CS Domain Identifier                      | O         |                      |                       |  |
| UARFCN                                       | M         |                      |                       |  |
| Frame Offset                                 | O         |                      |                       |  |
| Cell Parameter ID                            | M         |                      |                       |  |
| Sync Case                                    | M         |                      |                       |  |
| Time Slot                                    | C-Case3   |                      |                       |  |
| PSCH Time Slot                               | C-Case2&3 |                      |                       |  |
| Uplink Eb/No Target                          | O         |                      | Uplink                |  |



|                         |   |  |              |  |
|-------------------------|---|--|--------------|--|
|                         |   |  | Eb/No        |  |
| Maximum Uplink Eb/No    | M |  | Uplink Eb/No |  |
| Minimum Uplink Eb/No    | M |  | Uplink Eb/No |  |
| Downlink Eb/No Target   | O |  |              |  |
| Criticality Diagnostics | O |  |              |  |

| Condition  | Explanation  |
|------------|--|
| IfComb     | This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.     |
| IfNotComb  | This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B. |
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information                   |
| Case1      | This IE is present only if Sync Case = Case1.  |
| Case2&3    | This IE is present only if Sync Case = Case2 or Case3.                                       |

| Range bound | Explanation                     |
|-------------|---------------------------------|
| MaxnoofRLs  | Maximum no. of RLs for one UE.  |
| MaxnoofDCHs | Maximum no. of DCHs for one UE. |

## 9.1.7 RADIO LINK ADDITION RESPONSE

## 9.1.7.1 FDD Message

| IE/Group Name                            | Presence  | Range                      | IE type and reference | Semantics description  |
|--|-----------|----------------------------|-----------------------|--|
| Message Type                             | M         |                            |                       |  |
| Transaction ID                           | M         |                            |                       |  |
| <b>RL Information Response</b>           |           | 1..<maxnoofRLs-1>          |                       |  |
| RL ID                                    | M         |                            |                       |  |
| <u>RL Set ID</u>                         | <b>M</b>  |                            |                       |  |
| SAI                                      | M         |                            |                       |  |
| UL Interference Level                    | M         |                            |                       |  |
| <b>DL Code Information</b>               |           | 1..<maxnoofDLCodes>        |                       |  |
| DL Scrambling Code                       | M         |                            |                       |  |
| DL Channelisation Code                   | M         |                            |                       |  |
| Diversity Indication                     | M         |                            |                       |  |
| CHOICE <i>diversity indication</i>       |           |                            |                       |  |
| <i>Combining</i>                         |           |                            |                       |  |
| RL ID                                    | M         |                            |                       | Reference RL-Id  |
| <i>Non combining</i>                     |           |                            |                       |  |
| <b>DCH Information Response</b>          |           | 1..<maxnoofDCHs>           |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                   | M         |                            |                       |  |
| Binding ID                               | M         |                            |                       |  |
| Transport Layer Address                  | M         |                            |                       |  |
| SSDT Support Indicator                   | M         |                            |                       |  |
| Minimum Uplink Eb/No                     | M         |                            | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                     | M         |                            | Uplink Eb/No          |  |
| <b>Neighbouring FDD Cell Information</b> |           | 0..<maxnoofFDD Neighbours> |                       |  |
| UC-Id                                    | M         |                            |                       |  |
| CN PS Domain Identifier                  | O         |                            |                       |  |
| CN CS Domain Identifier                  | O         |                            |                       |  |
| UARFCN                                   | M         |                            |                       |  |
| Frame Offset                             | O         |                            |                       |  |
| Primary Scrambling Code                  | M         |                            |                       |  |
| Primary CPICH Power                      | O         |                            |                       |  |
| <b>Neighbouring TDD Cell Information</b> |           | 0..<maxnoofTDD Neighbours> |                       |  |
| UC-Id                                    | M         |                            |                       |  |
| CN PS Domain Identifier                  | O         |                            |                       |  |
| CN CS Domain Identifier                  | O         |                            |                       |  |
| UARFCN                                   | M         |                            |                       |  |
| Frame Offset                             | O         |                            |                       |  |
| Cell Parameter ID                        | M         |                            |                       |  |
| Sync Case                                | M         |                            |                       |  |
| Time Slot                                | C-Case1   |                            |                       |  |
| PSCH Time Slot                           | C-Case2&3 |                            |                       |  |
| Criticality Diagnostics                  | O         |                            |                       |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

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

## 9.1.8 RADIO LINK ADDITION FAILURE

## 9.1.8.1 FDD Message

| IE/Group Name                               | Presence  | Range                      | IE type and reference | Semantics description  |
|---|-----------|----------------------------|-----------------------|--|
| Message Type                                | M         |                            |                       |  |
| Transaction ID                              | M         |                            |                       |  |
| <b>Unsuccessful RL Information Response</b> |           | 1..<maxnoofRLs-1>          |                       |  |
| RL ID                                       | M         |                            |                       |  |
| Cause                                       | M         |                            |                       |  |
| <b>Succesfull RL Information Response</b>   |           | 1..<maxnoofRLs-2>          |                       |  |
| RL ID                                       | M         |                            |                       |  |
| <u>RL Set ID</u>                            | <b>M</b>  |                            |                       |  |
| SAI   | M         |                            |                       |  |
| UL Interference Level                       | M         |                            |                       |  |
| <b>DL Code Information</b>                  |           | 1..<maxnoofDLCodes>        |                       |  |
| DL scrambling code                          | M         |                            |                       |  |
| DL channelisation code                      | M         |                            |                       |  |
| Diversity Indication                        | M         |                            |                       |  |
| CHOICE <i>diversity indication</i>          |           |                            |                       |  |
| <i>Combining</i>                            |           |                            |                       |  |
| RL ID                                       | M         |                            |                       | Reference RL-Id  |
| <i>Non combining</i>                        |           |                            |                       |  |
| <b>DCH Information Response</b>             |           | 1..<maxnoofDCHs>           |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                      | M         |                            |                       |  |
| Binding ID                                  | M         |                            |                       |  |
| Transport Layer Address                     | M         |                            |                       |  |
| SSDT Support Indicator                      | M         |                            |                       |  |
| Minimum Uplink Eb/No                        | M         |                            | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                        | M         |                            | Uplink Eb/No          |  |
| <b>Neighbouring FDD Cell Information</b>    |           | 0..<maxnoofFDD Neighbours> |                       |  |
| UC-Id                                       | M         |                            |                       |  |
| CN PS Domain Identifier                     | O         |                            |                       |  |
| CN CS Domain Identifier                     | O         |                            |                       |  |
| UARFCN                                      | M         |                            |                       |  |
| Frame Offset                                | O         |                            |                       |  |
| Primary Scrambling Code                     | M         |                            |                       |  |
| Primary CPICH Power                         | O         |                            |                       |  |
| <b>Neighbouring TDD Cell Information</b>    |           | 0..<maxnoofTDD Neighbours> |                       |  |
| UC-Id                                       | M         |                            |                       |  |
| CN PS Domain Identifier                     | O         |                            |                       |  |
| CN CS Domain Identifier                     | O         |                            |                       |  |
| UARFCN                                      | M         |                            |                       |  |
| Frame Offset                                | O         |                            |                       |  |
| Cell Parameter ID                           | M         |                            |                       |  |
| Sync Case                                   | M         |                            |                       |  |
| Time Slot                                   | C-Case1   |                            |                       |  |
| PSCH Time Slot                              | C-Case2&3 |                            |                       |  |
| Criticality Diagnostics                     | O         |                            |                       |  |

| <b>Condition</b> | <b>Explanation</b>                                     |
|------------------|--|
| Case1            | This IE is present only if Sync Case = Case1.          |
| Case2&3          | This IE is present only if Sync Case = Case2 or Case3. |

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

## 9.1.18 RADIO LINK FAILURE INDICATION

| IE/Group Name                  | Presence | Range   | IE type and reference | Semantics description                                  |
|--------------------------------|----------|---|-----------------------|--|
| Message Type                   | M        |   |                       |  |
| Transaction ID                 | M        |   |                       |  |
| <u>CHOICE Reporting Object</u> | <u>M</u> |   |                       | <u>Object for which the Failure shall be reported.</u> |
| <u>"RL"</u>                    |          |   |                       |  |
| <u>RL Information</u>          | M        | 1 ..<br><MaxnoofRLs>                                  |                       |  |
| <u>RL ID</u>                   | M        |   |                       |  |
| <u>Cause</u>                   | M        |   |                       |  |
| <u>"RL Set"</u>                |          |   |                       |  |
| <u>RL Set Information</u>      |          | <u>1..</u><br><u>&lt;MaxnoofRLSets</u><br><u>&gt;</u> |                       |  |
| <u>RL Set ID</u>               | <u>M</u> |   |                       |  |
| <u>Cause</u>                   | <u>M</u> |   |                       |  |

| Range bound          | Explanation                                  |
|----------------------|--|
| MaxnoofRLs           | Maximum no. of RLs for one UE.               |
| <u>MaxnoofRLSets</u> | <u>Maximum number of RL Sets for one UE.</u> |

## 9.1.19 RADIO LINK RESTORE INDICATION

| IE/Group Name                  | Presence | Range                   | IE type and reference | Semantics description                                      |
|--------------------------------|----------|-------------------------|-----------------------|--|
| Message Type                   | M        |                         |                       |  |
| Transaction ID                 | M        |                         |                       |  |
| <u>CHOICE Reporting Object</u> | <u>M</u> |                         |                       | <u>Object for which the Restoration shall be reported.</u> |
| <u>"RL"</u>                    |          |                         |                       |  |
| <u>RL Information</u>          |          | 1 ..<br><MaxnoofRLs>    |                       |  |
| <u>RL ID</u>                   | M        |                         |                       |  |
| <u>"RL Set"</u>                |          |                         |                       |  |
| <u>RL Set Information</u>      |          | 1 ..<br><MaxnoofRLSets> |                       |  |
| <u>RL Set ID</u>               | <u>M</u> |                         |                       |  |

| Range bound          | Explanation                                  |
|----------------------|--|
| MaxnoofRLs           | Maximum no. of RLs for one UE.               |
| <u>MaxnoofRLSets</u> | <u>Maximum number of RL Sets for one UE.</u> |

## 9.1.28 DEDICATED MEASUREMENT INITIATION REQUEST

| IE/Group Name                                   | Presence | Range                           | IE Type and Reference | Semantics Description |
|---|----------|---------------------------------|-----------------------|-----------------------|
| Message Type                                    | M        |                                 |                       |                       |
| Transaction Id                                  | M        |                                 |                       |                       |
| Measurement Id                                  | M        |                                 |                       |                       |
| Dedicated Measurement Object Type               | M        |                                 |                       |                       |
| CHOICE <i>Dedicated Measurement Object Type</i> |          |                                 |                       |                       |
| "RL"  |          |                                 |                       |                       |
| <b>RL Information</b>                           |          | 1..<maxnoofRLs>                 |                       |                       |
| RL-id   | M        |                                 |                       |                       |
| DPCH Id   | O        |                                 |                       |                       |
| "RLS"   |          |                                 |                       |                       |
| <b><u>RL Information</u></b>                    |          | <u>1..&lt;maxnoofRLSets&gt;</u> |                       |                       |
| <u>RL-id</u>                                    | <u>M</u> |                                 |                       |                       |
| Dedicated Measurement Type                      | M        |                                 |                       |                       |
| Measurement Characteristics                     | M        |                                 |                       |                       |
| Report Characteristics                          | M        |                                 |                       |                       |

| Range bound          | Explanation  |
|----------------------|--|
| MaxnoofRLs           | Maximum number of individual RLs a measurement can be started on.            |
| <u>MaxnoofRLSets</u> | <u>Maximum number of individual RL Sets a measurement can be started on.</u> |



## 9.1.29 DEDICATED MEASUREMENT INITIATION RESPONSE

| IE/Group Name                                   | Presence | Range              | IE Type and Reference | Semantics Description  |
|---|----------|--------------------|-----------------------|--|
| Message Type                                    | M        |                    |                       |  |
| Transaction Id                                  | M        |                    |                       | Are both transaction id and Measurement id needed ?                  |
| Measurement Id                                  | M        |                    |                       |  |
| CHOICE <i>Dedicated Measurement Object Type</i> |          |                    |                       | Dedicated Measurement Object Type the measurement was initiated with |
| "RL" or "ALL RL"                                |          |                    |                       |  |
| <b>RL Information</b>                           |          | 1..<maxnoofRLs>    |                       |  |
| RL-id   | M        |                    |                       |  |
| DPCH Id   | O        |                    |                       |  |
| Dedicated Measurement Value                     | M        |                    |                       |  |
| "RLS" or "ALL RLS"                              |          |                    |                       |  |
| <b>RL Set Information</b>                       |          | 1..<maxnoofRLSets> |                       |  |
| <u>RL Set ID</u>                                | <u>M</u> |                    |                       |  |
| <u>Dedicated Measurement Value</u>              | <u>M</u> |                    |                       |  |
| —"ALLRL"  |          |                    |                       |  |
| — <u>Dedicated Measurement Value</u>            | <u>M</u> |                    |                       |  |
| CFN   | O        |                    |                       | Dedicated Measurement Time Reference                                 |
| Criticality Diagnostics                         | O        |                    |                       |  |

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

## 9.1.31 DEDICATED MEASUREMENT REPORT

| IE/Group Name                                   | Presence     | Range                           | IE Type and Reference | Semantics Description  |
|---|--------------|---------------------------------|-----------------------|--|
| Message Type                                    | M            |                                 |                       |  |
| Transaction Id                                  | M            |                                 |                       |  |
| Measurement Id                                  | M            |                                 |                       |  |
| CHOICE <i>Dedicated Measurement Object Type</i> |              |                                 |                       | Dedicated Measurement Object Type the measurement was initiated with |
| <i>"RL" or "ALL RL"</i>                         |              |                                 |                       |  |
| <b>RL Information</b>                           |              | <i>1..&lt;maxnoofRLs&gt;</i>    |                       |  |
| RL-Id   | M            |                                 |                       |  |
| DPCH Id   | O            |                                 |                       |  |
| Dedicated Measurement Value                     | M            |                                 |                       |  |
| <i>"RLS" or "ALL RLS"</i>                       |              |                                 |                       |  |
| <b>RL Set Information</b>                       |              | <i>1..&lt;maxnoofRLSets&gt;</i> |                       |  |
| <u>RL Set ID</u>                                | <u>M</u>     |                                 |                       |  |
| <u>Dedicated Measurement Value</u>              | <u>M</u>     |                                 |                       |  |
| <del>"ALLRL"</del>                              |              |                                 |                       |  |
| <del>Dedicated Measurement Value</del>          | <del>M</del> |                                 |                       |  |
| CFN   | O            |                                 |                       | Dedicated Measurement Time Reference                                 |

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

### 9.2.1.15 Dedicated Measurement Object Type

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

| IE/Group Name                     | Presence | Range | IE Type and Reference                                     | Semantics Description |
|-----------------------------------|----------|-------|---|-----------------------|
| Dedicated Measurement Object Type |          |       | ENUMERATED (RL, <u>RLS</u> , ALL_RL, <u>ALL_RLS</u> ,...) |                       |

### 9.2.2.x RL Set ID

The RL Set ID uniquely identifies one RL Set within a UE Context.

| <u>IE/Group Name</u> | <u>Presence</u> | <u>Range</u> | <u>IE type and reference</u>     | <u>Semantics description</u> |
|----------------------|-----------------|--------------|----------------------------------|------------------------------|
| <u>RL Set ID</u>     |                 |              | <u>INTEGER</u><br><u>(0..31)</u> |                              |

### 9.3.3 PDU Definitions

```

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

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,

```

DL-ScramblingCode,  
 DPCH-ID,  
 DRX-Parameter,  
 DedicatedMeasurementValue,  
 DiversityControlField,  
 DiversityMode,  
 FACH-DataFrameSize,  
 FACH-InitialWindowSize,  
 FACH-PriorityIndicator,  
 FDD-DL-ChannelisationCodeNumber,  
 FDD-S-CCPCH-Offset,  
 FrameHandlingPriority,  
 FrameOffset,  
 GapPeriod,  
 GapPositionMode,  
 L3-Information,  
 MAC-c-SDU-Length,  
 MaxNrOfUL-DPCHs,  
 MeanBitRate,  
 MeasurementCharacteristics,  
 MeasurementID,  
 MidambleShift,  
 MinUL-ChannelisationCodeLength,  
 MultipleURAsIndicator,  
 MultiplexingPosition,  
 Offset,  
 PD,  
 PSCH-PCCPCH-TimeSlot,  
 PSCH-TimeSlot,  
 PayloadCRC-PresenceIndicator,  
 PilotBitsUsedIndicator,  
 PowerControlMode,  
 PowerOffset,  
 PowerResumeMode,  
 PrimaryCCPCH-RSCP,  
 PrimaryCPICH-EcNo,  
 PrimaryCPICH-Power,  
 PrimaryScramblingCode,  
 PropagationDelay,  
 PunctureLimit,  
 RANAP-RelocationInformation,  
 RL-ID,  
 RLC-Mode,  
RL-Set-ID,  
 RNC-ID,  
 RepetitionLength,  
 RepetitionPeriod,  
 ReportCharacteristics,  
 S-FieldLength,  
 S-RNTI,  
 SAI,

```

SN,
SRNC-ID,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
ScaledUL-InterferenceLevel,
ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-PhysicalChannelOffset,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSet,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
UC-ID,
UL-DL-CompressedModeSelection,
UL-DPCCH-SlotFormat,
UL-EbNo,
UL-EbNoTarget,
UL-FP-Mode,
UL-ScramblingCode,
URA-ID
FROM RNSAP-IEs

PrivateExtensionContainer{},
ProtocolExtensionContainer{},
ProtocolIE-ContainerList{},
ProtocolIE-ContainerPair{},
ProtocolIE-ContainerPairList{},
ProtocolIE-Container{},
RNSAP-PRIVATE-EXTENSION,
RNSAP-PROTOCOL-EXTENSION,
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers

maxNoOfDL-Codes,

```

maxNrOfCCTrCHs,  
 maxNrOfDCHs,  
 maxNrOfDL-Codes,  
 maxNrOfDPCHs,  
 maxNrOfFACH-FD-Size,  
 maxNrOfFDD-Neighbours,  
 maxNrOfMACcSDU-Length,  
 maxNrOfTDD-Neighbours,  
 maxNrOfRLs,  
maxNrOfRLSets,  
 maxNrOfSCCPCHs,  
 maxRNCinURA,

id-AllowedQueuingTime,  
 id-BindingID,  
 id-C-ID,  
 id-C-RNTI,  
 id-CCTrCH-ID,  
 id-CFN,  
 id-CN-CS-DomainIdentifier,  
 id-CN-PS-DomainIdentifier,  
 id-Cause,  
 id-CompressedModeMethod,  
 id-CriticalityDiagnostics,  
 id-D-RNTI,  
 id-D-RNTI-ReleaseIndication,  
 id-DCH-AddItem,  
 id-DCH-AddItem-RL-ReconfPrepFDD,  
 id-DCH-AddItem-RL-ReconfPrepTDD,  
 id-DCH-AddItem-RL-ReconfReadyFDD,  
 id-DCH-AddItem-RL-ReconfRqstFDD,  
 id-DCH-AddItem-RL-ReconfRqstTDD,  
 id-DCH-AddList-RL-ReconfPrepFDD,  
 id-DCH-AddList-RL-ReconfPrepTDD,  
 id-DCH-AddList-RL-ReconfRqstFDD,  
 id-DCH-AddList-RL-ReconfRqstTDD,  
 id-DCH-DeleteItem-RL-ReconfPrepFDD,  
 id-DCH-DeleteItem-RL-ReconfPrepTDD,  
 id-DCH-DeleteItem-RL-ReconfRqstFDD,  
 id-DCH-DeleteItem-RL-ReconfRqstTDD,  
 id-DCH-DeleteList-RL-ReconfPrepFDD,  
 id-DCH-DeleteList-RL-ReconfPrepTDD,  
 id-DCH-DeleteList-RL-ReconfRqstFDD,  
 id-DCH-DeleteList-RL-ReconfRqstTDD,  
 id-DCH-Information-RL-SetupReqFDD,  
 id-DCH-InformationItem-RL-SetupReqFDD,  
 id-DCH-InformationItem-RL-SetupReqTDD,  
 id-DCH-InformationList-RL-SetupReqTDD,  
 id-DCH-ModifyItem,  
 id-DCH-ModifyItem-RL-ReconfPrepFDD,  
 id-DCH-ModifyItem-RL-ReconfPrepTDD,



id-DCH-ModifyItem-RL-ReconfReadyFDD,  
 id-DCH-ModifyItem-RL-ReconfRqstFDD,  
 id-DCH-ModifyItem-RL-ReconfRqstTDD,  
 id-DCH-ModifyList-RL-ReconfPrepFDD,  
 id-DCH-ModifyList-RL-ReconfPrepTDD,  
 id-DCH-ModifyList-RL-ReconfRqstFDD,  
 id-DCH-ModifyList-RL-ReconfRqstTDD,  
 id-DL-CCTrCH-Information-RL-ReconfPrepTDD,  
 id-DL-CCTrCH-Information-RL-ReconfRqstTDD,  
 id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,  
 id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD,  
 id-DL-CCTrChInformationItem-RL-SetupReqTDD,  
 id-DL-CCTrChInformationList-RL-SetupReqTDD,  
 id-DL-CodeInformation-PhyChReconfRqstFDD,  
 id-DL-DPCH-Information,  
 id-DL-DPCH-Information-RL-SetupReqFDD,  
 id-DL-DPCH-InformationList-PhyChReconfRqstTDD,  
 id-DL-DPCH-InformationList-RL-ReconfReadyTDD,  
 id-DL-EbNoTarget,  
 id-DL-FrameType,  
 id-DL-MeanBitRate,  
 id-DL-ReferencePowerInformation-DL-PC-Rqst,  
 id-DRX-Parameter,  
 id-DedicatedMeasurementObjectType-DM-Rprt,  
 id-DedicatedMeasurementObjectType-DM-Rqst,  
 id-DedicatedMeasurementObjectType-DM-Rspns,  
 id-FACH-InfoForOptionalGroupS-CCPCH,  
 id-FACH-InfoForOptionals-CCPCH,  
 id-FACH-InfoForS-CCPCH-CoupledToPRACH,  
 id-GapPositionMode,  
 id-L3-Information,  
 id-MeasurementCharacteristics,  
 id-MeasurementID,  
 id-MultipleURAsIndicator,  
 id-PD,  
 id-PagingArea-PagingRqst,  
 id-PowerControlMode,  
 id-PowerResumeMode,  
 id-ProcedureScope-DL-PC-Rqst,  
 id-RANAP-RelocationInformation,  
 id-RL-Information-PhyChReconfRqstFDD,  
 id-RL-Information-PhyChReconfRqstTDD,  
 id-RL-Information-RL-AdditionRqstFDD,  
 id-RL-Information-RL-AdditionRqstTDD,  
 id-RL-Information-RL-DeletionRqst,  
 id-RL-Information-RL-FailureInd,  
 id-RL-Information-RL-ReconfPrepFDD,  
 id-RL-Information-RL-RestoreInd,  
 id-RL-Information-RL-SetupReqFDD,  
 id-RL-Information-RL-SetupReqTDD,  
 id-RL-InformationItem-DM-Rprt,

id-RL-InformationItem-DM-Rqst,  
 id-RL-InformationItem-DM-Rspns,  
 id-RL-InformationItem-RL-SetupReqFDD,  
 id-RL-InformationList-RL-AdditionRqstFDD,  
 id-RL-InformationList-RL-DeletionRqst,  
~~id-RL-InformationList-RL-FailureInd,~~  
 id-RL-InformationList-RL-ReconfPrepFDD,  
~~id-RL-InformationList-RL-RestoreInd,~~  
 id-RL-InformationResponse-RL-AdditionRspTDD,  
 id-RL-InformationResponse-RL-ReconfReadyTDD,  
 id-RL-InformationResponse-RL-SetupRspTDD,  
 id-RL-InformationResponseItem-RL-AdditionRspFDD,  
 id-RL-InformationResponseItem-RL-ReconfReadyFDD,  
 id-RL-InformationResponseItem-RL-SetupRspFDD,  
 id-RL-InformationResponseList-RL-AdditionRspFDD,  
 id-RL-InformationResponseList-RL-ReconfReadyFDD,  
 id-RL-InformationResponseList-RL-SetupRspFDD,  
~~id-RL-Set-InformationItem-DM-Rqst,~~  
~~id-RL-Set-InformationItem-DM-Rprt~~  
~~id-RL-Set-InformationItem-DM-Rspns,~~  
~~id-RL-Set-Information-RL-FailureInd,~~  
~~id-RL-Set-Information-RL-RestoreInd,~~  
 id-RL-ReconfigurationFailure-RL-ReconfFail,  
 id-RL-ReconfigurationFailureList-RL-ReconfFail,  
 id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind,  
 id-ReportCharacteristics,  
~~id-Reporting-Object-RL-FailureInd,~~  
~~id-Reporting-Object-RL-RestoreInd,~~  
 id-S-RNTI,  
 id-SAI,  
 id-SN,  
 id-SRNC-ID,  
 id-ScramblingCodeChange,  
 id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,  
 id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,  
 id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,  
 id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,  
 id-TGD,  
 id-TGL,  
 id-TGP1,  
 id-TGP2,  
 id-TransportBearerID,  
 id-TransportBearerRequestIndicator,  
 id-TransportLayerAddress,  
 id-UC-ID,  
 id-UL-CCTrCH-Information-RL-ReconfPrepTDD,  
 id-UL-CCTrCH-Information-RL-ReconfRqstTDD,  
 id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,  
 id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,  
 id-UL-CCTrChInformationItem-RL-SetupReqTDD,  
 id-UL-CCTrChInformationList-RL-SetupReqTDD,

```

id-UL-DL-CompressedModeSelection,
id-UL-DPCH-Information,
id-UL-DPCH-Information-RL-SetupReqFDD,
id-UL-DPCH-InformationList-PhyChReconfRqstTDD,
id-UL-DPCH-InformationList-RL-ReconfReadyTDD,
id-UL-DeltaEbNo,
id-UL-DeltaEbNoAfter,
id-UL-EbNoTarget,
id-UL-MeanBitRate,
id-URA-ID,
id-UnsuccessfulRL-InformationResponse,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
FROM RNSAP-Constants;

-- *****
--
-- Common Container List
--
-- *****

DCH-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfDCHs,      { IEsSetParam } }
RL-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfRLs,      { IEsSetParam } }
| RL-Set-IE-ContainerList { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfRLSets, { IEsSetParam } }
CCTrCH-IE-ContainerList  { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfCCTrCHs, { IEsSetParam } }
DL-Code-IE-ContainerList { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfDL-Codes, { IEsSetParam } }

.
.
.
Two Messages Skipped
.
.
.
-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

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

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |

```

```

{ ID id-CN-PS-DomainIdentifier          CRITICALITY ignore TYPE CN-PS-DomainIdentifier          PRESENCE optional } |
{ ID id-CN-CS-DomainIdentifier          CRITICALITY ignore TYPE CN-CS-DomainIdentifier          PRESENCE optional } |
{ ID id-RL-InformationResponseList-RL-SetupRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD
      PRESENCE mandatory } |
{ ID id-UL-EbNoTarget                   CRITICALITY ignore TYPE UL-EbNoTarget                   PRESENCE optional } |
{ ID id-DL-EbNoTarget                   CRITICALITY ignore TYPE DL-EbNoTarget                   PRESENCE optional } |
{ ID id-CriticalityDiagnostics           CRITICALITY ignore TYPE CriticalityDiagnostics           PRESENCE optional },
...
}

RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList { {RL-InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-SetupRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseItem-RL-SetupRspFDD PRESENCE mandatory },
  ...
}

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
  rL-ID                               RL-ID,
  rL-Set-ID                           RL-Set-ID,
  sAI                                 SAI,
  ul-InterferenceLevel                ScaledUL-InterferenceLevel,
  dl-CodeInformation                  DL-CodeInformationList-RL-SetupRspFDD,
  sSDT-SupportIndicator               SSDT-SupportIndicator,
  maxUL-EbNo                          UL-EbNo,
  minUL-EbNo                          UL-EbNo,
  neighbouringFDD-CellInformation      NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
  neighbouringTDD-CellInformation      NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
  iE-Extensions                       ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupRspFDD

DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE {
  dl-ScramblingCode                   DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber     FDD-DL-ChannelisationCodeNumber,
  -- ** NOTE: How many alternatives are there, 2 or 3? **
  diversityIndication                 CHOICE {
    combining                          SEQUENCE {
      rL-ID                             RL-ID
    },
    nonCombiningOrIENotPresent         SEQUENCE {
      dCH-InformationResponse-RL-SetupRspFDD    DCH-InformationResponseList-RL-SetupRspFDD    OPTIONAL
    }
  }
}

```

```

    }
  }
  OPTIONAL
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions          ProtocolExtensionContainer { {DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

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

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspFDD

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

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

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
  NeighbouringFDD-CellInformationItem-RL-SetupRsp

NeighbouringFDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
  uC-ID                C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN              UARFCN,
  frameOffset        FrameOffset OPTIONAL,
  primaryScramblingCode PrimaryScramblingCode,
  primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

NeighbouringTDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
  NeighbouringTDD-CellInformationItem-RL-SetupRsp

NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
  c-ID                C-ID,

```

```

cN-PS-DomainIdentifier          CN-PS-DomainIdentifier  OPTIONAL,
cN-CS-DomainIdentifier          CN-CS-DomainIdentifier  OPTIONAL,
uARFCN                          UARFCN,
frameOffset                      FrameOffset          OPTIONAL,
cellParameterID                 CellParameterID,
syncCase                         SyncCase,
timeSlot                         TimeSlot          OPTIONAL
-- This IE is present only if SyncCase is Case1 -- ,
pSCH-TimeSlot                    PSCH-TimeSlot          OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
ul-EbNo                          UL-EbNo           OPTIONAL,
dl-EbNo                          DL-EbNo           OPTIONAL,
iE-Extensions                    ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
.
.
.
One Message Skipped
.
.
.

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

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

RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE mandatory } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE mandatory } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE mandatory } |
    { ID id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
      PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD

```

```

        CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
        PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
      PRESENCE mandatory },
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID RL-ID,
    cause Cause,
    iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      PRESENCE mandatory },
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID RL-ID,
    rL-Set-ID RL-Set-ID,
    sAI SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation DL-CodeInformationList-RL-SetupFailureFDD,
    sSDT-SupportIndicator SSdT-SupportIndicator,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    ul-EbNoTarget UL-EbNo,
    maxUL-EbNo UL-EbNo,
    minUL-EbNo UL-EbNo,
    dl-EbNoTarget DL-EbNo,
    iE-Extensions ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupFailureFDD

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication        CHOICE {
        combining                SEQUENCE {
            rL-ID                RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-SetupFailureFDD DCH-InformationResponseList-RL-SetupFailureFDD OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

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

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupFailureFDD

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

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

NeighbouringFDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID                    C-ID,
    cN-PS-DomainIdentifier    CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier    CN-CS-DomainIdentifier    OPTIONAL,
    uARFCN                   UARFCN,

```



```

frameOffset          FrameOffset          OPTIONAL,
primaryScramblingCode PrimaryScramblingCode,
primaryCPICH-Power   PrimaryCPICH-Power   OPTIONAL,
IE-Extensions        ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
uC-ID                C-ID,
cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
uARFCN               UARFCN,
frameOffset          FrameOffset          OPTIONAL,
cellParameterID      CellParameterID,
syncCase             SyncCase,
timeSlot             TimeSlot,
pSCH-TimeSlot        PSCH-TimeSlot        OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
IE-Extensions        ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

.
.
.
Three Messages Skipped
.
.
.
-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

RadioLinkAdditionResponseFDD ::= SEQUENCE {

```

```

    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionResponseFDD-Extensions}}
    ...
}

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI          CRITICALITY ignore  TYPE D-RNTI          PRESENCE optional } |
  { ID id-RL-InformationResponseList-RL-AdditionRspFDD
    CRITICALITY ignore  TYPE RL-InformationResponseList-RL-AdditionRspFDD
    PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= RL-IE-ContainerList { {RL-InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-AdditionRspFDD
    CRITICALITY ignore  TYPE RL-InformationResponseItem-RL-AdditionRspFDD  PRESENCE mandatory },
  ...
}

RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  rL-Set-ID     RL-Set-ID,
  sAI           SAI,
  ul-InterferenceLevel          ScaledUL-InterferenceLevel,
  dl-CodeInformation          DL-CodeInformationList-RL-AdditionRspFDD,
  sSDT-SupportIndicator          SSdT-SupportIndicator,
  maxUL-EbNo          UL-EbNo,
  minUL-EbNo          UL-EbNo,
  neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
  neighbouringTDD-CellInformation          NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-AdditionRspFDD

DL-CodeInformationItem-RL-AdditionRspFDD ::= SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber          FDD-DL-ChannelisationCodeNumber,
  -- ** NOTE: How many alternatives are there, 2 or 3? **
  diversityIndication          CHOICE {
    combining          SEQUENCE {
      rL-ID          RL-ID
    }
  }
}

```

```

    },
    nonCombiningOrIENotPresent          SEQUENCE {
        dCH-InformationResponse-RL-AdditionRspFDD          DCH-InformationResponseList-RL-AdditionRspFDD OPTIONAL
    }
}
-- This IE is present only if the RL is not the first on in the RL Information -- ,
iE-Extensions          ProtocolExtensionContainer { {DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
...
}

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

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionRspFDD

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

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

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-AdditionRsp

NeighbouringFDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier          OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier          OPTIONAL,
    uARFCN              UARFCN,
    frameOffset         FrameOffset          OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power  PrimaryCPICH-Power    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-AdditionRsp

```

```

NeighbouringTDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier    CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier    CN-CS-DomainIdentifier    OPTIONAL,
    uARFCN                UARFCN,
    frameOffset            FrameOffset                OPTIONAL,
    cellParameterID        CellParameterID,
    syncCase                SyncCase,
    timeSlot                TimeSlot,
    pSCH-TimeSlot            PSCH-TimeSlot                OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    iE-Extensions            ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

.
.
.
One Message Skipped
.
.
.
-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

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

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics
      CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },

```

```

}
...
}
UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    PRESENCE mandatory },
  ...
}
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    PRESENCE mandatory },
  ...
}
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  rL-Set-ID RL-Set-ID,
  SAI SAI,
  ul-InterferenceLevel ScaledUL-InterferenceLevel,
  dl-CodeInformation DL-CodeInformationList-RL-AdditionFailureFDD,
  sSDT-SupportIndicator SSDT-SupportIndicator,
  maxUL-EbNo UL-EbNo,
  minUL-EbNo UL-EbNo,
  neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
  neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-AdditionFailureFDD

DL-CodeInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  dl-ChannelisationCode     DL-ChannelisationCode,
  diversityIndication       CHOICE {
    combining                SEQUENCE {
      rL-ID                  RL-ID
    },
    nonCombiningOrIENotPresent SEQUENCE {
      dCH-InformationResponse-RL-AdditionFailureFDD DCH-InformationResponseList-RL-AdditionFailureFDD OPTIONAL
    }
  } OPTIONAL
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions             ProtocolExtensionContainer { {DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

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

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionFailureFDD

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

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

NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
  NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID                    C-ID,
  cN-PS-DomainIdentifier   CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier   CN-CS-DomainIdentifier OPTIONAL,
  uARFCN                  UARFCN,
  frameOffset             FrameOffset OPTIONAL,
  primaryScramblingCode   PrimaryScramblingCode,
  cPICH-Power             CPICH-Power OPTIONAL,
  iE-Extensions           ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

}
NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
  NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD
NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID                C-ID,
  cN-PS-DomainIdentifier  CN-PS-DomainIdentifier  OPTIONAL,
  cN-CS-DomainIdentifier  CN-CS-DomainIdentifier  OPTIONAL,
  uARFCN                UARFCN,
  frameOffset            FrameOffset            OPTIONAL,
  cellParameterID        CellParameterID,
  syncCase                SyncCase,
  timeSlot                TimeSlot,
  pSCH-TimeSlot            PSCH-TimeSlot            OPTIONAL
  -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
  iE-Extensions            ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
.
.
.
Several Messages Skipped
.
.
.
-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

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

```

```

RadioLinkFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationListReporting-Object-RL-FailureInd    CRITICALITY ignore  TYPE RL-InformationListReporting-Object-RL-FailureInd  PRESENCE
  mandatory  },
  ...
}

Reporting-Object-RL-FailureInd ::= CHOICE {
  rL                               RL-InformationList-RL-FailureInd,
  rL-Set                             RL-Set-InformationList-RL-FailureInd,
  ...
}

RL-InformationList-RL-FailureInd          ::= RL-IE-ContainerList { {RL-Information-RL-FailureInd-IEs} }

RL-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-FailureInd          CRITICALITY ignore  TYPE RL-Information-RL-FailureInd          PRESENCE mandatory  },
  ...
}

RL-Information-RL-FailureInd ::= SEQUENCE {
  rL-ID                RL-ID,
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
  ...
}

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

RL-Set-InformationList-RL-FailureInd          ::= RL-IE-ContainerList { {RL-Set-Information-RL-FailureInd-IEs} }

RL-Set-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-Information-RL-FailureInd          CRITICALITY ignore  TYPE RL-Set-Information-RL-FailureInd          PRESENCE mandatory  },
  ...
}

RL-Set-Information-RL-FailureInd ::= SEQUENCE {
  rL-Set-ID                RL-Set-ID,
  cause                    Cause,
  iE-Extensions            ProtocolExtensionContainer { {RL-Set-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
  ...
}

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

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

```



```

}
-- *****
--
-- RADIO LINK RESTORE INDICATION
--
-- *****

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

RadioLinkRestoreIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationListReporting-Object-RL-RestoreInd CRITICALITY ignore TYPE RL-InformationListReporting-Object-RL-RestoreInd PRESENCE
    mandatory },
    ...
}

Reporting-Object-RL-RestoreInd ::= CHOICE {
    rL                RL-InformationList-RL-RestoreInd,
    rL-Set            RL-Set-InformationList-RL-RestoreInd,
    ...
}

RL-Set-InformationList-RL-RestoreInd ::= RL-IE-ContainerList { {RL-Set-Information-RL-RestoreInd-IEs} }

RL-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-RestoreInd CRITICALITY ignore TYPE RL-Information-RL-RestoreInd PRESENCE mandatory },
    ...
}

RL-Information-RL-RestoreInd ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,
    ...
}

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

RL-Set-InformationList-RL-RestoreInd ::= RL-IE-ContainerList { {RL-Set-Information-RL-RestoreInd-IEs} }

RL-Set-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-Information-RL-RestoreInd CRITICALITY ignore TYPE RL-Set-Information-RL-RestoreInd PRESENCE mandatory },
    ...
}

RL-Set-Information-RL-RestoreInd ::= SEQUENCE {

```

```

RL-Set-ID                RL-Set-ID,
iE-Extensions          ProtocolExtensionContainer { {RL-Set-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,
...
}

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

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

.
.
.
Several Messages Skipped
.
.
.

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****

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

DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rqst PRESENCE mandatory } |
    { ID id-MeasurementCharacteristics CRITICALITY ignore TYPE MeasurementCharacteristics PRESENCE mandatory } |
    { ID id-ReportCharacteristics CRITICALITY ignore TYPE ReportCharacteristics PRESENCE mandatory },
    ...
}

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
    rLs                RL-InformationList-DM-Rqst,
    rLS                  RL-Set-InformationList-DM-Rqst,
    all-RL               All-RL-InformationList-DM-Rqst,
    all-RLS              All-RL-Set-InformationList-DM-Rqst,
    ...
}

RL-InformationList-DM-Rqst ::= RL-IE-ContainerList { {RL-Information-DM-Rqst-IEs} }

```

```

RL-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rqst      CRITICALITY ignore  TYPE RL-InformationItem-DM-Rqst      PRESENCE mandatory  },
  ...
}

RL-InformationItem-DM-Rqst ::= SEQUENCE {
  rL-ID          RL-ID,
  dPCH-ID        DPCH-ID      OPTIONAL,
  iE-Extensions  ProtocolExtensionContainer { {RL-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-InformationList-DM-Rqst      ::= RL-Set-IE-ContainerList { {RL-Set-Information-DM-Rqst-IEs} }

RL-Set-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-InformationItem-DM-Rqst      CRITICALITY ignore  TYPE RL-Set-InformationItem-DM-Rqst      PRESENCE mandatory  },
  ...
}

RL-InformationItem-DM-Rqst ::= SEQUENCE {
  rL-Set-ID          RL-Set-ID,
  iE-Extensions      ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL,
  ...
}

RL-Set-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

All-RL-InformationList-DM-Rqst      ::= ProtocolExtensionContainer { {All-RL-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL

All-RL-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

All-RL-Set-InformationList-DM-Rqst      ::= ProtocolExtensionContainer { {All-RL-Set-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL

All-RL-Set-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

-- *****
--

```

```

-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****
DedicatedMeasurementInitiationResponse ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{DedicatedMeasurementInitiationResponse-IEs}},
    protocolExtensions         ProtocolExtensionContainer {{DedicatedMeasurementInitiationResponse-Extensions}}
    ...
}

DedicatedMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rspns CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rspns PRESENCE mandatory } |
    { ID id-CFN                    CRITICALITY ignore TYPE CFN                    PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

DedicatedMeasurementObjectType-DM-Rspns ::= CHOICE {
    rL-Set                RL-InformationList-DM-Rspns,
    rL-Set                  RL-Set-InformationList-DM-Rspns,
    allRL                    AllRL-Information-DM-Rspns,
    allRL-Set                RL-Set-Information-DM-Rspns,
    ...
}

RL-InformationList-DM-Rspns ::= RL-IE-ContainerList { {RL-Information-DM-Rspns-IEs} }

RL-Information-DM-Rspns-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rspns CRITICALITY ignore TYPE RL-InformationItem-DM-Rspns PRESENCE mandatory },
    ...
}

RL-InformationItem-DM-Rspns ::= SEQUENCE {
    rL-ID                    RL-ID,
    dPCH-ID                  DPCH-ID                OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    iE-Extensions            ProtocolExtensionContainer { {RL-InformationItem-DM-Rspns-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rspns ::= RL-IE-ContainerList { {RL-Set-Information-DM-Rspns-IEs} }

RL-Set-Information-DM-Rspns-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rspns CRITICALITY ignore TYPE RL-Set-InformationItem-DM-Rspns PRESENCE mandatory },
    ...
}

```

```

RL-InformationItem-DM-Rspns ::= SEQUENCE {
  rL-Set-ID          RL-Set-ID,
  dedicatedMeasurementValue DedicatedMeasurementValue,
  iE-Extensions     ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rspns-ExtIEs} } OPTIONAL,
  ...
}

```

```

RL-Set-InformationItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

AllRL-Information-DM-Rspns ::= SEQUENCE {
  dedicatedMeasurementValue DedicatedMeasurementValue,
  iE-Extensions             ProtocolExtensionContainer { {AllRL-Information-DM-Rspns-ExtIEs} } OPTIONAL,
  ...
}

```

```

AllRL-Information-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

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

```

- 
- 
- 
- 
- 
- 

One Message Skipped

```

-- *****
--
-- DEDICATED MEASUREMENT REPORT
--
-- *****

```

```

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

```

```

DedicatedMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rprt CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rprt PRESENCE mandatory } |
  { ID id-CFN                    CRITICALITY ignore TYPE CFN                    PRESENCE optional },
  ...
}

```

```

}
DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
  rL-Set          RL-InformationList-DM-Rprt,
  all-RL         AllRL-Information-DM-Rprt,
  All-RL-Set     RL-Set-InformationList-DM-Rprt,
  ...
}
RL-InformationList-DM-Rprt          ::= RL-IE-ContainerList { {RL-Information-DM-Rprt-IEs} }
RL-Information-DM-Rprt-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rprt          CRITICALITY ignore  TYPE RL-InformationItem-DM-Rprt          PRESENCE mandatory  },
  ...
}
RL-InformationItem-DM-Rprt ::= SEQUENCE {
  rL-ID          RL-ID,
  dPCH-ID        DPCH-ID          OPTIONAL,
  dedicatedMeasurementValue      DedicatedMeasurementValue,
  iE-Extensions  ProtocolExtensionContainer { {RL-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
  ...
}
RL-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
RL-Set-InformationList-DM-Rprt          ::= RL-IE-ContainerList { {RL-Set-Information-DM-Rprt-IEs} }
RL-Information-DM-Rprt-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-InformationItem-DM-Rprt          CRITICALITY ignore  TYPE RL-Set-InformationItem-DM-Rprt          PRESENCE mandatory  },
  ...
}
RL-Set-InformationItem-DM-Rprt ::= SEQUENCE {
  rL-Set-ID          RL-Set-ID,
  dedicatedMeasurementValue      DedicatedMeasurementValue,
  iE-Extensions  ProtocolExtensionContainer { {RL-Set-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
  ...
}
RL-Set-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
AllRL-Information-DM-Rprt ::= SEQUENCE {
  dedicatedMeasurementValue      DedicatedMeasurementValue,
  iE-Extensions  ProtocolExtensionContainer { {AllRL-Information-DM-Rprt-ExtIEs} } OPTIONAL,
  ...
}

```

```
}  
AllRL-Information-DM-Rprt-ExtIEs-RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
DedicatedMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
.  
.  
.  
Several Messages Skipped  
.  
.  
.
```

### 9.3.4 Information Element Definitions

```

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

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTTFs,
    maxTTI-Count
FROM RNSAP-Constants

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

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

.
.
.
Several IEs Skipped
.
.
.

-- D

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

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

DedicatedMeasurementObjectType ::= ENUMERATED {
    rl,
    rls,

```



```

    all-rl,
    all-rls,
    ...
}
-- ** OR:
-- DedicatedMeasurementObjectType ::= INTEGER {
--   rL(0),
--   allRL(1)
-- } (0..255)
-- **

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rSCP,
    ...
}
-- timeslotTSCP is used by TDD only

-- ** OR:
-- DedicatedMeasurementType ::= INTEGER {
--   sIR(0),
--   sIR-Error(1),
--   transmittedCodePower(2),
--   rSCP(3)
-- } (0..255)
-- **

-- ** NOTE: Extensibility added **
-- **TODO**

DedicatedMeasurementValue ::= SEQUENCE {
    sIR-Value          ScaledSIR-Value          OPTIONAL,
    sIR-ErrorValue    ScaledSIR-ErrorValue     OPTIONAL,
    transmittedCodePowerValue ScaledTransmittedCodePowerValue OPTIONAL, -- Relative to CPICH
    rSCP              TBD                      OPTIONAL, -- TDD only
    iE-Extensions     ProtocolExtensionContainer { {DedicatedMeasurementValue-ExtIEs} } OPTIONAL,
    ...
}

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

-- ** TODO **
DiversityControlField ::= INTEGER

-- ** TODO **
DiversityMode ::= INTEGER

```

```

-- ** TODO **
DL-ChannelisationCode      ::= INTEGER

-- ** TODO **
DL-DPCCH-SlotFormat        ::= INTEGER

-- ** TODO **
DL-DPCH-SlotNumber         ::= INTEGER

DL-EbNo                     ::= ScaledUL-EbNo

DL-EbNoTarget               ::= ScaledUL-EbNo

-- ** TODO **
DL-Power                    ::= INTEGER

D-RNTI                       ::= INTEGER (0..1048576)
-- ** OR:
-- D-RNTI                     ::= BIT STRING (SIZE (20))
-- **

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

-- ** TODO **
DL-ScramblingCode          ::= INTEGER

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

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

-- **TODO**
DRX-Parameter               ::= TBD

-- **TODO**
DSCH-TransportFormatCombinationSet ::= INTEGER

-- **TODO**
DSCH-TFS                     ::= INTEGER

-- **TODO**
D-FieldLength               ::= INTEGER

•
•

```

```

•
Several IEs Skipped
•
•
•
-- R

-- ** TODO **
RAC ::= INTEGER

-- ** TODO **
-- OCTET STRING?
RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

RepetitionLength ::= INTEGER (1..63)

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

-- This is changed from the tabular format because it seems that
-- this is what is wanted.
ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF--,
-- ...
}

-- Changed
ReportPeriodicity ::= CHOICE {
    msec              INTEGER (1..1000),
    min               INTEGER (1..60)
}

RLC-Mode ::= ENUMERATED {
    acknowledged-mode,

```

```
    unacknowledged-mode,  
    transparent-mode  
}
```

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

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

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

```
•  
•  
•
```

```
Several IEs Skipped
```

```
•  
•  
•
```

## 9.3.6 Constant Definitions

```

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

RNSAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

id-commonTransportChannelResourcesInitiationFDD          INTEGER ::= 0
id-commonTransportChannelResourcesInitiationTDD          INTEGER ::= 1
id-commonTransportChannelResourcesRelease                INTEGER ::= 2
id-compressedModeCancellationFDD                        INTEGER ::= 3
id-compressedModeCommitFDD                              INTEGER ::= 4
id-compressedModePrepareFDD                             INTEGER ::= 5
id-downlinkPowerControl                                 INTEGER ::= 6
id-downlinkSignallingTransfer                            INTEGER ::= 7
id-errorIndication                                     INTEGER ::= 8
id-measurementFailure                                  INTEGER ::= 9
id-measurementInitiation                                INTEGER ::= 10
id-measurementReporting                                  INTEGER ::= 11
id-measurementTermination                               INTEGER ::= 12
id-pagingRequest                                        INTEGER ::= 13
id-physicalChannelReconfiguration                       INTEGER ::= 14
id-privateMessage                                       INTEGER ::= 15
id-radioLinkAddition                                    INTEGER ::= 16
id-radioLinkDeletion                                    INTEGER ::= 17
id-radioLinkFailure                                     INTEGER ::= 18
id-radioLinkRestoration                                 INTEGER ::= 19
id-radioLinkSetup                                       INTEGER ::= 20
id-srnsRelocationCommit                                 INTEGER ::= 21
id-synchronisedRadioLinkReconfigurationCancellation      INTEGER ::= 22
id-synchronisedRadioLinkReconfigurationCommit            INTEGER ::= 23
id-synchronisedRadioLinkReconfigurationPrepare          INTEGER ::= 24
id-unSynchronisedRadioLinkReconfiguration               INTEGER ::= 25
id-uplinkSignallingTransfer                             INTEGER ::= 26

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

```

```

--
-- *****
maxPrivateExtensions          INTEGER ::= 65535
maxProtocolExtensions        INTEGER ::= 65535
maxProtocolIEs               INTEGER ::= 65535
-- *****
--
-- Lists
--
-- *****

maxRateMatching              INTEGER ::= 10
maxNrOfTFCs                 INTEGER ::= 10
maxNrOfTFs                  INTEGER ::= 10

maxNoOfDL-Codes             INTEGER ::= 10
maxNrOfCCTrCHs              INTEGER ::= 10
maxNrOfDCHs                 INTEGER ::= 10
maxNrOfDL-Codes             INTEGER ::= 10
maxNrOfDPCHs                INTEGER ::= 10
maxNrOfErrors               INTEGER ::= 10
maxNrOfFACH-FD-Size         INTEGER ::= 10
maxNrOfFDD-Neighbours       INTEGER ::= 10
maxNrOfMACcSDU-Length       INTEGER ::= 10
maxNrOfTDD-Neighbours       INTEGER ::= 10
maxNrOfRRLs                 INTEGER ::= 10
maxNrOfRRLSets              ::= maxNrOfRRLs
maxNrOfSCCPCHs              INTEGER ::= 10
maxRNCinURA                INTEGER ::= 10
maxTTI-Count                INTEGER ::= 10

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

id-AllowedQueuingTime        INTEGER ::= 0
id-BindingID                 INTEGER ::= 1
id-C-ID                      INTEGER ::= 2
id-C-RNTI                    INTEGER ::= 3
id-CCTrCH-ID                 INTEGER ::= 4
id-CFN                       INTEGER ::= 5
id-CN-CS-DomainIdentifier    INTEGER ::= 6
id-CN-PS-DomainIdentifier    INTEGER ::= 7
id-Cause                     INTEGER ::= 8
id-CompressedModeMethod      INTEGER ::= 9
id-D-RNTI                    INTEGER ::= 10
id-D-RNTI-ReleaseIndication  INTEGER ::= 11

```

```

id-DCH-AddItem                INTEGER ::= 12
id-DCH-AddItem-RL-ReconfPrepFDD  INTEGER ::= 13
id-DCH-AddItem-RL-ReconfPrepTDD  INTEGER ::= 14
id-DCH-AddItem-RL-ReconfReadyFDD  INTEGER ::= 15
id-DCH-AddItem-RL-ReconfRqstFDD   INTEGER ::= 16
id-DCH-AddItem-RL-ReconfRqstTDD   INTEGER ::= 17
id-DCH-AddList-RL-ReconfPrepFDD   INTEGER ::= 18
id-DCH-AddList-RL-ReconfPrepTDD   INTEGER ::= 19
id-DCH-AddList-RL-ReconfRqstFDD   INTEGER ::= 20
id-DCH-AddList-RL-ReconfRqstTDD   INTEGER ::= 21
id-DCH-DeleteItem-RL-ReconfPrepFDD  INTEGER ::= 22
id-DCH-DeleteItem-RL-ReconfPrepTDD  INTEGER ::= 23
id-DCH-DeleteItem-RL-ReconfRqstFDD  INTEGER ::= 24
id-DCH-DeleteItem-RL-ReconfRqstTDD  INTEGER ::= 25
id-DCH-DeleteList-RL-ReconfPrepFDD  INTEGER ::= 26
id-DCH-DeleteList-RL-ReconfPrepTDD  INTEGER ::= 27
id-DCH-DeleteList-RL-ReconfRqstFDD  INTEGER ::= 28
id-DCH-DeleteList-RL-ReconfRqstTDD  INTEGER ::= 29
id-DCH-Information-RL-SetupReqFDD   INTEGER ::= 30
id-DCH-InformationItem-RL-SetupReqFDD  INTEGER ::= 31
id-DCH-InformationItem-RL-SetupReqTDD  INTEGER ::= 32
id-DCH-InformationList-RL-SetupReqTDD  INTEGER ::= 33
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id-DCH-ModifyItem-RL-ReconfPrepFDD  INTEGER ::= 35
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id-DCH-ModifyItem-RL-ReconfReadyFDD  INTEGER ::= 37
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id-DCH-ModifyList-RL-ReconfPrepFDD   INTEGER ::= 40
id-DCH-ModifyList-RL-ReconfPrepTDD   INTEGER ::= 41
id-DCH-ModifyList-RL-ReconfRqstFDD   INTEGER ::= 42
id-DCH-ModifyList-RL-ReconfRqstTDD   INTEGER ::= 43
id-DL-CCTrCH-Information-RL-ReconfPrepTDD  INTEGER ::= 44
id-DL-CCTrCH-Information-RL-ReconfRqstTDD  INTEGER ::= 45
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id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD  INTEGER ::= 47
id-DL-CCTrChInformationItem-RL-SetupReqTDD  INTEGER ::= 48
id-DL-CCTrChInformationList-RL-SetupReqTDD  INTEGER ::= 49
id-DL-CodeInformation-PhyChReconfRqstFDD  INTEGER ::= 50
id-DL-DPCH-Information            INTEGER ::= 51
id-DL-DPCH-Information-RL-SetupReqFDD  INTEGER ::= 52
id-DL-DPCH-InformationList-PhyChReconfRqstTDD  INTEGER ::= 53
id-DL-DPCH-InformationList-RL-ReconfReadyTDD  INTEGER ::= 54
id-DL-EbNoTarget                INTEGER ::= 55
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id-DL-MeanBitRate              INTEGER ::= 57
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| id-RL-InformationResponseList-RL-ReconfReadyFDD | INTEGER ::= 103            |
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| <del>id-RL-Set-InformationItem-DM-Rqst</del>    | <del>INTEGER ::= 149</del> |
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| <del>id-RL-Set-InformationItem-DM-Rspns</del>   | <del>INTEGER ::= 151</del> |
| <del>id-RL-Set-Information-RL-FailureInd</del>  | <del>INTEGER ::= 152</del> |
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| id-RL-ReconfigurationFailure-RL-ReconfFail      | INTEGER ::= 105            |
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| id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind | INTEGER ::= 107            |
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id-SN                                      INTEGER ::= 111
id-SRNC-ID                                INTEGER ::= 112
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id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD       INTEGER ::= 144
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD       INTEGER ::= 145
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD  INTEGER ::= 146
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD    INTEGER ::= 147
id-CriticalityDiagnostics                  INTEGER ::= 148

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END

# CHANGE REQUEST

*Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.*

**25.423 CR 022r1**

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**  
list expected approval meeting # here  
↑

for approval   
for information

Strategic   
non-strategic  (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

**Proposed change affects:** (U)SIM  ME  UTRAN / Radio  Core Network   
(at least one should be marked with an X)

**Source:** RAN-WG3 **Date:** 28<sup>th</sup> Feb. – 3<sup>rd</sup> March 2000

**Subject:** Restriction to allowed procedure parallelism

**Work item:**

|  |   |                                     |                 |                          |                                     |
|--|---|-------------------------------------|-----------------|--------------------------|-------------------------------------|
| <b>Category:</b><br><small>(only one category shall be marked with an X)</small> | F Correction  | <input checked="" type="checkbox"/> | <b>Release:</b> | Phase 2                  | <input type="checkbox"/>            |
|  | A Corresponds to a correction in an earlier release | <input type="checkbox"/>            |                 | Release 96               | <input type="checkbox"/>            |
|  | B Addition of feature                               | <input type="checkbox"/>            |                 | Release 97               | <input type="checkbox"/>            |
|  | C Functional modification of feature                | <input type="checkbox"/>            |                 | Release 98               | <input type="checkbox"/>            |
|  | D Editorial modification                            | <input type="checkbox"/>            |                 | Release 99               | <input checked="" type="checkbox"/> |
|  |   |                                     | Release 00      | <input type="checkbox"/> |                                     |

**Reason for change:** When introducing the concept of Elementary Procedures (EPs) a conflict with the previous agreement on parallelism of the RNSAP DCH Procedures was introduced. The problem is that prior to introducing the concept of EPs there was no possibility for the SRNC to send any other message than either RL RECONFIGURATION COMMIT or RL RECONFIGURATION CANCEL once the SRNC had received a response to the RL RECONFIGURATION PREPARE message. However since the previous procedure (RL Reconfiguration – Synchronised) was divided into three EPs the present way of describing the parallelism did not cover this case. After introducing EPs any SRNC initiated procedure may be initiated between the Synchronised RL Reconfiguration Preparation procedure and either of the procedures Synchronised RL Reconfiguration Commit and Synchronised RL Reconfiguration Cancellation. The procedures that in this way have an increased allowed parallelism are:

- \* RL Addition
- \* RL Deletion
- \* Synchronised RL Reconfiguration Preparation
- \* Unsynchronised RL Reconfiguration
- \* Measurement Initiation
- \* Measurement Termination
- \* Compressed Mode Preparation
- \* Compressed Mode Cancellation
- \* Compressed Mode Commit

**Clauses affected:** 3.1, 8.3.2.1, 8.3.3.1, 8.3.4.1, 8.3.4.2, 8.3.5.2, 8.3.6.2, 8.3.7.1, 8.3.11.1, 8.3.13.1, 8.3.16.1, 8.3.17.1, and 8.3.18.1.

**Other specs affected:** Other 3G core specifications  → List of CRs: 25.433 v3.0.0 CR-034r1  
Other GSM core specifications  → List of CRs:

MS test specifications  
BSS test specifications  
O&M specifications

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→ List of CRs:  
→ List of CRs:  
→ List of CRs:

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**Other  
comments:**

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## 3.1 Definitions

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

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

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

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

### Successful

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

### Unsuccessful

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

Class 2 EPs are considered always successful.

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

## 8.3.2 Radio Link Addition

### 8.3.2.1 General

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

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

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

## 8.3.3 Radio Link Deletion

### 8.3.3.1 General

The Radio Link Deletion procedure is used to release the resources in a DRNS for one or more established radio links towards a UE.

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

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

## 8.3.4 Synchronised Radio Link Reconfiguration Preparation

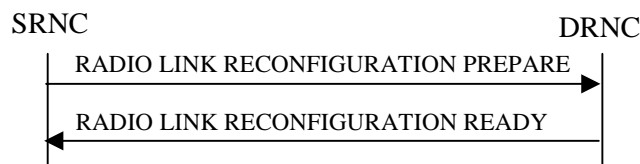
### 8.3.4.1 General

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

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

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

### 8.3.4.2 Successful Operation



**Figure 1: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation**

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

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

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

#### **DCH Modification :**

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

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

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

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new *ToAWE* in the user plane for this DCH in the new configuration.

#### **DCH Addition:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

The DRNS may use the included *RLC Mode* IE to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

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

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

#### **DCH Deletion:**

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

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

#### **Physical Channel Modification:**

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

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

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Spreading Factor of Channelisation Code (DL)* IE, for each *Spreading Factor of Channelisation Code (DL)* IE the DRNS shall allocate one new Downlink Channelisation Code per Radio Link and apply the new Downlink Channelisation Code(s) to the new configuration. Each Downlink Channelisation Code allocated for the new configuration shall be included as a *Channelisation Code (DL)* IE in the RADIO LINK RECONFIGURATION READY message when sent to the SRNC.]

The DRNS shall use the *TFCS (UL)* IE when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

The DRNS shall use the *TFCS (DL)* IE when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.



If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

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

#### SSDT Activation/Deactivation:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT Active in the UE", the DRNS may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE in the new configuration.]

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

If the requested modifications are allowed by the DRNS, and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s) it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message. When this procedure has been completed successfully there exist a Prepared Reconfiguration, as defined in chapter 3.1.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the *Maximum Uplink Eb/No* IE and *Minimum Uplink Eb/No* IE for each Radio Link in the RADIO LINK RECONFIGURATION READY message.

[TDD – The DRNC shall include all the IEs corresponding to the new physical channel parameters for the DL DPCH and/or the UL DPCH to be reconfigured in the RADIO LINK RECONFIGURATION READY message.]

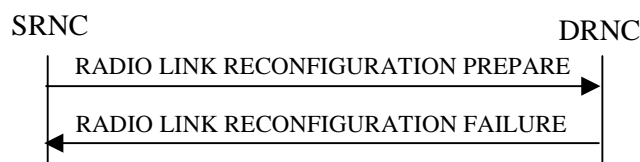
[Editor's note: Which information in the RL RECONFIGURATION PREPARE message triggers the DRNC to include any of the following *Optional TDD* information?:

- a) DL DPCH Group
- b) UL DPCH Group
- c) TDD Physical Channel Offset, *Repetition Length*, and TFCI Presence IEs as part of the DL DPCH Group
- d) TDD Physical Channel Offset, *Repetition Length*, and TFCI Presence IEs as part of the UL DPCH Group.]

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

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

#### 8.3.4.3 Unsuccessful Operation



**Figure 2: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation**

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

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

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

Typical cause values are:

**Radio Network Layer Causes:**

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Requested Configuration not Supported

**Protocol Causes:**

- Transaction not Allowed

**Miscellaneous Causes:**

- Control Processing Overload
- Not enough User Plane Processing Resources

#### 8.3.4.4 Abnormal Conditions

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

## 8.3.5 Synchronised Radio Link Reconfiguration Commit

### 8.3.5.1 General

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

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

### 8.3.5.2 Successful Operation



**Figure 3: Synchronised Radio Link Reconfiguration Commit procedure, Successful Operation**

The DRNS shall switch to the new configuration previously prepared by the Synchronised RL Reconfiguration procedure at the CFN requested by the SRNC when receiving the RADIO LINK RECONFIGURATION COMMIT message from the SRNC. When this procedure has been completed the Prepared Reconfiguration does not exist any more, see chapter 3.1.

### 8.3.5.3 Abnormal Conditions

## 8.3.6 Synchronised Radio Link Reconfiguration Cancellation

### 8.3.6.1 General

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

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

### 8.3.6.2 Successful Operation



**Figure 4: Synchronised Radio Link Reconfiguration Cancellation procedure, Successful Operation**

The DRNS shall release the new configuration previously prepared by the Synchronised RL Reconfiguration Preparation procedure and continue using the old configuration when receiving the RADIO LINK RECONFIGURATION CANCEL message from the SRNC. When this procedure has been completed the Prepared Reconfiguration does not exist any more, see chapter 3.1.

### 8.3.6.3 Abnormal Conditions

If the DRNS receives the RADIO LINK RECONFIGURATION CANCEL message from the SRNC when there is no new configuration for the Radio Link(s) within the DRNS, previously prepared by the Synchronised Radio Link Preparation procedure, the message shall be ignored.

## 8.3.7 Unsynchronised Radio Link Reconfiguration

### 8.3.7.1 General

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

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

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

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

## 8.3.11 Measurement Initiation

[Editor's note: According to TSGR#5 (99)564, the following measurements shall also be considered:

- \* Time of Arrival
- \* Frequency Offset
- \* Round Trip Time
- \* RX Timing Deviation

Whether these measurements shall be dedicated or common measurements have so far not been considered by TSG RAN WG3 and are thus not incorporated.]

### 8.3.11.1 General

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

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

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

## 8.3.13 Measurement Termination

### 8.3.13.1 General

This procedure is used by the SRNS to terminate a measurement previously requested by the Measurement Initiation procedure.

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

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

## 8.3.16 Compressed Mode Preparation [FDD]

### 8.3.16.1 General

The Compressed Mode Preparation procedure is used to prepare the compressed mode in the DRNS for one UE-UTRAN connection.

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

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



## 8.3.17 Compressed Mode Commit [FDD]

### 8.3.17.1 General

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

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

-

## 8.3.18 Compressed Mode Cancellation [FDD]

### 8.3.18.1 General

The Compressed Mode Cancellation procedure is used to cancel the compressed mode in the DRNS for one UE-UTRAN connection.

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

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

## CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

**25.423 CR 25 R1**

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**  
list expected approval meeting # here  
↑

For approval for information

Strategic   
non-strategic  (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:** (U)SIM  ME  UTRAN / Radio  Core Network   
(at least one should be marked with an X)

**Source:** **RAN-WG3** **Date:** **Feb , 2000**

**Subject:** **Inclusion of Beta C/D in TFCS (update of R3-000501)**

**Work item:**

|   |   |                                     |                 |                          |                                     |
|---|---|-------------------------------------|-----------------|--------------------------|-------------------------------------|
| <b>Category:</b><br>(only one category shall be marked with an X) | F Correction  | <input checked="" type="checkbox"/> | <b>Release:</b> | Phase 2                  | <input type="checkbox"/>            |
|   | A Corresponds to a correction in an earlier release | <input type="checkbox"/>            |                 | Release 96               | <input type="checkbox"/>            |
|   | B Addition of feature                               | <input type="checkbox"/>            |                 | Release 97               | <input type="checkbox"/>            |
|   | C Functional modification of feature                | <input type="checkbox"/>            |                 | Release 98               | <input type="checkbox"/>            |
|   | D Editorial modification                            | <input type="checkbox"/>            |                 | Release 99               | <input checked="" type="checkbox"/> |
|   |   |                                     | Release 00      | <input type="checkbox"/> |                                     |

**Reason for change:**

The Beta C and Beta D are the gain factors used for the DPCCH and DPDCH respectively.

These Beta's may vary per TFC and are provided by the UTRAN to the UE as part of the TFCS. In order to enable a node-B only measuring the DPCCH SIR to estimate the SIR for the DPDCH, which is used as input for certain decoders, it is proposed to extend the TFCS with the inclusion of the Beta's in line with the RRC approach as was agreed based on R2-000082 (CR 134) from Nortel.

One deviation from R2-000082 is the fact that the Beta's are not included mandatory (which seems to be an error), but only conditionally depending on the channel.

**Clauses affected:** **9.2.1.53, 9.3.4.**

|                              |                               |                          |                |  |
|------------------------------|-------------------------------|--------------------------|----------------|--|
| <b>Other specs affected:</b> | Other 3G core specifications  | <input type="checkbox"/> | → List of CRs: |  |
|                              | Other GSM core specifications | <input type="checkbox"/> | → List of CRs: |  |
|                              | MS test specifications        | <input type="checkbox"/> | → List of CRs: |  |
|                              | BSS test specifications       | <input type="checkbox"/> | → List of CRs: |  |
|                              | O&M specifications            | <input type="checkbox"/> | → List of CRs: |  |

**Other comments:** Other CR's also update the TFCS: in the resulting update, the beta's should only be included in non-DSCH cases.

### 9.2.1.53 Transport Format Combination Set

The Transport Format Combination Set is defined as a set of Transport Format Combinations on a Coded Composite Transport Channel. It is the allowed Transport Format Combinations of the corresponding Transport Channels. The DL Transport Format Combination Set is applicable for DL Transport Channels.

| IE/Group Name                             | Presence       | Range              | IE type and reference | Semantics description   |
|---|----------------|--------------------|-----------------------|---|
| <b>TFCS</b>                               |                | 1 to <maxnoofTFCs> |                       | The first instance of the parameter corresponds to TFC zero, the second to 1 and so on. |
| <u>&gt;</u> CTFC                          | M              |                    | INTEGER(0..MaxCTFC-1) | Integer number calculated according to ref. <b>[Error! Reference source not found.]</b> |
| <u>&gt;</u> CHOICE Gain Factors           | C-<br>PhysChan |                    |                       |   |
| <u>&gt;&gt;</u> Signalled Gain Factors    |                |                    |                       |   |
| <u>&gt;&gt;&gt;</u> Gain Factor $\beta_C$ | M              |                    | Integer (0..15)       | For UL DPCH or control part of PRACH in FDD: mapping in accordance to TS 25.213         |
| <u>&gt;&gt;&gt;</u> Gain Factor $\beta_D$ | M              |                    | Integer (0..15)       | For UL DPCH or data part of PRACH in FDD: mapping in accordance to TS 25.213            |
| <u>&gt;&gt;&gt;</u> Reference TFC nr      | O              |                    | Integer (0..15)       | If this TFC is a reference TFC, this IE indicates the reference number                  |
| <u>&gt;&gt;</u> Computed Gain Factors     |                |                    |                       |   |
| <u>&gt;&gt;&gt;</u> Reference TFC nr      | M              |                    | Integer (0..15)       | Indicates the reference TFC to be used to calculate the gain factors for this TFC       |

| Condition | Explanation  |
|-----------|--|
| PhysChan  | The choice shall be present if the TFCS concerns a UL DPCH or PRACH channel in FDD, not when the TFCS is used for other physical channels. |

| Range bound | Explanation   |
|-------------|---|
| MaxnoofTFCs | The maximum number of Transport Format Combinations (1024).   |
| MaxCTFC     | Maximum number of the CTFC value is calculated according to the following:<br>$\sum_{i=1}^I (L_i - 1)P_i$ with the notation according to ref. <b>[Error! Reference source not found.]</b> . |

### 9.3.4. Information Elements Definitions

-- B

BetaCD ::= INTEGER (0..15)

-- \*\* NOTE: Size in tabular 1..4,... \*\*

BindingID ::= OCTET STRING (SIZE (1..MAX))

BLER ::= INTEGER (-63..0)

-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

BurstType ::= ENUMERATED {  
    type1 (1),  
    type2 (2)  
}

```

-- R

-- ** TODO **
RAC ::= INTEGER

-- ** TODO **
-- OCTET STRING?
RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

RefTFNumber ::= INTEGER (0..15)

RepetitionLength ::= INTEGER (1..63)

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

-- This is changed from the tabular format because it seems that
-- this is what is wanted.
ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic           Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF--,
    -- ...
}

-- Changed
ReportPeriodicity ::= CHOICE {
    msec              INTEGER (1..1000),
    min               INTEGER (1..60)
}

RLC-Mode ::= ENUMERATED {
    acknowledged-mode,
    unacknowledged-mode,
    transparent-mode
}

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

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

```

```

-- T

-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)

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

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

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

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

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
    -- ...
}

TransportBearerID ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize ::= INTEGER (1..5000)
-- Unit is bits

TransportFormatCombination-Beta ::= CHOICE {
    SEQUENCE {
        betaC BetaCD,
        betaD BetaCD,
        refTFCNumber RefTFCNumber OPTIONAL
    }
    refTFCNumber RefTFCNumber
}

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC CTFC,
        tFC-Beta TransportFormatCombination-Beta OPTIONAL,

```

```

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

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

TransportFormatSet ::= SEQUENCE {
    dynamicParts          TransportFormatSet-DynamicPartList,
    semi-staticPart      TransportFormatSet-Semi-staticPart,
    iE-Extensions        ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

TransportFormatSet-ModeDP ::= CHOICE {
    tdd                    TransmissionTimeIntervallList,
    -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
    ...
}

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

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

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

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

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

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

```



```
|  
  
} ...  
  
-- TransportLayerAddress ::= BIT STRING (1..160, ...)  
TransportLayerAddress ::= OCTET STRING (SIZE (1..20, ...))
```

|  |  |  |                           |
|--|--|--|---------------------------|
| <b>CHANGE REQUEST</b>  |  | Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. |                           |
| <b>25.423</b>  | <b>CR 31r1</b>   | Current Version: <b>3.0.0</b>  |                           |
| GSM (AA.BB) or 3G (AA.BBB) specification number ↑                                      | ↑ CR number as allocated by MCC support team   |  |                           |
| For submission to: <b>RAN#7</b><br><i>(list expected approval meeting # here)</i><br>↑ | for approval <input checked="" type="checkbox"/><br>for information <input type="checkbox"/> | strategic <input type="checkbox"/><br>non-strategic <input type="checkbox"/>                                     | <i>(for SMG use only)</i> |

Form: CR cover sheet, version 2 for 3GPP and SMG    The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:**    (U)SIM     ME     UTRAN / Radio     Core Network   
*(at least one should be marked with an X)*

**Source:**    RAN-WG3    **Date:**    2 Mar 2000

**Subject:**    Criticality assignment for RNSAP

**Work item:**    \_\_\_\_\_

|                  |  |                 |  |
|------------------|--|-----------------|--|
| <b>Category:</b> | F Correction <input type="checkbox"/><br>A Corresponds to a correction in an earlier release <input type="checkbox"/><br>B Addition of feature <input type="checkbox"/><br>C Functional modification of feature <input checked="" type="checkbox"/><br>D Editorial modification <input type="checkbox"/> | <b>Release:</b> | Phase 2 <input type="checkbox"/><br>Release 96 <input type="checkbox"/><br>Release 97 <input type="checkbox"/><br>Release 98 <input type="checkbox"/><br>Release 99 <input checked="" type="checkbox"/><br>Release 00 <input type="checkbox"/> |
|------------------|--|-----------------|--|

*(only one category shall be marked with an X)*

**Reason for change:**    The criticality assignment shall be specified within TS25.423. The new columns within the message tabular format provide:

- Better representation and readability of the specification.
- Easier translation from the tabular format to ASN.1 code.

**Clauses affected:**    9.1 Message Functional Definition and Content  
                                   9.3 Message and Information element abstract syntax (with ASN.1)

|                              |  |   |
|------------------------------|--|---|
| <b>Other specs affected:</b> | Other 3G core specifications <input checked="" type="checkbox"/><br>Other GSM core specifications <input type="checkbox"/><br>MS test specifications <input type="checkbox"/><br>BSS test specifications <input type="checkbox"/><br>O&M specifications <input type="checkbox"/> | → List of CRs: 25.433-CR047<br>→ List of CRs:<br>→ List of CRs:<br>→ List of CRs:<br>→ List of CRs: |
|------------------------------|--|---|

**Other comments:**    The criticality information presented in this document reflects the outcome of the criticality ad hoc meeting held during RAN3#10 in Gothenburg and the followed e-mail discussion on the 3GPP TSG RAN WG3 reflector.



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

## 9.1.2 Message Contents

### 9.1.2.1 Presence

An information element can be of the following *types*:

|           |   |
|-----------|---|
| <b>M</b>  | The information element is mandatory, i.e. always present in the message  |
| <b>O</b>  | The information element is optional, i.e. may or may not be present in the message independently on the presence or value of other information elements in the same message                 |
| <b>C#</b> | The presence of the information element is conditional to the presence or to the value of another information element, as reported in the correspondent note below the message description. |

In case of an information element group, the group is preceded by a name for the info group (in bold). It is also indicated whether the group is mandatory, optional or conditional. Each group may be also repeated within one message. The presence field of the information elements inside one group defines if the information element is mandatory, optional or conditional if the group is present.

### 9.1.2.2 Criticality

Each information element or Group of information elements may have a criticality information applied to it. Following cases are possible:

|               |   |
|---------------|---|
| –             | No criticality information is applied explicitly.   |
| <b>YES</b>    | Criticality information is applied. 'YES' is usable only for non-repeatable information elements.   |
| <b>GLOBAL</b> | The information element and all its repetitions together have one common criticality information. 'GLOBAL' is usable only for repeatable information elements.  |
| <b>EACH</b>   | Each repetition of the information element has its own criticality information. It is not allowed to assign different criticality values to the repetitions. 'EACH' is usable only for repeatable information elements. |

## 9.1.3 RADIO LINK SETUP REQUEST

## 9.1.3.1 FDD Message

| IE/Group Name                       | Presence     | Range                | IE type and reference | Semantics description            | Criticality | Assigned Criticality |
|-------------------------------------|--------------|----------------------|-----------------------|----------------------------------|-------------|----------------------|
| Message Type                        | M            |                      |                       |                                  | YES         | reject               |
| Transaction ID                      | M            |                      |                       |                                  | –           |                      |
| S-RNTI                              | M            |                      |                       |                                  | YES         | reject               |
| D-RNTI                              | O            |                      |                       |                                  | YES         | reject               |
| Allowed Queuing time                | O            |                      |                       |                                  | YES         | reject               |
| <b>UL DPCH Information</b>          |              | 1                    |                       |                                  | YES         | reject               |
| UL Scrambling Code                  | M            |                      |                       |                                  | –           |                      |
| Min UL Channelisation Code Length   | M            |                      |                       |                                  | –           |                      |
| Max Number of UL DPDCHs             | C – CodeLen  |                      |                       |                                  | –           |                      |
| Puncture Limit                      | M            |                      |                       | For the UL.                      | –           |                      |
| UL Transport Format Combination Set | M            |                      |                       |                                  | –           |                      |
| UL DPCH Slot Format                 | M            |                      |                       |                                  | –           |                      |
| UL Eb/No Target                     | O            |                      |                       |                                  | –           |                      |
| Diversity mode                      | M            |                      |                       |                                  | –           |                      |
| D Field Length                      | C-FB         |                      |                       |                                  | –           |                      |
| SSDT Cell ID Length                 | O            |                      |                       |                                  | –           |                      |
| S Field Length                      | O            |                      |                       |                                  | –           |                      |
| Mean Bit Rate                       | O            |                      |                       | For the UL.                      | –           |                      |
| <b>DL DPCH Information</b>          |              | 1                    |                       |                                  | YES         | reject               |
| Transport Format Combination Set    | M            |                      |                       |                                  | –           |                      |
| DL DPCH Slot Format                 | M            |                      |                       |                                  | –           |                      |
| TFCI Signalling Mode                | M            |                      |                       |                                  | –           |                      |
| TFCI Presence                       | C-SlotFormat |                      |                       |                                  | –           |                      |
| Multiplexing Position               | M            |                      |                       |                                  | –           |                      |
| <b>Power Offset Information</b>     |              | 1                    |                       |                                  | –           |                      |
| PO1                                 | M            |                      | Power Offset          | Power offset for the TFCI bits.  | –           |                      |
| PO2                                 | M            |                      | Power Offset          | Power offset for the TPC bits.   | –           |                      |
| PO3                                 | M            |                      | Power Offset          | Power offset for the pilot bits. | –           |                      |
| TPC Downlink Step Size              | M            |                      |                       |                                  | –           |                      |
| Mean Bit Rate                       | O            |                      |                       | For the DL.                      | –           |                      |
| <b>DCH Information</b>              |              | 1..<maxnumberOfDCHs> |                       |                                  | GLOBAL      | reject               |
| DCH ID                              | M            |                      |                       |                                  | –           |                      |
| DCH Combination Ind                 | O            |                      |                       |                                  | –           |                      |
| RLC Mode                            | M            |                      |                       |                                  | –           |                      |
| Transport Format Set                | M            |                      |                       | For the UL.                      | –           |                      |
| Transport Format Set                | M            |                      |                       | For the DL.                      | –           |                      |
| BLER                                | M            |                      |                       | For the UL.                      | –           |                      |
| BLER                                | M            |                      |                       | For the DL.                      | –           |                      |
| Allocation/Retention Priority       | M            |                      |                       |                                  | –           |                      |
| Frame Handling Priority             | M            |                      |                       |                                  | –           |                      |
| Payload CRC Presence Indicator      | M            |                      |                       |                                  | –           |                      |
| UL FP Mode                          | M            |                      |                       |                                  | –           |                      |
| ToAWS                               | M            |                      |                       |                                  | –           |                      |

|                         |                       |                                |          |  |      |        |
|-------------------------|-----------------------|--------------------------------|----------|--|------|--------|
| ToAWE                   | M                     |                                |          |  | –    |        |
| <b>RL Information</b>   |                       | <i>1...&lt;maxno ofRLs&gt;</i> |          |  | EACH | notify |
| RL ID                   | M                     |                                |          |  | –    |        |
| C-ID                    | M                     |                                |          |  | –    |        |
| Frame Offset            | M                     |                                |          |  | –    |        |
| Chip Offset             | M                     |                                |          |  | –    |        |
| Propagation Delay       | O                     |                                |          |  | –    |        |
| Diversity Control Field | C –<br>NotFirstR<br>L |                                |          |  | –    |        |
| Initial DL TX Power     | O                     |                                | DL Power |  | –    |        |
| Primary CPICH Ec/Io     | O                     |                                |          |  | –    |        |
| SSDT Cell ID            | O                     |                                |          |  | –    |        |

| Condition  | Explanation  |
|------------|--|
| CodeLen    | This IE is present only if "Min UL Channelisation Code len" equals to 4                    |
| FB         | This IE is present only if Feed Back mode diversity is activated.                          |
| SlotFormat | This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16. |
| NotFirstRL | This IE is present only if the RL is not the first one in the <b>RL Information</b> .      |

| Range bound | Explanation                     |
|-------------|---------------------------------|
| MaxnoofDCHs | Maximum no. of DCHs for one UE. |
| MaxnoofRLs  | Maximum no. of RLs for one UE.  |

## 9.1.3.2 TDD Message

| IE/Group Name                  | Presence | Range                             | IE type and reference | Semantics description                | Criticality | Assigned Criticality |
|--------------------------------|----------|-----------------------------------|-----------------------|--------------------------------------|-------------|----------------------|
| Message Type                   | M        |                                   |                       |                                      | YES         | reject               |
| Transaction ID                 | M        |                                   |                       |                                      | –           |                      |
| S-RNTI                         | M        |                                   |                       |                                      | YES         | reject               |
| D-RNTI                         | O        |                                   |                       |                                      | YES         | reject               |
| Allowed Queuing time           | O        |                                   |                       |                                      | YES         | reject               |
| Mean Bit Rate                  | O        |                                   |                       | For the UL.                          | YES         | reject               |
| Mean Bit Rate                  | O        |                                   |                       | For the DL.                          | YES         | reject               |
| <b>UL CCTrCH Information</b>   |          | <i>1..&lt;maxnoof CCTrCHs&gt;</i> |                       |                                      | EACH        | notify               |
| CCTrCH ID                      | M        |                                   |                       |                                      | –           |                      |
| TFCS                           | M        |                                   |                       | For the UL.                          | –           |                      |
| TFCI Coding                    | M        |                                   |                       |                                      | –           |                      |
| Puncture Limit                 | M        |                                   |                       |                                      | –           |                      |
| <b>DL CCTrCH Information</b>   |          | <i>1..&lt;maxnoof CCTrCHs&gt;</i> |                       |                                      | EACH        | notify               |
| CCTrCH ID                      | M        |                                   |                       |                                      | –           |                      |
| TFCS                           | M        |                                   |                       | For the DL.                          | –           |                      |
| TFCI Coding                    | M        |                                   |                       |                                      | –           |                      |
| Puncture Limit                 | M        |                                   |                       |                                      | –           |                      |
| <b>DCH Information</b>         |          | <i>1..&lt;maxnoof DCHs&gt;</i>    |                       |                                      | GLOBAL      | reject               |
| DCH ID                         | M        |                                   |                       |                                      | –           |                      |
| CCTrCH ID                      | M        |                                   |                       | UL CCTrCH in which the DCH is mapped | –           |                      |
| CCTrCH ID                      | M        |                                   |                       | DL CCTrCH in which the DCH is mapped | –           |                      |
| DCH Combination Ind            | O        |                                   |                       |                                      | –           |                      |
| RLC Mode                       | M        |                                   |                       |                                      | –           |                      |
| Transport Format Set           | M        |                                   |                       | For the UL.                          | –           |                      |
| Transport Format Set           | M        |                                   |                       | For the DL.                          | –           |                      |
| BLER                           | M        |                                   |                       | For the UL.                          | –           |                      |
| BLER                           | M        |                                   |                       | For the DL.                          | –           |                      |
| Allocation/Retention Priority  | M        |                                   |                       |                                      | –           |                      |
| Frame Handling Priority        | M        |                                   |                       |                                      | –           |                      |
| Payload CRC Presence Indicator | M        |                                   |                       |                                      | –           |                      |
| UL FP Mode                     | M        |                                   |                       |                                      | –           |                      |
| ToAWS                          | M        |                                   |                       |                                      | –           |                      |
| ToAWE                          | M        |                                   |                       |                                      | –           |                      |
| <b>RL Information</b>          |          | <i>1</i>                          |                       |                                      | YES         | reject               |
| RL ID                          | M        |                                   |                       |                                      | –           |                      |
| C-ID                           | M        |                                   |                       |                                      | –           |                      |
| Frame Offset                   | M        |                                   |                       |                                      | –           |                      |
| Primary CCPCH RSCP             | O        |                                   |                       |                                      | –           |                      |

| Range bound    | Explanation                       |
|----------------|-----------------------------------|
| MaxnoofDCHs    | Maximum no. of DCHs for one UE.   |
| MaxnoofCCTrCHs | Maximum no. of CCTrCH for one UE. |

## 9.1.4 RADIO LINK SETUP RESPONSE

## 9.1.4.1 FDD Message

| IE/Group Name                            | Presence     | Range                      | IE type and reference | Semantics description                                       | Criticality | Assigned Criticality |
|--|--------------|----------------------------|-----------------------|---|-------------|----------------------|
| Message Type                             | M            |                            |                       |   | YES         | reject               |
| Transaction ID                           | M            |                            |                       |   | –           |                      |
| D-RNTI                                   | O            |                            |                       |   | YES         |                      |
| CN PS Domain Identifier                  | O            |                            |                       |   | YES         | ignore               |
| CN CS Domain Identifier                  | O            |                            |                       |   | YES         | ignore               |
| <b>RL Information Response</b>           |              | 1..<maxnoof RLS>           |                       |   | EACH        | ignore               |
| RL ID                                    | M            |                            |                       |   | –           |                      |
| SAI                                      | M            |                            |                       |   | –           |                      |
| UL Interference Level                    | M            |                            |                       |   | –           |                      |
| <b>DL Code Information</b>               |              | 1..<maxnoofDL Codes>       |                       |   | –           |                      |
| DL Scrambling Code                       | M            |                            |                       |   | –           |                      |
| FDD DL Channelisation Code Number        | M            |                            |                       |   | –           |                      |
| Diversity Indication                     | C-NotFirstRL |                            |                       |   | –           |                      |
| CHOICE <i>diversity Indication</i>       |              |                            |                       |   |             |                      |
| <i>Combining</i>                         |              |                            |                       |   | YES         | ignore               |
| RL ID                                    | M            |                            |                       | Reference RL ID for the combining                           | –           |                      |
| <i>Non Combining or IE not present</i>   |              |                            |                       | "IE not present" is equivalent to "First RL".               | YES         | ignore               |
| <b>DCH Information Response</b>          |              | 0..<maxnoof DCHs>          |                       | Only one DCH per set of co-ordinated DCHs shall be included | –           |                      |
| DCH ID                                   | M            |                            |                       |   | –           |                      |
| Binding ID                               | M            |                            |                       |   | –           |                      |
| Transport Layer Address                  | M            |                            |                       |   | –           |                      |
| SSDT Support Indicator                   | M            |                            |                       |   | –           |                      |
| Maximum Uplink Eb/No                     | M            |                            | Uplink Eb/No          |   | –           |                      |
| Minimum Uplink Eb/No                     | M            |                            | Uplink Eb/No          |   | –           |                      |
| <b>Neighbouring FDD Cell Information</b> |              | 0..<maxnoof FDDneighbours> |                       |   | EACH        | ignore               |
| UC-Id                                    | M            |                            |                       |   | –           |                      |
| CN PS Domain Identifier                  | O            |                            |                       |   | –           |                      |
| CN CS Domain Identifier                  | O            |                            |                       |   | –           |                      |
| UARFCN                                   | M            |                            |                       |   | –           |                      |
| Frame Offset                             | O            |                            |                       |   | –           |                      |
| Primary Scrambling Code                  | M            |                            |                       |   | –           |                      |
| Primary CPICH Power                      | O            |                            |                       |   | –           |                      |
| <b>Neighbouring TDD Cell Information</b> | O            | 0..<maxnoof TDDneighbours> |                       |   | EACH        | ignore               |
| UC-Id                                    | M            |                            |                       |   | –           |                      |

|                         |           |  |              |  |     |        |
|-------------------------|-----------|--|--------------|--|-----|--------|
| CN PS Domain Identifier | O         |  |              |  | –   |        |
| CN CS Domain Identifier | O         |  |              |  | –   |        |
| UARFCN                  | M         |  |              |  | –   |        |
| Frame Offset            | O         |  |              |  | –   |        |
| Cell Parameter ID       | M         |  |              |  | –   |        |
| Sync Case               | M         |  |              |  | –   |        |
| Time Slot               | C-Case1   |  |              |  | –   |        |
| PSCH Time Slot          | C-Case2&3 |  |              |  | –   |        |
| Uplink Eb/No Target     | O         |  | Uplink Eb/No |  | YES | ignore |
| Downlink Eb/No Target   | O         |  |              |  | YES | ignore |
| Criticality Diagnostics | O         |  |              |  | YES | ignore |

| Condition  | Explanation  |
|------------|--|
| IfComb     | This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.     |
| IfNotComb  | This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B. |
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information                   |
| Case1      | This IE is present only if Sync Case = Case1.  |
| Case2&3    | This IE is present only if Sync Case = Case2 or Case3.                                       |

| Range bound          | Explanation   |
|----------------------|---|
| MaxnoofRLs           | Maximum no. of RLs for one UE.                        |
| MaxnoofDCHs          | Maximum no. of DCHs for one UE.                       |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell. |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell. |



## 9.1.4.2 TDD Message

| IE/Group Name                            | Presence | Range                      | IE type and reference | Semantics description  | Criticality | Assigned Criticality |
|--|----------|----------------------------|-----------------------|--|-------------|----------------------|
| Message Type                             | M        |                            |                       |  | YES         | reject               |
| Transaction ID                           | M        |                            |                       |  | –           |                      |
| D-RNTI                                   | O        |                            |                       |  | YES         | ignore               |
| CN PS Domain Identifier                  | O        |                            |                       |  | YES         | ignore               |
| CN CS Domain Identifier                  | O        |                            |                       |  | YES         | ignore               |
| <b>RL Information Response</b>           |          | 1                          |                       |  | YES         | ignore               |
| RL ID                                    | M        |                            |                       |  | –           |                      |
| SAI                                      | M        |                            |                       |  | –           |                      |
| UL Interference Level                    | M        |                            |                       |  | –           |                      |
| Maximum Uplink Eb/No                     | M        |                            | Uplink Eb/No          |  | –           |                      |
| Minimum Uplink Eb/No                     | M        |                            | Uplink Eb/No          |  | –           |                      |
| Uplink Eb/No Target                      | O        |                            | Uplink Eb/No          |  | –           |                      |
| Downlink Eb/No Target                    | O        |                            |                       |  | –           |                      |
| <b>UL CCTrCH Information</b>             |          | 1..<maxnoof CCTrCHs>       |                       |  | GLOBAL      | ignore               |
| CCTrCH ID                                | M        |                            |                       |  | –           |                      |
| <b>UL DPCH Information</b>               |          | 1..<Maxnoof DPCHs>         |                       |  | EACH        | ignore               |
| DPCH ID                                  | M        |                            |                       |  | –           |                      |
| TDD Channelisation Code                  | M        |                            |                       |  | –           |                      |
| Burst Type                               | M        |                            |                       |  | –           |                      |
| Midamble Shift                           | M        |                            |                       |  | –           |                      |
| Time Slot                                | M        |                            |                       |  | –           |                      |
| TDD Physical Channel Offset              | M        |                            |                       |  | –           |                      |
| Repetition Period                        | M        |                            |                       |  | –           |                      |
| Repetition Length                        | M        |                            |                       |  | –           |                      |
| TFCI Presence                            | M        |                            |                       |  | –           |                      |
| <b>DL CCTrCH Information</b>             |          | 1..<maxnoof CCTrCHs>       |                       |  | GLOBAL      | ignore               |
| CCTrCH ID                                | M        |                            |                       |  | –           |                      |
| <b>DL DPCH Information</b>               |          | 1..<Maxnoof DPCHs>         |                       |  | EACH        | ignore               |
| DPCH ID                                  | M        |                            |                       |  | –           |                      |
| TDD Channelisation Code                  | M        |                            |                       |  | –           |                      |
| Burst Type                               | M        |                            |                       |  | –           |                      |
| Midamble Shift                           | M        |                            |                       |  | –           |                      |
| Time Slot                                | M        |                            |                       |  | –           |                      |
| TDD Physical Channel Offset              | M        |                            |                       |  | –           |                      |
| Repetition Period                        | M        |                            |                       |  | –           |                      |
| Repetition Length                        | M        |                            |                       |  | –           |                      |
| TFCI Presence                            | M        |                            |                       |  | –           |                      |
| <b>DCH Information Response</b>          |          | 1..<maxnoof DCHs>          |                       | Only one DCH per set of co-ordinated DCHs shall be included. | GLOBAL      | ignore               |
| DCH ID                                   | M        |                            |                       |  | –           |                      |
| Binding ID                               | M        |                            |                       |  | –           |                      |
| Transport Layer Address                  | M        |                            |                       |  | –           |                      |
| <b>Neighbouring FDD Cell Information</b> | O        | 0..<maxnoof FDDneighbours> |                       |  | EACH        | ignore               |
| UC-Id                                    | M        |                            |                       |  | –           |                      |

|  |           |   |  |  |      |        |
|--|-----------|---|--|--|------|--------|
| CN PS Domain Identifier                  | O         |   |  |  | –    |        |
| CN CS Domain Identifier                  | O         |   |  |  | –    |        |
| UARFCN                                   | M         |   |  |  | –    |        |
| Frame Offset                             | O         |   |  |  | –    |        |
| Primary Scrambling Code                  | M         |   |  |  | –    |        |
| Primary CPICH Power                      | O         |   |  |  | –    |        |
| <b>Neighbouring TDD Cell Information</b> | O         | <i>0..&lt;maxnoof TDDneighbours&gt;</i> |  |  | EACH | ignore |
| UC-Id                                    | M         |   |  |  | –    |        |
| CN PS Domain Identifier                  | O         |   |  |  | –    |        |
| CN CS Domain Identifier                  | O         |   |  |  | –    |        |
| UARFCN                                   | M         |   |  |  | –    |        |
| Frame Offset                             | O         |   |  |  | –    |        |
| Cell Parameter ID                        | M         |   |  |  | –    |        |
| Sync Case                                | M         |   |  |  | –    |        |
| Time Slot                                | C-Case1   |   |  |  | –    |        |
| PSCH Time Slot                           | C-Case2&3 |   |  |  | –    |        |
| Criticality Diagnostics                  | O         |   |  |  | YES  | ignore |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range bound          | Explanation  |
|----------------------|--|
| MaxnoofDPCHs         | Maximum no. of DPCHs for one CCTrCH.                 |
| MaxnoofDCHs          | Maximum no. of DCHs for one UE.                      |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell |
| MaxnoofCCTrCHs       | Maximum no. of CCTrCH for one UE.                    |

## 9.1.5 RADIO LINK SETUP FAILURE

## 9.1.5.1 FDD Message

| IE/Group Name                               | Presence | Range                | IE type and reference | Semantics description  | Criticality | Assigned Criticality |
|---|----------|----------------------|-----------------------|--|-------------|----------------------|
| Message Type                                | M        |                      |                       |  | YES         | reject               |
| Transaction ID                              | M        |                      |                       |  | –           |                      |
| D-RNTI                                      | O        |                      |                       |  | YES         | ignore               |
| CN PS Domain Identifier                     | O        |                      |                       |  | YES         | ignore               |
| CN CS Domain Identifier                     | O        |                      |                       |  | YES         | ignore               |
| <b>Unsuccessful RL Information Response</b> |          | 1...<maxnoof fRLs>   |                       |  | EACH        | ignore               |
| RL ID                                       | M        |                      |                       |  | –           |                      |
| Cause                                       | M        |                      |                       |  | –           |                      |
| <b>Successful RL Information Response</b>   |          | 0..<maxnoof RLS-1>   |                       |  | EACH        | ignore               |
| RL ID                                       | M        |                      |                       |  | –           |                      |
| SAI   | M        |                      |                       |  | –           |                      |
| UL Interference Level                       | M        |                      |                       |  | –           |                      |
| <b>DL Code Information</b>                  |          | 1..<maxnoofDL Codes> |                       |  | GLOBAL      | ignore               |
| DL Scrambling Code                          | M        |                      |                       |  | –           |                      |
| FDD DL Channelisation Code Number           | M        |                      |                       |  | –           |                      |
| Diversity Indication                        | M        |                      |                       |  | –           |                      |
| CHOICE <i>diversity Indication</i>          |          |                      |                       |  |             |                      |
| <i>Combining</i>                            |          |                      |                       |  | YES         | ignore               |
| RL ID                                       | M        |                      |                       | Reference RL ID for the combining                            | –           |                      |
| <i>Non Combining or IE not present</i>      |          |                      |                       | "IE not present" is equivalent to "First RL".                | YES         | ignore               |
| <b>DCH Information Response</b>             |          | 0..<maxnoof DCHs>    |                       | Only one DCH per set of co-ordinated DCHs shall be included. | –           |                      |
| DCH ID                                      | M        |                      |                       |  | –           |                      |
| Binding ID                                  | M        |                      |                       |  | –           |                      |
| Transport Layer Address                     | M        |                      |                       |  | –           |                      |
| SSDT Support Indicator                      | M        |                      |                       |  | –           |                      |
| <b>Neighbouring FDD Cell Information</b>    | O        |                      |                       |  | EACH        | ignore               |
| UC-Id                                       | M        |                      |                       |  | –           |                      |
| CN PS Domain Identifier                     | O        |                      |                       |  | –           |                      |
| CN CS Domain Identifier                     | O        |                      |                       |  | –           |                      |
| UARFCN                                      | M        |                      |                       |  | –           |                      |
| Frame Offset                                | O        |                      |                       |  | –           |                      |
| Primary Scrambling Code                     | M        |                      |                       |  | –           |                      |
| Primary CPICH Power                         | O        |                      |                       |  | –           |                      |
| <b>Neighbouring TDD Cell Information</b>    | O        |                      |                       |  | EACH        | ignore               |
| UC-Id                                       | M        |                      |                       |  | –           |                      |
| CN PS Domain Identifier                     | O        |                      |                       |  | –           |                      |
| CN CS Domain Identifier                     | O        |                      |                       |  | –           |                      |

|                         |           |  |              |  |     |        |
|-------------------------|-----------|--|--------------|--|-----|--------|
| Identifier              |           |  |              |  |     |        |
| UARFCN                  | M         |  |              |  | –   |        |
| Frame Offset            | O         |  |              |  | –   |        |
| Cell Parameter ID       | M         |  |              |  | –   |        |
| Sync Case               | M         |  |              |  | –   |        |
| Time Slot               | C-Case3   |  |              |  | –   |        |
| PSCH Time Slot          | C-Case2&3 |  |              |  | –   |        |
| Uplink Eb/No Target     | O         |  | Uplink Eb/No |  | –   |        |
| Maximum Uplink Eb/No    | M         |  | Uplink Eb/No |  | –   |        |
| Minimum Uplink Eb/No    | M         |  | Uplink Eb/No |  | –   |        |
| Downlink Eb/No Target   | O         |  |              |  | –   |        |
| Criticality Diagnostics | O         |  |              |  | YES | ignore |

| Condition  | Explanation  |
|------------|--|
| IfComb     | This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.     |
| IfNotComb  | This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B. |
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information                   |
| Case1      | This IE is present only if Sync Case = Case1.  |
| Case2&3    | This IE is present only if Sync Case = Case2 or Case3.                                       |

| Range bound | Explanation                     |
|-------------|---------------------------------|
| MaxnoofRLs  | Maximum no. of RLs for one UE.  |
| MaxnoofDCHs | Maximum no. of DCHs for one UE. |

### 9.1.5.2 TDD Message

| IE/Group Name                               | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                                | M        |       |                       |                       | YES         | reject               |
| Transaction ID                              | M        |       |                       |                       | –           |                      |
| <b>Unsuccessful RL Information Response</b> |          | 1     |                       |                       | YES         | ignore               |
| RL ID                                       | M        |       |                       |                       | –           |                      |
| Cause                                       | M        |       |                       |                       | –           |                      |
| Criticality Diagnostics                     | O        |       |                       |                       | YES         | ignore               |

## 9.1.6 RADIO LINK ADDITION REQUEST

### 9.1.6.1 FDD Message

| IE/Group Name           | Presence | Range                           | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|---------------------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |                                 |                       |                       | YES         | reject               |
| Transaction ID          | M        |                                 |                       |                       | –           |                      |
| Uplink Eb/No Target     | M        |                                 | Uplink Eb/No          |                       | YES         | reject               |
| <b>RL Information</b>   |          | <i>1..&lt;maxnoof RLS-1&gt;</i> |                       |                       | EACH        | notify               |
| RL ID                   | M        |                                 |                       |                       | –           |                      |
| C-Id                    | M        |                                 |                       |                       | –           |                      |
| Frame Offset            | M        |                                 |                       |                       | –           |                      |
| Chip Offset             | M        |                                 |                       |                       | –           |                      |
| Diversity Control Field | M        |                                 |                       |                       | –           |                      |
| Primary CPICH Ec/lo     | O        |                                 |                       |                       | –           |                      |
| SSTD Cell Identity      | O        |                                 |                       |                       | –           |                      |

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

### 9.1.6.2 TDD Message

| IE/Group Name           | Presence | Range    | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|----------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |          |                       |                       | YES         | reject               |
| Transaction ID          | M        |          |                       |                       | –           |                      |
| <b>RL Information</b>   |          | <i>1</i> |                       |                       | YES         | reject               |
| RL ID                   | M        |          |                       |                       | –           |                      |
| C-Id                    | M        |          |                       |                       | –           |                      |
| Frame Offset            | M        |          |                       |                       | –           |                      |
| Diversity Control Field | M        |          |                       |                       | –           |                      |
| Primary CCPCH RSCP      | O        |          |                       |                       | –           |                      |

## 9.1.7 RADIO LINK ADDITION RESPONSE

## 9.1.7.1 FDD Message

| IE/Group Name                            | Presence | Range                       | IE type and reference | Semantics description  | Criticality | Assigned Criticality |
|--|----------|-----------------------------|-----------------------|--|-------------|----------------------|
| Message Type                             | M        |                             |                       |  | YES         | reject               |
| Transaction ID                           | M        |                             |                       |  | –           |                      |
| <b>RL Information Response</b>           |          | 1..<maxnoof RLS-1>          |                       |  | EACH        | ignore               |
| RL ID                                    | M        |                             |                       |  | –           |                      |
| SAI                                      | M        |                             |                       |  | –           |                      |
| UL Interference Level                    | M        |                             |                       |  | –           |                      |
| <b>DL Code Information</b>               |          | 1..<maxnoof DL Codes>       |                       |  | GLOBAL      | ignore               |
| DL Scrambling Code                       | M        |                             |                       |  | –           |                      |
| DL Channelisation Code                   | M        |                             |                       |  | –           |                      |
| Diversity Indication                     | M        |                             |                       |  | YES         | ignore               |
| CHOICE <i>diversity indication</i>       |          |                             |                       |  |             |                      |
| <i>Combining</i>                         |          |                             |                       |  | YES         | ignore               |
| RL ID                                    | M        |                             |                       | Reference RL-Id  | –           |                      |
| <i>Non combining</i>                     |          |                             |                       |  | YES         | ignore               |
| <b>DCH Information Response</b>          |          | 1..<maxnoof DCHs>           |                       | Only one DCH per set of co-ordinated DCHs shall be included. | –           |                      |
| DCH ID                                   | M        |                             |                       |  | –           |                      |
| Binding ID                               | M        |                             |                       |  | –           |                      |
| Transport Layer Address                  | M        |                             |                       |  | –           |                      |
| SSDT Support Indicator                   | M        |                             |                       |  | –           |                      |
| Minimum Uplink Eb/No                     | M        |                             | Uplink Eb/No          |  | –           |                      |
| Maximum Uplink Eb/No                     | M        |                             | Uplink Eb/No          |  | –           |                      |
| <b>Neighbouring FDD Cell Information</b> |          | 0..<maxnoof FDD Neighbours> |                       |  | EACH        | ignore               |
| UC-Id                                    | M        |                             |                       |  | –           |                      |
| CN PS Domain Identifier                  | O        |                             |                       |  | –           |                      |
| CN CS Domain Identifier                  | O        |                             |                       |  | –           |                      |
| UARFCN                                   | M        |                             |                       |  | –           |                      |
| Frame Offset                             | O        |                             |                       |  | –           |                      |
| Primary Scrambling Code                  | M        |                             |                       |  | –           |                      |
| Primary CPICH Power                      | O        |                             |                       |  | –           |                      |
| <b>Neighbouring TDD Cell Information</b> |          | 0..<maxnoof TDD Neighbours> |                       |  | EACH        | ignore               |
| UC-Id                                    | M        |                             |                       |  | –           |                      |
| CN PS Domain Identifier                  | O        |                             |                       |  | –           |                      |
| CN CS Domain Identifier                  | O        |                             |                       |  | –           |                      |
| UARFCN                                   | M        |                             |                       |  | –           |                      |
| Frame Offset                             | O        |                             |                       |  | –           |                      |
| Cell Parameter ID                        | M        |                             |                       |  | –           |                      |
| Sync Case                                | M        |                             |                       |  | –           |                      |
| Time Slot                                | C-Case1  |                             |                       |  | –           |                      |
| PSCH Time Slot                           | C-       |                             |                       |  | –           |                      |

|                         |         |  |  |  |     |        |
|-------------------------|---------|--|--|--|-----|--------|
|                         | Case2&3 |  |  |  |     |        |
| Criticality Diagnostics | O       |  |  |  | YES | ignore |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range bound          | Explanation   |
|----------------------|---|
| MaxnoofDCHs          | Maximum number of dedicated channels on one RL        |
| MaxnoofRLs           | Maximum number of radio links for one UE              |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one cell |
| MaxnoofDLCodes       | Maximum number of DL code information                 |

## 9.1.7.2 TDD Message

| IE/Group Name                            | Presence | Range                      | IE type and reference | Semantics description  | Criticality | Assigned Criticality |
|--|----------|----------------------------|-----------------------|--|-------------|----------------------|
| Message Type                             | M        |                            |                       |  | YES         | reject               |
| Transaction ID                           | M        |                            |                       |  | –           |                      |
| <b>RL Information Response</b>           |          | 1                          |                       |  | YES         | ignore               |
| RL ID                                    | M        |                            |                       |  | –           |                      |
| SAI                                      | M        |                            |                       |  | –           |                      |
| UL Interference Level                    | M        |                            |                       |  | –           |                      |
| <b>UL CCTrCH Information</b>             |          | 1..<maxnoof CCTrCHs>       |                       |  | GLOBAL      | ignore               |
| CCTrCH ID                                | M        |                            |                       |  | –           |                      |
| <b>UL DPCH Information</b>               |          | 1..<maxnoOf fDPCHs>        |                       |  | EACH        | ignore               |
| DPCH ID                                  | M        |                            |                       |  | –           |                      |
| TDD Channelisation Code                  | M        |                            |                       |  | –           |                      |
| Burst Type                               | M        |                            |                       |  | –           |                      |
| Midamble Shift                           | M        |                            |                       |  | –           |                      |
| Time Slot                                | M        |                            |                       |  | –           |                      |
| TDD Physical Channel Offset              | M        |                            |                       |  | –           |                      |
| Repetition Period                        | M        |                            |                       |  | –           |                      |
| Repetition Length                        | M        |                            |                       |  | –           |                      |
| TFCI Presence                            | M        |                            |                       |  | –           |                      |
| <b>DL CCTrCH Information</b>             |          | 1..<maxnoof CCTrCHs>       |                       |  | GLOBAL      | ignore               |
| CCTrCH ID                                | M        |                            |                       |  | –           |                      |
| <b>DL DPCH information</b>               |          | 1..<maxnoOf fDPCHs>        |                       |  | EACH        | ignore               |
| DPCH ID                                  | M        |                            |                       |  | –           |                      |
| TDD Channelisation Code                  | M        |                            |                       |  | –           |                      |
| Burst Type                               | M        |                            |                       |  | –           |                      |
| Midamble Shift                           | M        |                            |                       |  | –           |                      |
| Time Slot                                | M        |                            |                       |  | –           |                      |
| TDD Physical Channel Offset              | M        |                            |                       |  | –           |                      |
| Repetition Period                        | M        |                            |                       |  | –           |                      |
| Repetition Length                        | M        |                            |                       |  | –           |                      |
| TFCI Presence                            | M        |                            |                       |  | –           |                      |
| Diversity Indication                     | M        |                            |                       |  | YES         | ignore               |
| CHOICE <i>diversity indication</i>       |          |                            |                       |  |             |                      |
| <i>Combining</i>                         |          |                            |                       |  | YES         | ignore               |
| RL ID                                    | M        |                            |                       | Reference RL   | –           |                      |
| <i>Non combining</i>                     |          |                            |                       |  | YES         | ignore               |
| <b>DCH Information Response</b>          |          | 1..<maxnoof DCHs>          |                       | Only one DCH per set of co-ordinated DCHs shall be included. | –           |                      |
| DCH ID                                   | M        |                            |                       |  | –           |                      |
| Binding ID                               | M        |                            |                       |  | –           |                      |
| Transport Layer Address                  | M        |                            |                       |  | –           |                      |
| Minimum Uplink Eb/No                     | M        |                            | Uplink Eb/No          |  | –           |                      |
| Maximum Uplink Eb/No                     | M        |                            | Uplink Eb/No          |  | –           |                      |
| <b>Neighbouring FDD Cell Information</b> |          | 0..<maxnoof FDDNeighbours> |                       |  | EACH        | ignore               |
| UC-Id                                    | M        |                            |                       |  | –           |                      |



|  |           |   |  |  |      |        |
|--|-----------|---|--|--|------|--------|
| CN PS Domain Identifier                  | O         |   |  |  | –    |        |
| CN CS Domain Identifier                  | O         |   |  |  | –    |        |
| UARFCN                                   | M         |   |  |  | –    |        |
| Frame Offset                             | O         |   |  |  | –    |        |
| Primary Scrambling Code                  | M         |   |  |  | –    |        |
| Primary CPICH Power                      | O         |   |  |  | –    |        |
| <b>Neighbouring TDD Cell Information</b> |           | <i>0..&lt;maxnoof TDDNeighbours&gt;</i> |  |  | EACH | ignore |
| UC-Id                                    | M         |   |  |  | –    |        |
| CN PS Domain Identifier                  | O         |   |  |  | –    |        |
| CN CS Domain Identifier                  | O         |   |  |  | –    |        |
| UARFCN                                   | M         |   |  |  | –    |        |
| Frame Offset                             | O         |   |  |  | –    |        |
| Cell Parameter ID                        | M         |   |  |  | –    |        |
| Sync Case                                | M         |   |  |  | –    |        |
| Time Slot                                | C-Case1   |   |  |  | –    |        |
| PSCH Time Slot                           | C-Case2&3 |   |  |  | –    |        |
| Criticality Diagnostics                  | O         |   |  |  | YES  | ignore |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1           |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range Bound          | Explanation   |
|----------------------|---|
| MaxnoofDCHs          | Maximum number of dedicated channels on one RL        |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one cell |
| MaxnoofDLCodes       | Maximum number of DL code information                 |
| MaxnoOfDPCHs         | Maximum number of DPCH in one CCTrCH                  |
| MaxnoofCCTrCHs       | no. of CCTrCH for one UE.                             |

## 9.1.8 RADIO LINK ADDITION FAILURE

## 9.1.8.1 FDD Message

| IE/Group Name                               | Presence | Range                       | IE type and reference | Semantics description  | Criticality | Assigned Criticality |
|---|----------|-----------------------------|-----------------------|--|-------------|----------------------|
| Message Type                                | M        |                             |                       |  | YES         | reject               |
| Transaction ID                              | M        |                             |                       |  | –           |                      |
| <b>Unsuccessful RL Information Response</b> |          | 1..<maxnoof RLS-1>          |                       |  | EACH        | ignore               |
| RL ID                                       | M        |                             |                       |  | –           |                      |
| Cause                                       | M        |                             |                       |  | –           |                      |
| <b>Successful RL Information Response</b>   |          | 1..<maxnoof RLS-2>          |                       |  | EACH        | ignore               |
| RL ID                                       | M        |                             |                       |  | –           |                      |
| SAI   | M        |                             |                       |  | –           |                      |
| UL Interference Level                       | M        |                             |                       |  | –           |                      |
| <b>DL Code Information</b>                  |          | 1..<maxnoof DL Codes>       |                       |  | GLOBAL      | ignore               |
| DL scrambling code                          | M        |                             |                       |  | –           |                      |
| DL channelisation code                      | M        |                             |                       |  | –           |                      |
| Diversity Indication                        | M        |                             |                       |  | YES         | ignore               |
| CHOICE <i>diversity indication</i>          |          |                             |                       |  |             |                      |
| <i>Combining</i>                            |          |                             |                       |  | YES         | ignore               |
| RL ID                                       | M        |                             |                       | Reference RL-Id  | –           |                      |
| <i>Non combining</i>                        |          |                             |                       |  | YES         | ignore               |
| <b>DCH Information Response</b>             |          | 1..<maxnoof DCHs>           |                       | Only one DCH per set of co-ordinated DCHs shall be included. | –           |                      |
| DCH ID                                      | M        |                             |                       |  | –           |                      |
| Binding ID                                  | M        |                             |                       |  | –           |                      |
| Transport Layer Address                     | M        |                             |                       |  | –           |                      |
| SSDT Support Indicator                      | M        |                             |                       |  | –           |                      |
| Minimum Uplink Eb/No                        | M        |                             | Uplink Eb/No          |  | –           |                      |
| Maximum Uplink Eb/No                        | M        |                             | Uplink Eb/No          |  | –           |                      |
| <b>Neighbouring FDD Cell Information</b>    |          | 0..<maxnoof FDD Neighbours> |                       |  | EACH        | ignore               |
| UC-Id                                       | M        |                             |                       |  | –           |                      |
| CN PS Domain Identifier                     | O        |                             |                       |  | –           |                      |
| CN CS Domain Identifier                     | O        |                             |                       |  | –           |                      |
| UARFCN                                      | M        |                             |                       |  | –           |                      |
| Frame Offset                                | O        |                             |                       |  | –           |                      |
| Primary Scrambling Code                     | M        |                             |                       |  | –           |                      |
| Primary CPICH Power                         | O        |                             |                       |  | –           |                      |
| <b>Neighbouring TDD Cell Information</b>    |          | 0..<maxnoof TDD Neighbours> |                       |  | EACH        | ignore               |
| UC-Id                                       | M        |                             |                       |  | –           |                      |
| CN PS Domain Identifier                     | O        |                             |                       |  | –           |                      |
| CN CS Domain Identifier                     | O        |                             |                       |  | –           |                      |
| UARFCN                                      | M        |                             |                       |  | –           |                      |
| Frame Offset                                | O        |                             |                       |  | –           |                      |
| Cell Parameter ID                           | M        |                             |                       |  | –           |                      |

|                         |           |  |  |  |     |        |
|-------------------------|-----------|--|--|--|-----|--------|
| Sync Case               | M         |  |  |  | –   |        |
| Time Slot               | C-Case1   |  |  |  | –   |        |
| PSCH Time Slot          | C-Case2&3 |  |  |  | –   |        |
| Criticality Diagnostics | O         |  |  |  | YES | ignore |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range bound          | Explanation   |
|----------------------|---|
| MaxnoofDCHs          | Maximum number of dedicated channels on one RL        |
| MaxnoofRLs           | Maximum number of radio links for one UE              |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one cell |
| MaxnoofDLCodes       | Maximum number of DL code information                 |

### 9.1.8.2 TDD Message

| IE/Group Name                               | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                                | M        |       |                       |                       | YES         | reject               |
| Transaction ID                              | M        |       |                       |                       | –           |                      |
| <b>Unsuccessful RL Information Response</b> |          | 1     |                       |                       | YES         | ignore               |
| RL ID                                       | M        |       |                       |                       | –           |                      |
| Cause                                       | M        |       |                       |                       | –           |                      |
| Criticality Diagnostics                     | O        |       |                       |                       | YES         | ignore               |

### 9.1.9 RADIO LINK DELETION REQUEST

| IE/Group Name         | Presence | Range            | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-----------------------|----------|------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type          | M        |                  |                       |                       | YES         | reject               |
| Transaction ID        | M        |                  |                       |                       | –           |                      |
| <b>RL Information</b> |          | 1..<maxnoof RLs> |                       |                       | EACH        | notify               |
| RL ID                 | M        |                  |                       |                       | –           |                      |

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

### 9.1.10 RADIO LINK DELETION RESPONSE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       |                       |                       | YES         | reject               |
| Transaction ID          | M        |       |                       |                       | –           |                      |
| Criticality Diagnostics | O        |       |                       |                       | YES         | ignore               |

## 9.1.11 RADIO LINK RECONFIGURATION PREPARE

## 9.1.11.1 FDD Message

| IE/Group Name                     | Presence      | Range             | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-----------------------------------|---------------|-------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                      | M             |                   |                       |                       | YES         | reject               |
| Transaction ID                    | M             |                   |                       |                       | –           |                      |
| Allowed Queuing Time              | O             |                   |                       |                       | YES         | reject               |
| <b>UL DPCH Information</b>        |               | 0..1              |                       |                       | YES         | reject               |
| UL Scrambling code                | O             |                   |                       |                       | –           |                      |
| Min UL Channelisation Code Length | O             |                   |                       |                       | –           |                      |
| Max Number of UL DPDCHs           | C – CodeLen   |                   |                       |                       | –           |                      |
| Puncture Limit                    | O             |                   |                       | For the UL.           | –           |                      |
| TFCS                              | O             |                   |                       | TFCS for the UL.      | –           |                      |
| UL DPCCCH Slot Format             | O             |                   |                       |                       | –           |                      |
| SSDT Cell Identity Length         | O             |                   |                       |                       | –           |                      |
| S-Field Length                    | O             |                   |                       |                       | –           |                      |
| Mean Bit Rate                     | O             |                   |                       | For the UL.           | –           |                      |
| <b>DL DPCH Information</b>        |               | 0..1              |                       |                       | YES         | reject               |
| TFCS                              | O             |                   |                       | TFCS for the DL.      | –           |                      |
| DL DPCH Slot Format               | O             |                   |                       |                       | –           |                      |
| TFCI Signalling Mode              | O             |                   |                       |                       | –           |                      |
| TFCI Presence                     | C- SlotFormat |                   |                       |                       | –           |                      |
| MultiplexingPosition              | O             |                   |                       |                       | –           |                      |
| Mean Bit Rate                     | O             |                   |                       | For the DL.           | –           |                      |
| <b>DCHs to Modify</b>             |               | 0..<maxnoof DCHs> |                       |                       | GLOBAL      | reject               |
| DCH ID                            | M             |                   |                       |                       | –           |                      |
| Transport Format Set              | O             |                   |                       | For the UL.           | –           |                      |
| Transport Format Set              | O             |                   |                       | For the DL.           | –           |                      |
| Allocation/Retention Priority     | O             |                   |                       |                       | –           |                      |
| Frame Handling Priority           | O             |                   |                       |                       | –           |                      |
| UL FP Mode                        | O             |                   |                       |                       | –           |                      |
| ToAWS                             | O             |                   |                       |                       | –           |                      |
| ToAWE                             | O             |                   |                       |                       | –           |                      |
| <b>DCHs to Add</b>                |               | 0..<maxnoof DCHs> |                       |                       | GLOBAL      | reject               |
| DCH ID                            | M             |                   |                       |                       | –           |                      |
| DCH Combination Indicator         | O             |                   |                       |                       | –           |                      |
| RLC Mode                          | M             |                   |                       |                       | –           |                      |
| Transport Format Set              | M             |                   |                       | For the UL.           | –           |                      |
| Transport Format Set              | M             |                   |                       | For the DL.           | –           |                      |
| BLER                              | M             |                   |                       | For the UL.           | –           |                      |
| BLER                              | M             |                   |                       | For the DL.           | –           |                      |
| Allocation/Retention Priority     | M             |                   |                       |                       | –           |                      |
| Frame Handling Priority           | M             |                   |                       |                       | –           |                      |
| Payload CRC Presence Indicator    | M             |                   |                       |                       | –           |                      |
| UL FP Mode                        | M             |                   |                       |                       | –           |                      |
| ToAWS                             | M             |                   |                       |                       | –           |                      |
| ToAWE                             | M             |                   |                       |                       | –           |                      |
| <b>DCHs to Delete</b>             |               | 0..<maxnoof DCHs> |                       |                       | GLOBAL      | reject               |
| DCH ID                            | M             |                   |                       |                       | –           |                      |
| <b>RL Information</b>             |               | 0..<maxnoof       |                       |                       | EACH        | reject               |

|                    |                      |                |  |  |   |  |
|--------------------|----------------------|----------------|--|--|---|--|
|                    |                      | <i>RLs&gt;</i> |  |  |   |  |
| RL ID              | M                    |                |  |  | – |  |
| SSTD Indication    | O                    |                |  |  | – |  |
| SSTD Cell Identity | C -<br>SSTDIndO<br>N |                |  |  | – |  |

| <b>Condition</b> | <b>Explanation</b>   |
|------------------|--|
| SSTDIndON        | The IE may be present if the SSTD Indication is set to 'SSTD Active in the UE'.            |
| CodeLen          | This IE is present only if "Min UL Channelisation Code length" equals to 4.                |
| SlotFormat       | This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16. |

| <b>Range bound</b> | <b>Explanation</b>               |
|--------------------|----------------------------------|
| MaxnoofDCHs        | Maximum number of DCHs for a UE. |
| MaxnoofRLs         | Maximum number of RLs for a UE.  |

## 9.1.11.2 TDD Message

| IE/Group Name                  | Presence | Range                          | IE Type and Reference | Semantics Description              | Criticality | Assigned Criticality |
|--------------------------------|----------|--------------------------------|-----------------------|------------------------------------|-------------|----------------------|
| Message Type                   | M        |                                |                       |                                    | YES         | reject               |
| Transaction ID                 | M        |                                |                       |                                    | –           |                      |
| Allowed Queuing Time           | O        |                                |                       |                                    | YES         | reject               |
| Mean Bit Rate                  | O        |                                |                       | For the UL                         | YES         | reject               |
| Mean Bit Rate                  | O        |                                |                       | For the DL                         | YES         | reject               |
| <b>UL CCH Information</b>      |          | <i>0..&lt;maxnoof CCHs&gt;</i> |                       |                                    | EACH        | notify               |
| CCH ID                         | M        |                                |                       |                                    | –           |                      |
| TFCS                           | O        |                                |                       | For the UL.                        | –           |                      |
| TFCI Coding                    | O        |                                |                       |                                    | –           |                      |
| Puncture Limit                 | O        |                                |                       |                                    | –           |                      |
| <b>DL CCH Information</b>      |          | <i>0..&lt;maxnoof CCHs&gt;</i> |                       |                                    | EACH        | notify               |
| CCH ID                         | M        |                                |                       |                                    | –           |                      |
| TFCS                           | O        |                                |                       | For the DL.                        | –           |                      |
| TFCI Coding                    | O        |                                |                       |                                    | –           |                      |
| Puncture Limit                 | O        |                                |                       |                                    | –           |                      |
| <b>DCHs to Modify</b>          |          | <i>0..&lt;maxnoof DCHs&gt;</i> |                       |                                    | GLOBAL      | reject               |
| DCH ID                         | M        |                                |                       |                                    | –           |                      |
| CCH Id                         | O        |                                |                       | UL CCH in which the DCH is mapped. | –           |                      |
| CCH Id                         | O        |                                |                       | DL CCH in which the DCH is mapped  | –           |                      |
| Transport Format Set           | O        |                                |                       | For the UL.                        | –           |                      |
| Transport Format Set           | O        |                                |                       | For the DL.                        | –           |                      |
| Allocation/Retention Priority  | O        |                                |                       |                                    | –           |                      |
| Frame Handling Priority        | O        |                                |                       |                                    | –           |                      |
| UL FP Mode                     | O        |                                |                       |                                    | –           |                      |
| ToAWS                          | O        |                                |                       |                                    | –           |                      |
| ToAWE                          | O        |                                |                       |                                    | –           |                      |
| <b>DCHs to Add</b>             |          | <i>0..&lt;maxnoof DCHs&gt;</i> |                       |                                    | GLOBAL      | reject               |
| DCH ID                         | M        |                                |                       |                                    | –           |                      |
| CCH Id                         | M        |                                |                       | UL CCH in which the DCH is mapped. | –           |                      |
| CCH Id                         | M        |                                |                       | DL CCH in which the DCH is mapped  | –           |                      |
| DCH Combination Indicator      | O        |                                |                       |                                    | –           |                      |
| RLC Mode                       | M        |                                |                       |                                    | –           |                      |
| Transport Format Set           | M        |                                |                       | For the UL.                        | –           |                      |
| Transport Format Set           | M        |                                |                       | For the DL.                        | –           |                      |
| BLER                           | M        |                                |                       | For the UL.                        | –           |                      |
| BLER                           | M        |                                |                       | For the DL.                        | –           |                      |
| Allocation/Retention Priority  | M        |                                |                       |                                    | –           |                      |
| Frame Handling Priority        | M        |                                |                       |                                    | –           |                      |
| Payload CRC Presence Indicator | M        |                                |                       |                                    | –           |                      |
| UL FP Mode                     | M        |                                |                       |                                    | –           |                      |
| ToAWS                          | M        |                                |                       |                                    | –           |                      |
| ToAWE                          | M        |                                |                       |                                    | –           |                      |
| <b>DCHs to Delete</b>          |          | <i>0..&lt;maxnoof DCHs&gt;</i> |                       |                                    | GLOBAL      | reject               |

|        |   |  |  |  |   |  |
|--------|---|--|--|--|---|--|
| DCH ID | M |  |  |  | – |  |
|--------|---|--|--|--|---|--|

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

## 9.1.12 RADIO LINK RECONFIGURATION READY

### 9.1.12.1 FDD Message

| IE/Group Name                    | Presence | Range                              | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|----------------------------------|----------|------------------------------------|-----------------------|---|-------------|----------------------|
| Message Type                     | M        |                                    |                       |   | YES         | reject               |
| Transaction ID                   | M        |                                    |                       |   | –           |                      |
| <b>RL Information Response</b>   |          | <i>0..&lt;maxnoof RLS&gt;</i>      |                       |   | EACH        | ignore               |
| RL ID                            | M        |                                    |                       |   | –           |                      |
| Maximum Uplink Eb/No             | O        |                                    | Uplink Eb/No          |   | –           |                      |
| Minimum Uplink Eb/No             | O        |                                    | Uplink Eb/No          |   | –           |                      |
| <b>Downlink Code Information</b> |          | <i>0..&lt;maxnoof DL Codes&gt;</i> |                       |   | GLOBAL      | ignore               |
| DL Scrambling Code               | M        |                                    |                       |   | –           |                      |
| DL Channelisation Code           | M        |                                    |                       |   | –           |                      |
| <b>DCH to be Added</b>           |          | <i>0..&lt;maxnoof DCHs&gt;</i>     |                       | Only one DCH per set of co-ordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLS. | GLOBAL      | ignore               |
| DCH ID                           | M        |                                    |                       |   | –           |                      |
| Binding ID                       | M        |                                    |                       |   | –           |                      |
| Transport Layer Address          | M        |                                    |                       |   | –           |                      |
| <b>DCH to be Modified</b>        |          | <i>0..&lt;maxnoof DCHs&gt;</i>     |                       | Only one DCH per set of co-ordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLS. | GLOBAL      | ignore               |
| DCH ID                           | M        |                                    |                       |   | –           |                      |
| Binding ID                       | M        |                                    |                       |   | –           |                      |
| Transport Layer Address          | M        |                                    |                       |   | –           |                      |
| Criticality Diagnostics          | O        |                                    |                       |   | YES         | ignore               |

| Range bound     | Explanation                                      |
|-----------------|--|
| MaxnoofDCHs     | Maximum number of DCHs.                          |
| MaxnoofRLs      | Maximum number of RLS for a UE.                  |
| MaxnoofDL Codes | Maximum number of Downlink Channelisation Codes. |

## 9.1.12.2 TDD Message

| IE/Group Name                  | Presence | Range                | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|--------------------------------|----------|----------------------|-----------------------|---|-------------|----------------------|
| Message Type                   | M        |                      |                       |   | YES         | reject               |
| Transaction ID                 | M        |                      |                       |   | –           |                      |
| <b>RL Information Response</b> |          | 0..1                 |                       |   | YES         | ignore               |
| RL ID                          | M        |                      |                       |   | –           |                      |
| Maximum Uplink Eb/No           | O        |                      | Uplink Eb/No          |   | –           |                      |
| Minimum Uplink Eb/No           | O        |                      | Uplink Eb/No          |   | –           |                      |
| <b>UL CCTrCH Information</b>   |          | 0..<maxnoof CCTrCHs> |                       |   | GLOBAL      | ignore               |
| CCTrCH ID                      | M        |                      |                       |   | –           |                      |
| <b>UL DPCH Information</b>     |          | 1..<maxnoof DPCHs>   |                       |   | GLOBAL      | ignore               |
| DPCH ID                        | M        |                      |                       |   | –           |                      |
| TDD Channelisation Code        | O        |                      |                       |   | –           |                      |
| Burst Type                     | O        |                      |                       |   | –           |                      |
| Midamble Shift                 | O        |                      |                       |   | –           |                      |
| Time Slot                      | O        |                      |                       |   | –           |                      |
| TDD Physical Channel Offset    | O        |                      |                       |   | –           |                      |
| Repetition Period              | O        |                      |                       |   | –           |                      |
| Repetition Length              | O        |                      |                       |   | –           |                      |
| TFCI Presence                  | O        |                      |                       |   | –           |                      |
| <b>DL CCTrCH Information</b>   |          | 0..<maxnoof CCTrCHs> |                       |   | GLOBAL      | ignore               |
| CCTrCH ID                      | M        |                      |                       |   | –           |                      |
| <b>DL DPCH Information</b>     |          | 1..<maxnoof DPCHs>   |                       |   | GLOBAL      | ignore               |
| DPCH ID                        | M        |                      |                       |   | –           |                      |
| TDD Channelisation Code        | O        |                      |                       |   | –           |                      |
| Burst Type                     | O        |                      |                       |   | –           |                      |
| Midamble Shift                 | O        |                      |                       |   | –           |                      |
| Time Slot                      | O        |                      |                       |   | –           |                      |
| TDD Physical Channel Offset    | O        |                      |                       |   | –           |                      |
| Repetition Period              | O        |                      |                       |   | –           |                      |
| Repetition Length              | O        |                      |                       |   | –           |                      |
| TFCI Presence                  | O        |                      |                       |   | –           |                      |
| <b>DCH to be Added</b>         |          | 0..<maxnoof DCHs>    |                       | Only one DCH per set of co-ordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLs. | GLOBAL      | ignore               |
| DCH ID                         | M        |                      |                       |   | –           |                      |
| Binding ID                     | M        |                      |                       |   | –           |                      |
| Transport Layer Address        | M        |                      |                       |   | –           |                      |
| <b>DCH to be Modified</b>      |          | 0..<maxnoof DCHs>    |                       | Only one DCH per set of co-ordinated DCHs shall be included.<br><br>The IE group shall be included only                                       | GLOBAL      | ignore               |



|                         |   |  |  |                                       |     |        |
|-------------------------|---|--|--|---------------------------------------|-----|--------|
|                         |   |  |  | once per DCH per set of combined RLS. |     |        |
| DCH ID                  | M |  |  |                                       | –   |        |
| Binding ID              | M |  |  |                                       | –   |        |
| Transport Layer Address | M |  |  |                                       | –   |        |
| Criticality Diagnostics | O |  |  |                                       | YES | ignore |

| Range bound    | Explanation                            |
|----------------|--|
| MaxnoofDCHs    | Maximum number of DCHs for a UE.       |
| MaxnoofCCTrCHs | Maximum number of CCTrCHs for a UE.    |
| Maxnoof DPCHs  | Maximum number of DPCHs in one CCTrCH. |

### 9.1.13 RADIO LINK RECONFIGURATION COMMIT

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       |                       |                       | YES         | reject               |
| Transaction ID | M        |       |                       |                       | –           |                      |
| CFN            | M        |       |                       |                       | YES         | ignore               |

### 9.1.14 RADIO LINK RECONFIGURATION FAILURE

| IE/Group Name                              | Presence | Range                         | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------------------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                               | M        |                               |                       |                       | YES         | reject               |
| Transaction ID                             | M        |                               |                       |                       | –           |                      |
| Cause                                      | M        |                               |                       |                       | YES         | ignore               |
| <b>RLs Causing Reconfiguration Failure</b> |          | <i>0..&lt;maxnoof RLS&gt;</i> |                       |                       | EACH        | ignore               |
| RL ID                                      | M        |                               |                       |                       | –           |                      |
| Cause                                      | M        |                               |                       |                       | –           |                      |
| Criticality Diagnostics                    | O        |                               |                       |                       | YES         | ignore               |

| Range bound | Explanation                     |
|-------------|---------------------------------|
| MaxnoofRLs  | Maximum number of RLS for a UE. |

### 9.1.15 RADIO LINK RECONFIGURATION CANCEL

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       |                       |                       | YES         | reject               |
| Transaction ID | M        |       |                       |                       | –           |                      |

## 9.1.16 RADIO LINK RECONFIGURATION REQUEST

## 9.1.16.1 FDD Message

| IE/Group Name                  | Presence | Range             | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--------------------------------|----------|-------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                   | M        |                   |                       |                       | YES         | reject               |
| Transaction ID                 | M        |                   |                       |                       | –           |                      |
| Allowed Queuing Time           | O        |                   |                       |                       | YES         | reject               |
| <b>UL DPCH Information</b>     |          | 0..1              |                       |                       | YES         | reject               |
| TFCS                           | O        |                   |                       | TFCS for the UL.      | –           |                      |
| Mean Bit Rate                  | O        |                   |                       |                       | –           |                      |
| <b>DL DPCH Information</b>     |          | 0..1              |                       |                       | YES         | reject               |
| TFCS                           | O        |                   |                       | TFCS for the DL.      | –           |                      |
| TFCI Signalling Mode           | O        |                   |                       |                       | –           |                      |
| Mean Bit Rate                  | O        |                   |                       |                       | –           |                      |
| <b>DCHs to Modify</b>          |          | 0..<maxnoof DCHs> |                       |                       | GLOBAL      | reject               |
| DCH ID                         | M        |                   |                       |                       | –           |                      |
| Transport Format Set           | O        |                   |                       | For the UL.           | –           |                      |
| Transport Format Set           | O        |                   |                       | For the DL.           | –           |                      |
| Allocation/Retention Priority  | O        |                   |                       |                       | –           |                      |
| Frame Handling Priority        | O        |                   |                       |                       | –           |                      |
| UL FP Mode                     | O        |                   |                       |                       | –           |                      |
| ToAWS                          | O        |                   |                       |                       | –           |                      |
| ToAWE                          | O        |                   |                       |                       | –           |                      |
| <b>DCHs to add</b>             |          | 0..<maxnoof DCHs> |                       |                       | GLOBAL      | reject               |
| DCH ID                         | M        |                   |                       |                       | –           |                      |
| DCH Combination Ind            | O        |                   |                       |                       | –           |                      |
| RLC Mode                       | M        |                   |                       |                       | –           |                      |
| Transport Format Set           | M        |                   |                       | For the UL.           | –           |                      |
| Transport Format Set           | M        |                   |                       | For the DL.           | –           |                      |
| Allocation/Retention Priority  | M        |                   |                       |                       | –           |                      |
| Frame Handling Priority        | M        |                   |                       |                       | –           |                      |
| Payload CRC Presence Indicator | M        |                   |                       |                       | –           |                      |
| UL FP mode                     | M        |                   |                       |                       | –           |                      |
| ToAWS                          | M        |                   |                       |                       | –           |                      |
| ToAWE                          | M        |                   |                       |                       | –           |                      |
| <b>DCHs to Delete</b>          |          | 0..<maxnoof DCHs> |                       |                       | GLOBAL      | reject               |
| DCH ID                         | M        |                   |                       |                       | –           |                      |

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

## 9.1.16.2 TDD Message

| IE/Group Name                  | Presence | Range                             | IE Type and Reference | Semantics Description                 | Criticality | Assigned Criticality |
|--------------------------------|----------|-----------------------------------|-----------------------|---------------------------------------|-------------|----------------------|
| Message Type                   | M        |                                   |                       |                                       | YES         | reject               |
| Transaction ID                 | M        |                                   |                       |                                       | –           |                      |
| Allowed Queuing Time           | O        |                                   |                       |                                       | YES         | reject               |
| Mean Bit Rate                  | O        |                                   |                       | For the UL                            | YES         | reject               |
| Mean Bit Rate                  | O        |                                   |                       | For the DL                            | YES         | reject               |
| <b>UL CCTrCH Information</b>   |          | <i>0..&lt;maxnoof CCTrCHs&gt;</i> |                       |                                       | EACH        | notify               |
| CCTrCH ID                      | M        |                                   |                       |                                       | –           |                      |
| TFCS                           | M        |                                   |                       |                                       | –           |                      |
| <b>DL CCTrCH Information</b>   |          | <i>0..&lt;maxnoof CCTrCHs&gt;</i> |                       |                                       | EACH        | notify               |
| CCTrCH ID                      | M        |                                   |                       |                                       | –           |                      |
| TFCS                           | M        |                                   |                       |                                       | –           |                      |
| <b>DCHs to Modify</b>          |          | <i>0..&lt;maxnoof DCHs&gt;</i>    |                       |                                       | GLOBAL      | reject               |
| DCH ID                         | M        |                                   |                       |                                       | –           |                      |
| CCTrCH ID                      | O        |                                   |                       | UL CCTrCH in which the DCH is mapped. | –           |                      |
| CCTrCH ID                      | O        |                                   |                       | DL CCTrCH in which the DCH is mapped  | –           |                      |
| Transport Format Set           | O        |                                   |                       | For the UL.                           | –           |                      |
| Transport Format Set           | O        |                                   |                       | For the DL.                           | –           |                      |
| Allocation/Retention Priority  | O        |                                   |                       |                                       | –           |                      |
| Frame Handling Priority        | O        |                                   |                       |                                       | –           |                      |
| UL FP Mode                     | O        |                                   |                       |                                       | –           |                      |
| ToAWS                          | O        |                                   |                       |                                       | –           |                      |
| ToAWE                          | O        |                                   |                       |                                       | –           |                      |
| <b>DCHs to Add</b>             |          | <i>0..&lt;maxnoof DCHs&gt;</i>    |                       |                                       | GLOBAL      | reject               |
| DCH ID                         | M        |                                   |                       |                                       | –           |                      |
| RLC Mode                       | M        |                                   |                       |                                       | –           |                      |
| CCTrCH ID                      | M        |                                   |                       | UL CCTrCH in which the DCH is mapped. | –           |                      |
| CCTrCH ID                      | M        |                                   |                       | DL CCTrCH in which the DCH is mapped  | –           |                      |
| DCH Combination Ind            | O        |                                   |                       |                                       | –           |                      |
| Transport Format Set           | M        |                                   |                       | For the UL.                           | –           |                      |
| Transport Format Set           | M        |                                   |                       | For the DL.                           | –           |                      |
| Allocation/Retention Priority  | M        |                                   |                       |                                       | –           |                      |
| Frame Handling Priority        | M        |                                   |                       |                                       | –           |                      |
| Payload CRC Presence Indicator | M        |                                   |                       |                                       | –           |                      |
| UL FP Mode                     | M        |                                   |                       |                                       | –           |                      |
| ToAWS                          | M        |                                   |                       |                                       | –           |                      |
| ToAWE                          | M        |                                   |                       |                                       | –           |                      |
| <b>DCHs to Delete</b>          |          | <i>0..&lt;maxnoof DCHs&gt;</i>    |                       |                                       | GLOBAL      | reject               |
| DCH ID                         | M        |                                   |                       |                                       | –           |                      |

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

## 9.1.17 RADIO LINK RECONFIGURATION RESPONSE

| IE/Group Name                  | Presence | Range                          | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|--------------------------------|----------|--------------------------------|-----------------------|---|-------------|----------------------|
| Message Type                   | M        |                                |                       |   | YES         | reject               |
| Transaction ID                 | M        |                                |                       |   | –           |                      |
| <b>RL Information Response</b> |          | <i>0..&lt;maxnoof RLS&gt;</i>  |                       |   | EACH        | ignore               |
| RL ID                          | M        |                                |                       |   | –           |                      |
| Maximum Uplink Eb/No           | O        |                                | Uplink Eb/No          |   | –           |                      |
| Minimum Uplink Eb/No           | O        |                                | Uplink Eb/No          |   | –           |                      |
| <b>DCH to be Added</b>         |          | <i>0..&lt;maxnoof DCHs&gt;</i> |                       | Only one DCH per set of co-ordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLS. | GLOBAL      | ignore               |
| DCH ID                         | M        |                                |                       |   | –           |                      |
| Binding ID                     | M        |                                |                       |   | –           |                      |
| Transport Layer Address        | M        |                                |                       |   | –           |                      |
| <b>DCH to be Modified</b>      |          | <i>0..&lt;maxnoof DCHs&gt;</i> |                       | Only one DCH per set of co-ordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLS. | GLOBAL      | ignore               |
| DCH ID                         | M        |                                |                       |   | –           |                      |
| Binding ID                     | M        |                                |                       |   | –           |                      |
| Transport Layer Address        | M        |                                |                       |   | –           |                      |
| Criticality Diagnostics        | O        |                                |                       |   | YES         | ignore               |

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

## 9.1.18 RADIO LINK FAILURE INDICATION

| IE/Group Name         | Presence | Range                          | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-----------------------|----------|--------------------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type          | M        |                                |                       |                       | YES         | ignore               |
| Transaction ID        | M        |                                |                       |                       | –           |                      |
| <b>RL Information</b> | M        | <i>1 .. &lt;MaxnoofRLs&gt;</i> |                       |                       | EACH        | ignore               |
| RL ID                 | M        |                                |                       |                       | –           |                      |
| Cause                 | M        |                                |                       |                       | –           |                      |

| Range bound | Explanation                    |
|-------------|--------------------------------|
| MaxnoofRLs  | Maximum no. of RLs for one UE. |

### 9.1.19 RADIO LINK RESTORE INDICATION

| IE/Group Name         | Presence | Range                | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-----------------------|----------|----------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type          | M        |                      |                       |                       | YES         | ignore               |
| Transaction ID        | M        |                      |                       |                       | –           |                      |
| <b>RL Information</b> |          | 1 ..<br><MaxnoofRLs> |                       |                       | EACH        | ignore               |
| RL ID                 | M        |                      |                       |                       | –           |                      |

| Range bound | Explanation                    |
|-------------|--------------------------------|
| MaxnoofRLs  | Maximum no. of RLs for one UE. |

### 9.1.20 DL POWER CONTROL REQUEST [FDD]

| IE/Group Name                                 | Presence | Range            | IE type and reference | Semantics description  | Criticality | Assigned Criticality |
|---|----------|------------------|-----------------------|--|-------------|----------------------|
| Message Type                                  | M        |                  |                       |  | YES         | ignore               |
| Transaction ID                                | M        |                  |                       |  | –           |                      |
| CHOICE <i>procedure scope</i>                 |          |                  |                       |  | YES         | ignore               |
| "ALL RL"                                      |          |                  |                       |  | YES         | ignore               |
| DL Reference Power<br><i>"Individual RLs"</i> | M        |                  |                       |  | –           |                      |
| <b>DL Reference Power Information</b>         |          | 1..<maxnoof RLs> |                       |  | GLOBAL      | ignore               |
| RL ID   | M        |                  |                       |  | –           |                      |
| DL Reference Power                            | M        |                  | DL Power              | The SRNS requested downlink power to be used by the downlink inner loop power control to eliminate the power drifting problem. | –           |                      |

| Range Bound | Explanation                       |
|-------------|-----------------------------------|
| MaxnoofRLs  | Maximum number of RLs for one UE. |

## 9.1.21 PHYSICAL CHANNEL RECONFIGURATION REQUEST

## 9.1.21.1 FDD Message

| IE/Group Name                     | Presence | Range                     | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-----------------------------------|----------|---------------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                      | M        |                           |                       |                       | YES         | reject               |
| Transaction ID                    | M        |                           |                       |                       | –           |                      |
| <b>RL Information</b>             |          | 1                         |                       |                       | YES         | reject               |
| RL ID                             | M        |                           |                       |                       | –           |                      |
| <b>DL Code Information</b>        |          | 1 ..<br><maxnoofDL Codes> |                       |                       | GLOBAL      | notify               |
| DL Scrambling Code                | M        |                           |                       |                       | –           |                      |
| FDD DL Channelisation Code Number | M        |                           |                       |                       | –           |                      |

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

## 9.1.21.2 TDD Message

| IE/Group Name               | Presence | Range               | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-----------------------------|----------|---------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                | M        |                     |                       |                       | YES         | reject               |
| Transaction ID              | M        |                     |                       |                       | –           |                      |
| <b>RL Information</b>       |          | 1                   |                       |                       | YES         | reject               |
| RL ID                       | M        |                     |                       |                       | –           |                      |
| <b>UL CTrCH Information</b> |          | 1..<maxnoof CTrCHs> |                       |                       | GLOBAL      | reject               |
| CTrCH ID                    | M        |                     |                       |                       | –           |                      |
| <b>UL DPCH Information</b>  |          | 1..<Maxnoof DPCHs>  |                       |                       | EACH        | notify               |
| DPCH ID                     | M        |                     |                       |                       | –           |                      |
| TDD Channelisation Code     | O        |                     |                       |                       | –           |                      |
| Burst Type                  | O        |                     |                       |                       | –           |                      |
| Midamble Shift              | O        |                     |                       |                       | –           |                      |
| Time Slot                   | O        |                     |                       |                       | –           |                      |
| TDD Physical Channel Offset | O        |                     |                       |                       | –           |                      |
| Repetition Period           | O        |                     |                       |                       | –           |                      |
| Repetition Length           | O        |                     |                       |                       | –           |                      |
| TFCI Presence               | O        |                     |                       |                       | –           |                      |
| <b>DL CTrCH Information</b> |          | 1..<maxnoof CTrCHs> |                       |                       | GLOBAL      | reject               |
| CTrCH ID                    | M        |                     |                       |                       | –           |                      |
| <b>DL DPCH Information</b>  |          | 1..<Maxnoof DPCHs>  |                       |                       | EACH        | notify               |
| DPCH ID                     | M        |                     |                       |                       | –           |                      |
| TDD Channelisation Code     | O        |                     |                       |                       | –           |                      |
| Burst Type                  | O        |                     |                       |                       | –           |                      |
| Midamble Shift              | O        |                     |                       |                       | –           |                      |
| Time Slot                   | O        |                     |                       |                       | –           |                      |
| TDD Physical Channel Offset | O        |                     |                       |                       | –           |                      |
| Repetition Period           | O        |                     |                       |                       | –           |                      |
| Repetition Length           | O        |                     |                       |                       | –           |                      |
| TFCI Presence               | O        |                     |                       |                       | –           |                      |

| Range bound   | Explanation                         |
|---------------|-------------------------------------|
| MaxnoofDPCHs  | Maximum no. of DPCHs for one CTrCH. |
| MaxnoofCTrCHs | Maximum number of CTrCHs for a UE.  |

## 9.1.22 PHYSICAL CHANNEL RECONFIGURATION COMMAND

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       |                       |                       | YES         | reject               |
| Transaction ID          | M        |       |                       |                       | –           |                      |
| CFN                     | M        |       |                       |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       |                       |                       | YES         | ignore               |

## 9.1.23 PHYSICAL CHANNEL RECONFIGURATION FAILURE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       |                       |                       | YES         | reject               |
| Transaction ID          | M        |       |                       |                       | –           |                      |
| Cause                   | M        |       |                       |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       |                       |                       | YES         | ignore               |

## 9.1.24 UPLINK SIGNALLING TRANSFER INDICATION

| IE/Group Name                              | Presence | Range                    | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--|----------|--------------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                               | M        |                          |                       |                       | YES         | ignore               |
| Transaction ID                             | M        |                          |                       |                       | –           |                      |
| UC-ID                                      | M        |                          |                       |                       | YES         | ignore               |
| SAI  | M        |                          |                       |                       | YES         | ignore               |
| C-RNTI                                     | M        |                          |                       |                       | YES         | ignore               |
| S-RNTI                                     | M        |                          |                       |                       | YES         | ignore               |
| D-RNTI                                     | O        |                          |                       |                       | YES         | ignore               |
| L3 Information                             | M        |                          |                       |                       | YES         | ignore               |
| CN PS Domain Identifier                    | O        |                          |                       |                       | YES         | ignore               |
| CN CS Domain Identifier                    | O        |                          |                       |                       | YES         | ignore               |
| URA ID                                     | M        |                          |                       |                       | YES         | ignore               |
| Multiple URAs Indicator                    | M        |                          |                       |                       | YES         | ignore               |
| <b>RNCs with Cells in the Accessed URA</b> |          | 0 ..<br><MaxRNCin URA-1> |                       |                       | GLOBAL      | ignore               |
| RNC-Id                                     | M        |                          |                       |                       | –           |                      |

| Range bound | Explanation                      |
|-------------|----------------------------------|
| MaxRNCinURA | Maximum number of RNC in one URA |

## 9.1.25 DOWNLINK SIGNALLING TRANSFER REQUEST

| IE/Group Name             | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type              | M        |       |                       |                       | YES         | ignore               |
| Transaction ID            | M        |       |                       |                       | –           |                      |
| C-Id                      | M        |       |                       |                       | YES         | ignore               |
| D-RNTI                    | M        |       |                       |                       | YES         | ignore               |
| L3 Information            | M        |       |                       |                       | YES         | ignore               |
| D-RNTI Release Indication | M        |       |                       |                       | YES         | ignore               |

## 9.1.26 RELOCATION COMMIT

| IE/Group Name                | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|------------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                 | M        |       |                       |                       | YES         | ignore               |
| Transaction ID               | M        |       |                       |                       | –           |                      |
| D-RNTI                       | O        |       |                       |                       | YES         | ignore               |
| RANAP Relocation Information | O        |       |                       |                       | YES         | ignore               |



## 9.1.27 PAGING REQUEST

| IE/Group Name             | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|---------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type              | M        |       |                       |                       | YES         | ignore               |
| Transaction ID            | M        |       |                       |                       | –           |                      |
| CHOICE <i>paging area</i> |          |       |                       |                       | YES         | ignore               |
| "URA"                     |          |       |                       |                       | YES         | ignore               |
| URA-Id                    | M        |       |                       |                       | –           |                      |
| "Cell"                    |          |       |                       |                       | YES         | ignore               |
| C-Id                      | M        |       |                       |                       | –           |                      |
| SRNC-Id                   | M        |       | RNC-Id                |                       | YES         | ignore               |
| S-RNTI                    | M        |       |                       |                       | YES         | ignore               |
| DRX Parameter             | M        |       |                       |                       | YES         | ignore               |

## 9.1.28 DEDICATED MEASUREMENT INITIATION REQUEST

| IE/Group Name                                   | Presence | Range                         | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-------------------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                                    | M        |                               |                       |                       | YES         | reject               |
| Transaction Id                                  | M        |                               |                       |                       | –           |                      |
| Measurement Id                                  | M        |                               |                       |                       | YES         | reject               |
| Dedicated Measurement Object Type               | M        |                               |                       |                       | YES         | reject               |
| CHOICE <i>Dedicated Measurement Object Type</i> |          |                               |                       |                       | YES         | ignore               |
| "RL"  |          |                               |                       |                       | YES         | reject               |
| <b>RL Information</b>                           |          | <i>1..&lt;maxnoof RLs&gt;</i> |                       |                       | EACH        | reject               |
| RL-id   | M        |                               |                       |                       | –           |                      |
| DPCH Id   | O        |                               |                       |                       | –           |                      |
| Dedicated Measurement Type                      | M        |                               |                       |                       | YES         | reject               |
| Measurement Characteristics                     | M        |                               |                       |                       | YES         | reject               |
| Report Characteristics                          | M        |                               |                       |                       | YES         | reject               |

| Range bound | Explanation   |
|-------------|---|
| MaxnoofRLs  | Maximum number of individual RLs a measurement can be started on. |

## 9.1.29 DEDICATED MEASUREMENT INITIATION RESPONSE

| IE/Group Name                                   | Presence | Range                         | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|-------------------------------|-----------------------|--|-------------|----------------------|
| Message Type                                    | M        |                               |                       |  | YES         | reject               |
| Transaction Id                                  | M        |                               |                       | Are both transaction id and Measurement id needed ?                  | –           |                      |
| Measurement Id                                  | M        |                               |                       |  | YES         | ignore               |
| CHOICE <i>Dedicated Measurement Object Type</i> |          |                               |                       | Dedicated Measurement Object Type the measurement was initiated with | YES         | ignore               |
| "RL"  |          |                               |                       |  | YES         | ignore               |
| <b>RL Information</b>                           |          | <i>1..&lt;maxnoof RLS&gt;</i> |                       |  | EACH        | ignore               |
| RL-id   | M        |                               |                       |  | –           |                      |
| DPCH Id   | O        |                               |                       |  | –           |                      |
| Dedicated Measurement Value                     | M        |                               |                       |  | –           |                      |
| "ALLRL"   |          |                               |                       |  | YES         | ignore               |
| Dedicated Measurement Value                     | M        |                               |                       |  | –           |                      |
| CFN   | O        |                               |                       | Dedicated Measurement Time Reference                                 | YES         | ignore               |
| Criticality Diagnostics                         | O        |                               |                       |  | YES         | ignore               |

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

## 9.1.30 DEDICATED MEASUREMENT INITIATION FAILURE

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       |                       |                       | YES         | reject               |
| Transaction Id          | M        |       |                       |                       | –           |                      |
| Measurement Id          | M        |       |                       |                       | YES         | ignore               |
| Cause                   | M        |       |                       |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       |                       |                       | YES         | ignore               |

## 9.1.31 DEDICATED MEASUREMENT REPORT

| IE/Group Name                                   | Presence | Range            | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|------------------|-----------------------|--|-------------|----------------------|
| Message Type                                    | M        |                  |                       |  | YES         | ignore               |
| Transaction Id                                  | M        |                  |                       |  | –           |                      |
| Measurement Id                                  | M        |                  |                       |  | YES         | ignore               |
| CHOICE <i>Dedicated Measurement Object Type</i> |          |                  |                       | Dedicated Measurement Object Type the measurement was initiated with | YES         | ignore               |
| "RL"  |          |                  |                       |  |             |                      |
| <b>RL Information</b>                           |          | 1..<maxnoof RLS> |                       |  | EACH        | ignore               |
| RL-Id   | M        |                  |                       |  | –           |                      |
| DPCH Id   | O        |                  |                       |  | –           |                      |
| Dedicated Measurement Value                     | M        |                  |                       |  | –           |                      |
| "ALLRL"   |          |                  |                       |  | YES         | ignore               |
| Dedicated Measurement Value                     | M        |                  |                       |  | –           |                      |
| CFN   | O        |                  |                       | Dedicated Measurement Time Reference                                 | YES         | ignore               |

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

## 9.1.32 DEDICATED MEASUREMENT TERMINATION REQUEST

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       |                       |                       | YES         | ignore               |
| Transaction Id | M        |       |                       |                       | –           |                      |
| Measurement Id | M        |       |                       |                       | YES         | ignore               |

## 9.1.33 DEDICATED MEASUREMENT FAILURE INDICATION

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       |                       |                       | YES         | ignore               |
| Transaction Id | M        |       |                       |                       | –           |                      |
| Measurement Id | M        |       |                       |                       | YES         | ignore               |
| Cause          | M        |       |                       |                       | YES         | ignore               |

### 9.1.34 COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description            | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|----------------------------------|-------------|----------------------|
| Message Type   | M        |       |                       |                                  | YES         | ignore               |
| Transaction ID | M        |       |                       |                                  | –           |                      |
| D-RNTI         | M        |       |                       |                                  | YES         | ignore               |
| C-RNTI         | O        |       |                       | Release of an individual C-RNTI. | YES         | ignore               |

### 9.1.35 COMMON TRANSPORT CHANNEL RESOURCES REQUEST

| IE/Group Name                      | Presence | Range | IE type and reference | Semantics description   | Criticality | Assigned Criticality |
|------------------------------------|----------|-------|-----------------------|---|-------------|----------------------|
| Message Type                       | M        |       |                       |   | YES         | reject               |
| Transaction ID                     | M        |       |                       |   | –           |                      |
| D-RNTI                             | M        |       |                       |   | YES         | reject               |
| Transport Bearer Request Indicator | M        |       |                       | Request a new transport bearer or to use an existing bearer for the user plane. | YES         | reject               |
| Transport Bearer ID                | M        |       |                       | Indicates the lur transport bearer to be used for the user plane.               | YES         | reject               |

## 9.1.36 COMMON TRANSPORT CHANNEL RESOURCES RESPONSE

## 9.1.36.1 FDD Message

| IE/Group Name                                       | Presence | Range                   | IE type and reference | Semantics description                                | Criticality | Assigned Criticality |
|---|----------|-------------------------|-----------------------|--|-------------|----------------------|
| Message Type  | M        |                         |                       |  | YES         | reject               |
| Transaction ID                                      | M        |                         |                       |  | –           |                      |
| S-RNTI  | M        |                         |                       |  | YES         | ignore               |
| <b>FACH Info for S-CCPCH coupled to PRACH</b>       |          |                         |                       |  | YES         | ignore               |
| <b>Priority Indicator &amp; Initial Window Size</b> |          | 1..16                   |                       | Provide Information for each priority class used     | GLOBAL      | ignore               |
| FACH Priority Indicator                             | M        |                         |                       |  | –           |                      |
| <b>MAC-c SDU Length</b>                             |          | 1..<MaxNbMACcSDULength> |                       |  | GLOBAL      | ignore               |
| MAC-c SDU Length                                    | M        |                         |                       |  | –           |                      |
| FACH Initial Window Size                            | M        |                         |                       |  | –           |                      |
| <b>FACH Info for optional S-CCPCH</b>               | O        |                         |                       |  | YES         | ignore               |
| FDD S-CCPCH Offset                                  | M        |                         |                       | Corresponds to:<br>$\tau_{S-CCPCH,k}$ , see ref. [6] | –           |                      |
| DL Scrambling Code                                  | M        |                         |                       |  | –           |                      |
| FDD DL Channelisation Code Number                   | M        |                         |                       |  | –           |                      |
| TFCS  | M        |                         |                       | For the DL.  | –           |                      |
| Secondary CCPCH Slot Format                         | M        |                         |                       |  | –           |                      |
| Pilot Bits Used Indicator                           | M        |                         |                       |  | –           |                      |
| MultiplexingPosition                                | M        |                         |                       |  | –           |                      |
| STTD Indicator                                      | M        |                         |                       |  | –           |                      |
| <b>Priority Indicator &amp; Initial Window Size</b> |          | 1..16                   |                       | Provide Information for each priority class used     | GLOBAL      | ignore               |
| FACH Priority Indicator                             | M        |                         |                       |  | –           |                      |
| <b>Data Frame Size</b>                              |          | 1..<MaxNbMACcSDULength> |                       |  | GLOBAL      | ignore               |
| .....MAC-c SDU Length                               | M        |                         |                       |  | –           |                      |
| FACH Initial Window Size                            | M        |                         |                       |  | –           |                      |
| Transport Layer Address                             | O        |                         |                       |  | YES         | ignore               |
| Binding Identity                                    | O        |                         |                       |  | YES         | ignore               |
| Criticality Diagnostics                             | O        |                         |                       |  | YES         | ignore               |

| Range Bound        | Explanation                                    |
|--------------------|--|
| MaxNbMACcSDULength | Maximum number of different MAC-c SDU Lengths. |

## 9.1.36.2 TDD Message

| IE/Group Name                                       | Presence | Range                   | IE type and reference | Semantics description                             | Criticality | Assigned Criticality |
|---|----------|-------------------------|-----------------------|---|-------------|----------------------|
| Message Type  | M        |                         |                       |   | YES         | reject               |
| Transaction ID                                      | M        |                         |                       |   | –           |                      |
| S-RNTI  | M        |                         |                       |   | YES         | ignore               |
| <b>FACH Info for S-CCPCHs coupled to PRACH</b>      |          | 0..1                    |                       |   | YES         | ignore               |
| <b>Priority Indicator &amp; Initial Window Size</b> |          | 1..16                   |                       | Provide Information for each priority class used  | GLOBAL      | ignore               |
| FACH Priority Indicator                             | M        |                         |                       |   | –           |                      |
| <b>MAC-c SDU Length</b>                             |          | 1..<MaxNbMACcSDULength> |                       |   | GLOBAL      | ignore               |
| MAC-c SDU Length                                    | M        |                         |                       |   | –           |                      |
| FACH Initial Window Size                            | M        |                         |                       |   | –           |                      |
| <b>FACH Info for optional group of S-CCPCHs</b>     |          | 0..1                    |                       |   | YES         | ignore               |
| TFCS  | M        |                         |                       | For DL CCTrCH supporting several Secondary CCPCHs | –           |                      |
| <b>Secondary CCPCH</b>                              | M        | 1..<MaxnoofSCCPCHs>     |                       |   | GLOBAL      | ignore               |
| TDD Channelisation Code                             | M        |                         |                       |   | –           |                      |
| Time Slot   | M        |                         |                       |   | –           |                      |
| Burst Type  | M        |                         |                       |   | –           |                      |
| Midamble shift                                      | M        |                         |                       |   | –           |                      |
| TDD Physical Channel Offset                         | M        |                         |                       |   | –           |                      |
| Repetition Period                                   | M        |                         |                       |   | –           |                      |
| Repetition Length                                   | M        |                         |                       |   | –           |                      |
| STTD Indicator                                      | M        |                         |                       |   | –           |                      |
| <b>Priority Indicator &amp; Initial Window Size</b> |          | 1..16                   |                       | Provide Information for each priority class used  | GLOBAL      | ignore               |
| FACH Priority Indicator                             | M        |                         |                       |   | –           |                      |
| <b>Data Frame Size</b>                              |          | 1..<MaxNbMACcSDULength> |                       |   | GLOBAL      | ignore               |
| .....MAC-c SDU Length                               | M        |                         |                       |   | –           |                      |
| FACH Initial Window Size                            | M        |                         |                       |   | –           |                      |
| Transport Layer Address                             | O        |                         |                       |   | YES         | ignore               |
| Binding Identity                                    | O        |                         |                       |   | YES         | ignore               |
| Criticality Diagnostics                             | O        |                         |                       |   | YES         | ignore               |

| Range Bound        | Explanation                                    |
|--------------------|--|
| MaxNbMACcSDULength | Maximum number of different MAC-c SDU Lengths. |
| MaxnoofSCCPCHs     | TBD  |

## 9.1.37 COMMON TRANSPORT CHANNEL RESOURCES FAILURE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       |                       |                       | YES         | reject               |
| Transaction ID          | M        |       |                       |                       | –           |                      |
| S-RNTI                  | M        |       |                       |                       | YES         | ignore               |
| Cause                   | M        |       |                       |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       |                       |                       | YES         | ignore               |

## 9.1.38 COMPRESSED MODE PREPARE [FDD]

| IE/Group Name                   | Presence | Range | IE type and reference | Semantics description   | Criticality | Assigned Criticality |
|---------------------------------|----------|-------|-----------------------|---|-------------|----------------------|
| Message Type                    |          |       |                       |   | YES         | reject               |
| Transaction ID                  |          |       |                       |   | –           |                      |
| TGP1                            | M        |       | Gap Period            | Applies only to the first and all the subsequent odd gaps if TGP2 is present, see ref. [9]. | YES         | reject               |
| TGP2                            | O        |       | Gap Period            |   | YES         | reject               |
| TGL                             | M        |       |                       |   | YES         | reject               |
| TGD                             | M        |       |                       |   | YES         | reject               |
| PD                              | M        |       |                       |   | YES         | reject               |
| UL/DL Compressed Mode Selection | M        |       |                       |   | YES         | reject               |
| Compressed Mode Method          | M        |       |                       |   | YES         | reject               |
| Gap Position Mode               | M        |       |                       |   | YES         | reject               |
| SN                              | C-Flex   |       |                       |   | YES         | reject               |
| Downlink Frame Type             | M        |       |                       |   | YES         | reject               |
| Scrambling Code Change          | C-SF/2   |       |                       |   | YES         | reject               |
| Power Control Mode              | M        |       |                       |   | YES         | reject               |
| Power Resume Mode               | M        |       |                       |   | YES         | reject               |
| Uplink Delta Eb/No              | M        |       |                       |   | YES         | reject               |
| Uplink Delta Eb/No After        | M        |       |                       |   | YES         | reject               |

| Condition | Explanation  |
|-----------|--|
| Flex      | This IE is present only if "Gap position Mode" equals to 'flexible'. |
| SF/2      | This IE is present only if Compressed Mode Method equals to SF/2     |

## 9.1.39 COMPRESSED MODE READY [FDD]

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       |                       |                       | YES         | reject               |
| Transaction ID          | M        |       |                       |                       | –           |                      |
| Criticality Diagnostics | O        |       |                       |                       | YES         | ignore               |

## 9.1.40 COMPRESSED MODE FAILURE [FDD]

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M        |       |                       |                       | YES         | reject               |
| Transaction ID          | M        |       |                       |                       | –           |                      |
| Cause                   | M        |       |                       |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       |                       |                       | YES         | ignore               |

## 9.1.41 COMPRESSED MODE COMMIT [FDD]

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       |                       |                       | YES         | ignore               |
| Transaction ID | M        |       |                       |                       | –           |                      |
| CFN            | M        |       |                       |                       | YES         | ignore               |

## 9.1.42 COMPRESSED MODE CANCEL [FDD]

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|----------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type   | M        |       |                       |                       | YES         | ignore               |
| Transaction ID | M        |       |                       |                       | –           |                      |

## 9.1.43 ERROR INDICATION

| IE/Group Name           | Presence  | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|-----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Type            | M         |       |                       |                       | YES         | ignore               |
| Transaction Id          | M         |       |                       |                       | –           |                      |
| Cause                   | C_ifalone |       |                       |                       | YES         | ignore               |
| Criticality Diagnostics | C_ifalone |       |                       |                       | YES         | ignore               |

| Condition | Explanation   |
|-----------|---|
| C_ifalone | At least either of Cause IE or Criticality Diagnostics IE shall be present. |



```
9.3.2 Elementary Procedure Definitions
-- *****
--
-- Elementary Procedure definitions
--
-- *****

RNSAP-PDU-Descriptions -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    Criticality,
    ProcedureID,
    TransactionID
FROM RNSAP-CommonDataTypes

    CommonTransportChannelResourcesFailure,
    CommonTransportChannelResourcesRequest,
    CommonTransportChannelResourcesReleaseRequest,
    CommonTransportChannelResourcesResponseFDD,
    CommonTransportChannelResourcesResponseTDD,
    CompressedModeCancel,
    CompressedModeCommit,
    CompressedModeFailure,
    CompressedModePrepare,
    CompressedModeReady,
    DedicatedMeasurementFailureIndication,
    DedicatedMeasurementInitiationFailure,
    DedicatedMeasurementInitiationRequest,
    DedicatedMeasurementInitiationResponse,
    DedicatedMeasurementReport,
    DedicatedMeasurementTerminationRequest,
    DL-PowerControlRequest,
    DownlinkSignallingTransferRequest,
    ErrorIndication,
    PagingRequest,
    PhysicalChannelReconfigurationCommand,
    PhysicalChannelReconfigurationFailure,
    PhysicalChannelReconfigurationRequestFDD,
    PhysicalChannelReconfigurationRequestTDD,
    PrivateMessage,
    RadioLinkAdditionFailureFDD,
    RadioLinkAdditionFailureTDD,
```

RadioLinkAdditionRequestFDD,  
RadioLinkAdditionRequestTDD,  
RadioLinkAdditionResponseFDD,  
RadioLinkAdditionResponseTDD,  
RadioLinkDeletionRequest,  
RadioLinkDeletionResponse,  
RadioLinkFailureIndication,  
RadioLinkReconfigurationCancel,  
RadioLinkReconfigurationCommit,  
RadioLinkReconfigurationFailure,  
RadioLinkReconfigurationPrepareFDD,  
RadioLinkReconfigurationPrepareTDD,  
RadioLinkReconfigurationReadyFDD,  
RadioLinkReconfigurationReadyTDD,  
RadioLinkReconfigurationRequestFDD,  
RadioLinkReconfigurationRequestTDD,  
RadioLinkReconfigurationResponseFDD,  
RadioLinkReconfigurationResponseTDD,  
RadioLinkRestoreIndication,  
RadioLinkSetupFailureFDD,  
RadioLinkSetupFailureTDD,  
RadioLinkSetupRequestFDD,  
RadioLinkSetupRequestTDD,  
RadioLinkSetupResponseFDD,  
RadioLinkSetupResponseTDD,  
RelocationCommit,  
UplinkSignallingTransferIndication

FROM RNSAP-PDU-Contents

id-commonTransportChannelResourcesInitiationFDD,  
id-commonTransportChannelResourcesInitiationTDD,  
id-commonTransportChannelResourcesRelease,  
id-compressedModeCancellationFDD,  
id-compressedModeCommitFDD,  
id-compressedModePrepareFDD,  
id-downlinkPowerControl,  
id-downlinkSignallingTransfer,  
id-errorIndication,  
id-measurementFailure,  
id-measurementInitiation,  
id-measurementReporting,  
id-measurementTermination,  
id-pagingRequest,  
id-physicalChannelReconfiguration,  
id-privateMessage,  
id-radioLinkAddition,  
id-radioLinkDeletion,  
id-radioLinkFailure,  
id-radioLinkRestoration,  
id-radioLinkSetup,  
id-srnsRelocationCommit,

```

    id-synchronisedRadioLinkReconfigurationCancellation,
    id-synchronisedRadioLinkReconfigurationCommit,
    id-synchronisedRadioLinkReconfigurationPrepare,
    id-unSynchronisedRadioLinkReconfiguration,
    id-uplinkSignallingTransfer
FROM RNSAP-Constants;

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

RNSAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage          ,
    &SuccessfulOutcome          OPTIONAL,
    &UnsuccessfulOutcome        OPTIONAL,
    &Outcome                    OPTIONAL,
    &procedureID                ProcedureID  UNIQUE,
    &criticality                Criticality  DEFAULT ignore
}
WITH SYNTAX {
    INITIATING MESSAGE          &InitiatingMessage
    [SUCCESSFUL OUTCOME         &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME       &UnsuccessfulOutcome]
    [OUTCOME                    &Outcome]
    PROCEDURE ID                &procedureID
    [CRITICALITY                &criticality]
}

-- *****
--
-- Interface PDU Definition
--
-- *****

RNSAP-PDU ::= CHOICE {
    initiatingMessage  InitiatingMessage,
    succesfulOutcome  SuccessfulOutcome,
    unsuccessfulOutcome UnsuccessfulOutcome,
    outcome            Outcome,
    ...
}

InitiatingMessage ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID    ({RNSAP-ELEMENTARY-PROCEDURES}),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ({RNSAP-ELEMENTARY-PROCEDURES}@procedureID),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&InitiatingMessage  ({RNSAP-ELEMENTARY-PROCEDURES}@procedureID)
}

```

```
SuccessfulOutcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ( {RNSAP-ELEMENTARY-PROCEDURES} ),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}
```

```
UnsuccessfulOutcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ( {RNSAP-ELEMENTARY-PROCEDURES} ),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}
```

```
Outcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID      ( {RNSAP-ELEMENTARY-PROCEDURES} ),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&Outcome          ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}
```

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

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

```
RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURE ::= {
    radioLinkSetupFDD |
    radioLinkSetupTDD |
    radioLinkAdditionFDD |
    radioLinkAdditionTDD |
    radioLinkDeletion |
    synchronisedRadioLinkReconfigurationPreparationFDD |
    synchronisedRadioLinkReconfigurationPreparationTDD |
    unSynchronisedRadioLinkReconfigurationFDD |
    unSynchronisedRadioLinkReconfigurationTDD |
    physicalChannelReconfigurationFDD |
    physicalChannelReconfigurationTDD |
    measurementInitiation |
    compressedModePreparationFDD |
    commonTransportChannelResourcesInitiationFDD |
    commonTransportChannelResourcesInitiationTDD |
    ...
}
```

```

}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= {
    uplinkSignallingTransfer          |
    downlinkSignallingTransfer        |
    srnsRelocationCommit              |
    paging                            |
    synchronisedRadioLinkReconfigurationCommit |
    synchronisedRadioLinkReconfigurationCancellation |
    radioLinkFailure                  |
    radioLinkRestoration              |
    measurementReporting              |
    measurementTermination            |
    measurementFailure                |
    downlinkPowerControlFDD           |
    compressedModeCommitFDD          |
    compressedModeCancellationFDD    |
    commonTransportChannelResourcesRelease |
    errorIndication                  |
    privateMessage                    |
    ...
}

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

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

radioLinkSetupFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkSetupRequestFDD
    SUCCESSFUL OUTCOME  RadioLinkSetupResponseFDD
    UNSUCCESSFUL OUTCOME RadioLinkSetupFailureFDD
    PROCEDURE ID        { procedureCode id-radioLinkSetup, ddMode fdd }
    CRITICALITY         reject
}

radioLinkSetupTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkSetupRequestTDD
    SUCCESSFUL OUTCOME  RadioLinkSetupResponseTDD
    UNSUCCESSFUL OUTCOME RadioLinkSetupFailureTDD
    PROCEDURE ID        { procedureCode id-radioLinkSetup, ddMode tdd }
    CRITICALITY         reject
}

radioLinkAdditionFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE  RadioLinkAdditionRequestFDD

```

```

    SUCCESSFUL OUTCOME RadioLinkAdditionResponseFDD
    UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureFDD
    PROCEDURE ID { procedureCode id-radioLinkAddition , ddMode fdd }
    CRITICALITY reject
}

radioLinkAdditionTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkAdditionRequestTDD
    SUCCESSFUL OUTCOME RadioLinkAdditionResponseTDD
    UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureTDD
    PROCEDURE ID { procedureCode id-radioLinkAddition , ddMode tdd }
    CRITICALITY reject
}

radioLinkDeletion RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkDeletionRequest
    SUCCESSFUL OUTCOME RadioLinkDeletionResponse
    PROCEDURE ID { procedureCode id-radioLinkDeletion, ddMode common }
    CRITICALITY reject
}

synchronisedRadioLinkReconfigurationPreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationPrepareFDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationReadyFDD
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationPrepare, ddMode fdd }
    CRITICALITY reject
}

synchronisedRadioLinkReconfigurationPreparationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationPrepareTDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationReadyTDD
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationPrepare, ddMode tdd }
    CRITICALITY reject
}

unSynchronisedRadioLinkReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationRequestFDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationResponseFDD
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    PROCEDURE ID { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
    CRITICALITY reject
}

unSynchronisedRadioLinkReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE RadioLinkReconfigurationRequestTDD
    SUCCESSFUL OUTCOME RadioLinkReconfigurationResponseTDD
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    PROCEDURE ID { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
    CRITICALITY reject
}

```

```
}

physicalChannelReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE   PhysicalChannelReconfigurationRequestFDD
    SUCCESSFUL OUTCOME   PhysicalChannelReconfigurationCommand
    UNSUCCESSFUL OUTCOME PhysicalChannelReconfigurationFailure
    PROCEDURE ID         { procedureCode id-physicalChannelReconfiguration, ddMode fdd }
    CRITICALITY          reject
}

physicalChannelReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE   PhysicalChannelReconfigurationRequestTDD
    SUCCESSFUL OUTCOME   PhysicalChannelReconfigurationCommand
    UNSUCCESSFUL OUTCOME PhysicalChannelReconfigurationFailure
    PROCEDURE ID         { procedureCode id-physicalChannelReconfiguration, ddMode tdd }
    CRITICALITY          reject
}

measurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE   DedicatedMeasurementInitiationRequest
    SUCCESSFUL OUTCOME   DedicatedMeasurementInitiationResponse
    UNSUCCESSFUL OUTCOME DedicatedMeasurementInitiationFailure
    PROCEDURE ID         { procedureCode id-measurementInitiation, ddMode common }
    CRITICALITY          reject
}

compressedModePreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE   CompressedModePrepare
    SUCCESSFUL OUTCOME   CompressedModeReady
    UNSUCCESSFUL OUTCOME CompressedModeFailure
    PROCEDURE ID         { procedureCode id-compressedModePrepareFDD, ddMode fdd }
    CRITICALITY          reject
}

commonTransportChannelResourcesInitiationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE   CommonTransportChannelResourcesRequest
    SUCCESSFUL OUTCOME   CommonTransportChannelResourcesResponseFDD
    UNSUCCESSFUL OUTCOME CommonTransportChannelResourcesFailure
    PROCEDURE ID         { procedureCode id-commonTransportChannelResourcesInitiationFDD, ddMode common }
    CRITICALITY          reject
}

commonTransportChannelResourcesInitiationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE   CommonTransportChannelResourcesRequest
    SUCCESSFUL OUTCOME   CommonTransportChannelResourcesResponseTDD
    UNSUCCESSFUL OUTCOME CommonTransportChannelResourcesFailure
    PROCEDURE ID         { procedureCode id-commonTransportChannelResourcesInitiationTDD, ddMode common }
    CRITICALITY          reject
}

uplinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
```

```
INITIATING MESSAGE UplinkSignallingTransferIndication
PROCEDURE ID      { procedureCode id-uplinkSignallingTransfer, ddMode common }
CRITICALITY      ignore
}

downlinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DownlinkSignallingTransferRequest
  PROCEDURE ID      { procedureCode id-downlinkSignallingTransfer, ddMode common }
  CRITICALITY      ignore
}

srnsRelocationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RelocationCommit
  PROCEDURE ID      { procedureCode id-srnsRelocationCommit, ddMode common }
  CRITICALITY      ignore
}

paging RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE PagingRequest
  PROCEDURE ID      { procedureCode id-pagingRequest, ddMode common }
  CRITICALITY      ignore
}

synchronisedRadioLinkReconfigurationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationCommit
  PROCEDURE ID      { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
  CRITICALITY      ignore
}

synchronisedRadioLinkReconfigurationCancellation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkReconfigurationCancel
  PROCEDURE ID      { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
  CRITICALITY      ignore
}

radioLinkFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkFailureIndication
  PROCEDURE ID      { procedureCode id-radioLinkFailure, ddMode common }
  CRITICALITY      ignore
}

radioLinkRestoration RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE RadioLinkRestoreIndication
  PROCEDURE ID      { procedureCode id-radioLinkRestoration, ddMode common }
  CRITICALITY      ignore
}

measurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE DedicatedMeasurementReport
  PROCEDURE ID      { procedureCode id-measurementReporting, ddMode common }
  CRITICALITY      ignore
}
```



```
}

measurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    DedicatedMeasurementTerminationRequest
    PROCEDURE ID          { procedureCode id-measurementTermination, ddMode common }
    CRITICALITY           ignore
}

measurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    DedicatedMeasurementFailureIndication
    PROCEDURE ID          { procedureCode id-measurementFailure, ddMode common }
    CRITICALITY           ignore
}

downlinkPowerControlFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    DL-PowerControlRequest
    PROCEDURE ID          { procedureCode id-downlinkPowerControl, ddMode fdd }
    CRITICALITY           ignore
}

compressedModeCommitFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    CompressedModeCommit
    PROCEDURE ID          { procedureCode id-compressedModeCommitFDD, ddMode fdd }
    CRITICALITY           ignore
}

compressedModeCancellationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    CompressedModeCancel
    PROCEDURE ID          { procedureCode id-compressedModeCancellationFDD, ddMode fdd }
    CRITICALITY           ignore
}

commonTransportChannelResourcesRelease RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    CommonTransportChannelResourcesReleaseRequest
    PROCEDURE ID          { procedureCode id-commonTransportChannelResourcesRelease, ddMode common }
    CRITICALITY           ignore
}

errorIndication RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    ErrorIndication
    PROCEDURE ID          { procedureCode id-errorIndication, ddMode common }
    CRITICALITY           ignore
}

privateMessage RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    PrivateMessage
    PROCEDURE ID          { procedureCode id-privateMessage, ddMode common }
    CRITICALITY           ignore
}

END
```

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

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,
    DL-ScramblingCode,
    DPCH-ID,
```

DRX-Parameter,  
DedicatedMeasurementValue,  
DiversityControlField,  
DiversityMode,  
FACH-DataFrameSize,  
FACH-InitialWindowSize,  
FACH-PriorityIndicator,  
FDD-DL-ChannelisationCodeNumber,  
FDD-S-CCPCH-Offset,  
FrameHandlingPriority,  
FrameOffset,  
GapPeriod,  
GapPositionMode,  
L3-Information,  
MAC-c-SDU-Length,  
MaxNrOfUL-DPCHs,  
MeanBitRate,  
MeasurementCharacteristics,  
MeasurementID,  
MidambleShift,  
MinUL-ChannelisationCodeLength,  
MultipleURAsIndicator,  
MultiplexingPosition,  
Offset,  
PD,  
PSCH-PCCPCH-TimeSlot,  
PSCH-TimeSlot,  
PayloadCRC-PresenceIndicator,  
PilotBitsUsedIndicator,  
PowerControlMode,  
PowerOffset,  
PowerResumeMode,  
PrimaryCCPCH-RSCP,  
PrimaryCPICH-EcNo,  
PrimaryCPICH-Power,  
PrimaryScramblingCode,  
PropagationDelay,  
PunctureLimit,  
RANAP-RelocationInformation,  
RL-ID,  
RLC-Mode,  
RNC-ID,  
RepetitionLength,  
RepetitionPeriod,  
ReportCharacteristics,  
S-FieldLength,  
S-RNTI,  
SAI,  
SN,  
SRNC-ID,  
SSDT-CellID,

```
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
ScaledUL-InterferenceLevel,
ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-PhysicalChannelOffset,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSet,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
UC-ID,
UL-DL-CompressedModeSelection,
UL-DPCCH-SlotFormat,
UL-EbNo,
UL-EbNoTarget,
UL-FP-Mode,
UL-ScramblingCode,
URA-ID
FROM RNSAP-IEs

PrivateExtensionContainer{},
ProtocolExtensionContainer{},
ProtocolIE-ContainerList{},
-- ProtocolIE-ContainerPair{},
-- ProtocolIE-ContainerPairList{},
ProtocolIE-Container{},
RNSAP-PRIVATE-EXTENSION,
RNSAP-PROTOCOL-EXTENSION,
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers

maxNoOfDL-Codes,
maxNrOfCCTrCHs,
maxNrOfDCHs,
maxNrOfDL-Codes,
```

maxNrOfDPCHs,  
maxNrOfFACH-FD-Size,  
maxNrOfFDD-Neighbours,  
maxNrOfMACcSDU-Length,  
maxNrOfTDD-Neighbours,  
maxNrOfRLs,  
maxNrOfSCCPCHs,  
maxRNCinURA,

id-AllowedQueuingTime,  
id-AllRLsItem-DL-PC-Rqst,  
id-ALLRLItem-DM-Rprt,  
id-ALLRLItem-DM-Rspns,  
id-BindingID,  
id-C-ID,  
id-C-RNTI,  
id-CCTrCH-ID,  
id-CFN,  
id-CN-CS-DomainIdentifier,  
id-CN-PS-DomainIdentifier,  
id-Cause,  
id-CombiningItem-RL-AdditionFailureFDD,  
id-CombiningItem-RL-AdditionRspFDD,  
id-CombiningItem-RL-AdditionRspTDD,  
id-CombiningItem-RL-SetupFailureFDD,  
id-CombiningItem-RL-SetupRspFDD,  
id-CompressedModeMethod,  
id-CriticalityDiagnostics,  
id-D-RNTI,  
id-D-RNTI-ReleaseIndication,  
id-DCH-AddListIE,  
id-DCH-AddItem-RL-ReconfPrepTDD,  
id-DCH-AddItem-RL-ReconfReadyFDD,  
id-DCH-AddItem-RL-ReconfRqstTDD,  
id-DCH-AddListItem-RL-ReconfReadyFDD,  
id-DCH-AddListItem-RL-ReconfRsp,  
id-DCH-AddList-RL-ReconfPrepFDD,  
id-DCH-AddList-RL-ReconfPrepTDD,  
id-DCH-AddList-RL-ReconfRqstFDD,  
id-DCH-AddList-RL-ReconfRqstTDD,  
id-DCH-DeleteItem-RL-ReconfPrepTDD,  
id-DCH-DeleteItem-RL-ReconfRqstFDD,  
id-DCH-DeleteItem-RL-ReconfRqstTDD,  
id-DCH-DeleteList-RL-ReconfPrepFDD,  
id-DCH-DeleteList-RL-ReconfPrepTDD,  
id-DCH-DeleteList-RL-ReconfRqstFDD,  
id-DCH-DeleteList-RL-ReconfRqstTDD,  
id-DCH-Information-RL-SetupReqFDD,  
id-DCH-InformationItem-RL-SetupReqTDD,  
id-DCH-InformationList-RL-SetupReqTDD,  
id-DCH-InformationResponseListIE-RL-SetupRspTDD,

id-DCH-ModifyListIE,  
id-DCH-ModifyItem-RL-ReconfPrepTDD,  
id-DCH-ModifyItem-RL-ReconfReadyFDD,  
id-DCH-ModifyItem-RL-ReconfRqstTDD,  
id-DCH-ModifyListItem-RL-ReconfReadyFDD,  
id-DCH-ModifyListItem-RL-ReconfRsp,  
id-DCH-ModifyList-RL-ReconfPrepFDD,  
id-DCH-ModifyList-RL-ReconfPrepTDD,  
id-DCH-ModifyList-RL-ReconfRqstFDD,  
id-DCH-ModifyList-RL-ReconfRqstTDD,  
id-DL-CCTrCH-Information-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationIE-RL-AdditionRspTDD,  
id-DL-CCTrCH-InformationIE-RL-SetupRspTDD,  
id-DL-CCTrCH-InformationItem-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD,  
id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD,  
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationItem-RL-SetupReqTDD,  
id-DL-CCTrCH-InformationList-RL-SetupReqTDD,  
id-DL-CodeInformationListItem-PhyChReconfRqstFDD,  
id-DL-CodeInformationListItem-RL-AdditionFailureFDD,  
id-DL-CodeInformationListItem-RL-AdditionRspFDD,  
id-DL-CodeInformationListItem-RL-ReconfReadyFDD,  
id-DL-CodeInformationListItem-RL-SetupFailureFDD,  
id-DL-DPCH-Information,  
id-DL-DPCH-Information-RL-SetupReqFDD,  
id-DL-DPCH-InformationItem-RL-SetupRspTDD,  
id-DL-DPCH-InformationItem-RL-AdditionRspTDD,  
id-DL-DPCH-InformationItem-PhyChReconfRqstTDD,  
id-DL-DPCH-InformationListIE-RL-ReconfReadyTDD,  
id-DL-DPCH-InformationList-PhyChReconfRqstTDD,  
id-DL-DPCH-InformationList-RL-ReconfReadyTDD,  
id-DL-EbNoTarget,  
id-DL-FrameType,  
id-DL-MeanBitRate,  
id-DL-ReferencePowerInformationListItem-DL-PC-Rqst,  
id-DRX-Parameter,  
id-DataFrameSizeListItem,  
id-DedicatedMeasurementObjectType-DM-Rprrt,  
id-DedicatedMeasurementObjectType-DM-Rqst,  
id-DedicatedMeasurementObjectType-DM-Rspns,  
id-DiversityIndicationItem-RL-AdditionRspTDD,  
id-FACH-InfoForOptionalGroupS-CCPCH,  
id-FACH-InfoForOptionals-CCPCH-FDD,  
id-FACH-InfoForOptionalGroupS-CCPCH-CTCRRsp-TDD,  
id-FACH-InfoForS-CCPCH-CoupledToPRACH,  
id-GapPositionMode,  
id-IndividualRLsItem-DL-PC-Rqst,  
id-L3-Information,  
id-MAC-c-SDU-LengthListItem,

id-MeasurementCharacteristics,  
id-MeasurementID,  
id-MultipleURAsIndicator,  
id-NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD,  
id-NeighbouringFDD-CellInformationItem-RL-AdditionRsp,  
id-NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD,  
id-NeighbouringFDD-CellInformationItem-RL-SetupRsp,  
id-NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD,  
id-NeighbouringTDD-CellInformationItem-RL-AdditionRsp,  
id-NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD,  
id-NeighbouringTDD-CellInformationItem-RL-SetupRsp,  
id-NonCombiningItem-RL-AdditionRspTDD,  
id-NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD,  
id-NonCombiningOrIENotPresentItem-RL-AdditionRspFDD,  
id-NonCombiningOrIENotPresentItem-RL-SetupFailureFDD,  
id-NonCombiningOrIENotPresentItem-RL-SetupRspFDD,  
id-PD,  
id-PagingArea-PagingRqst,  
id-PowerControlMode,  
id-PowerResumeMode,  
id-PriorityIndicatorAndInitialWindowSizeListIE,  
id-PriorityIndicatorAndInitialWindowSizeList2IE,  
id-ProcedureScope-DL-PC-Rqst,  
id-RANAP-RelocationInformation,  
id-RL-Information-PhyChReconfRqstFDD,  
id-RL-Information-PhyChReconfRqstTDD,  
id-RL-Information-RL-AdditionRqstFDD,  
id-RL-Information-RL-AdditionRqstTDD,  
id-RL-Information-RL-DeletionRqst,  
id-RL-Information-RL-FailureInd,  
id-RL-Information-RL-ReconfPrepFDD,  
id-RL-Information-RL-RestoreInd,  
id-RL-Information-RL-SetupReqFDD,  
id-RL-Information-RL-SetupReqTDD,  
id-RL-InformationItem-DM-Rprt,  
id-RL-InformationItem-DM-Rqst,  
id-RL-InformationItem-DM-Rspns,  
id-RL-InformationItem-RL-SetupReqFDD,  
id-RL-InformationList-RL-AdditionRqstFDD,  
id-RL-InformationList-RL-DeletionRqst,  
id-RL-InformationList-RL-FailureInd,  
id-RL-InformationList-RL-ReconfPrepFDD,  
id-RL-InformationList-RL-RestoreInd,  
id-RL-InformationResponse-RL-AdditionRspTDD,  
id-RL-InformationResponse-RL-ReconfReadyTDD,  
id-RL-InformationResponse-RL-SetupRspTDD,  
id-RL-InformationResponseItem-RL-AdditionRspFDD,  
id-RL-InformationResponseItem-RL-ReconfReadyFDD,  
id-RL-InformationResponseItem-RL-ReconfRsp,  
id-RL-InformationResponseItem-RL-SetupRspFDD,  
id-RL-InformationResponseList-RL-AdditionRspFDD,

id-RL-InformationResponseList-RL-ReconfReadyFDD,  
id-RL-InformationResponseList-RL-ReconfRsp,  
id-RL-InformationResponseList-RL-SetupRspFDD,  
id-RL-ReconfigurationFailure-RL-ReconfFail,  
id-RL-ReconfigurationFailureList-RL-ReconfFail,  
id-RLsItem-DM-Rprt,  
id-RLsItem-DM-Rqst,  
id-RLsItem-DM-Rspns,  
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind,  
id-ReportCharacteristics,  
id-S-RNTI,  
id-SAI,  
id-SN,  
id-SRNC-ID,  
id-ScramblingCodeChange,  
id-SecondaryCCPCH-ListIE-CTCRRsp-TDD,  
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,  
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,  
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,  
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,  
id-TGD,  
id-TGL,  
id-TGP1,  
id-TGP2,  
id-TransportBearerID,  
id-TransportBearerRequestIndicator,  
id-TransportLayerAddress,  
id-UC-ID,  
id-UL-CCTrCH-InformationIE-RL-SetupRspTDD,  
id-UL-CCTrCH-InformationIE-RL-AdditionRspTDD,  
id-UL-CCTrCH-InformationItem-RL-ReconfRqstTDD,  
id-UL-CCTrCH-InformationItem-RL-SetupReqTDD,  
id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD,  
id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD,  
id-UL-CCTrCH-InformationList-RL-SetupReqTDD,  
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,  
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,  
id-UL-CCTrCH-Information-RL-ReconfPrepTDD, id-UL-DL-CompressedModeSelection,  
id-UL-DPCH-Information,  
id-UL-DPCH-Information-RL-SetupReqFDD,  
id-UL-DPCH-InformationItem-RL-SetupRspTDD,  
id-UL-DPCH-InformationItem-RL-AdditionRspTDD,  
id-UL-DPCH-InformationItem-PhyChReconfRqstTDD,  
id-UL-DPCH-InformationListIE-RL-ReconfReadyTDD,  
id-UL-DPCH-InformationList-PhyChReconfRqstTDD,  
id-UL-DPCH-InformationList-RL-ReconfReadyTDD,  
id-UL-DeltaEbNo,  
id-UL-DeltaEbNoAfter,  
id-UL-EbNoTarget,  
id-UL-MeanBitRate,  
id-URA-ID,



```

id-UnsuccessfulRL-InformationResponse,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
FROM RNSAP-Constants;

-- *****
--
-- Common Container List
--
-- *****

DPCH-IE-ContainerList    { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1, maxNrOfDPCHs, { IEsSetParam } }
RL-IE-ContainerList     { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1, maxNrOfRLs, { IEsSetParam } }
CCTrCH-IE-ContainerList { RNSAP-PROTOCOL-IES : IEsSetParam } ::= ProtocolIE-ContainerList { 1, maxNrOfCCTrCHs, { IEsSetParam } }

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

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

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY reject TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-D-RNTI          CRITICALITY reject TYPE D-RNTI          PRESENCE optional   } |
    { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime PRESENCE optional   } |
    { ID id-UL-DPCH-Information-RL-SetupReqFDD CRITICALITY reject TYPE UL-DPCH-Information-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-DL-DPCH-Information-RL-SetupReqFDD CRITICALITY reject TYPE DL-DPCH-Information-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-DCH-Information-RL-SetupReqFDD CRITICALITY reject TYPE DCH-InformationList-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqFDD CRITICALITY notify TYPE RL-InformationList-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs            MaxNrOfUL-DPCHs OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit           PunctureLimit,
    ul-TransportFormatCombinationSet TransportFormatCombinationSet,
    ul-DPCCCH-SlotFormat       UL-DPCCCH-SlotFormat,
    ul-EbNoTarget              UL-EbNoTarget OPTIONAL,
    diversityMode              DiversityMode,

```

```

d-FieldLength          D-FieldLength          OPTIONAL
-- This IE is present only if Feed Back mode diversity is activated -- ,
sSDT-CellIdLength      SSdT-CellID-Length    OPTIONAL,
s-FieldLength          S-FieldLength          OPTIONAL,
ul-meanBitRate         MeanBitRate          OPTIONAL,
iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
...
}

```

```

UL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

DL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
transportFormatCombinationSet      TransportFormatCombinationSet,
dl-DPCH-SlotNumber                 DL-DPCH-SlotNumber,
tFCI-SignallingMode                TFCI-SignallingMode,
tFCI-Presence                       TFCI-Presence          OPTIONAL
-- This IE is present if Slot Format is from 12 to 16 --,
multiplexingPosition               MultiplexingPosition,
powerOffsetInformation              SEQUENCE {
    po1-ForTFCI-Bits                PowerOffset,
    po2-ForTPC-Bits                 PowerOffset,
    po3-ForPilotBits                 PowerOffset,
    ...
},
dl-TPC-StepSize                    TPC-StepSize,
meanBitRate                         MeanBitRate          OPTIONAL,
iE-Extensions                       ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
...
}

```

```

DL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

DCH-InformationList-RL-SetupReqFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
dCH-ID                            DCH-ID,
dCH-CombinationInd                 DCH-CombinationInd    OPTIONAL,
rLC-Mode                           RLC-Mode,
ul-transportFormatSet              TransportFormatSet,
dl-transportFormatSet              TransportFormatSet,
ul-BLER                             BLER,
dl-BLER                             BLER,
allocationRetentionPriority         AllocationRetentionPriority,
frameHandlingPriority               FrameHandlingPriority,
payloadCRC-PresenceIndicator        PayloadCRC-PresenceIndicator,
ul-FP-Mode                          UL-FP-Mode,
toAWS                               ToAWS,
toAWE                               ToAWE,

```

```

        iE-Extensions          ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
        ...
    }

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

RL-InformationList-RL-SetupReqFDD          ::= RL-IE-ContainerList { {RL-InformationItemIEs-RL-SetupReqFDD} }

RL-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-SetupReqFDD    CRITICALITY notify    TYPE RL-InformationItem-RL-SetupReqFDD    PRESENCE mandatory    },
    ...
}

RL-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    uC-ID                C-ID,
    frameOffset          FrameOffset,
    chipOffset           ChipOffset,
    propagationDelay     PropagationDelay    OPTIONAL,
    diversityControlField DiversityControlField    OPTIONAL
    -- This IE is present only if the RL is not the first one in the RL-InformationList-RL-SetupReqFDD --,
    dl-InitialTX-Power   DL-Power            OPTIONAL
    -- Initial DL transmission power -- ,
    cPICH-EcIo           CPICH-EcIo         OPTIONAL,
    sSDT-CellID          SSDT-CellID        OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

```

```

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI          CRITICALITY reject TYPE S-RNTI          PRESENCE mandatory } |
  { ID id-D-RNTI          CRITICALITY reject TYPE D-RNTI          PRESENCE optional   } |
  { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime PRESENCE optional   } |
  { ID id-UL-MeanBitRate    CRITICALITY reject TYPE MeanBitRate    PRESENCE optional   } |
  { ID id-DL-MeanBitRate    CRITICALITY reject TYPE MeanBitRate    PRESENCE optional   } |
  { ID id-UL-CCTrCH-InformationList-RL-SetupReqTDD CRITICALITY notify TYPE UL-CCTrChInformationList-RL-SetupReqTDD PRESENCE mandatory } |
  { ID id-DL-CCTrCH-InformationList-RL-SetupReqTDD CRITICALITY notify TYPE DL-CCTrChInformationList-RL-SetupReqTDD PRESENCE mandatory } |
  { ID id-DCH-InformationList-RL-SetupReqTDD CRITICALITY reject TYPE DCH-InformationList-RL-SetupReqTDD PRESENCE mandatory } |
  { ID id-RL-Information-RL-SetupReqTDD CRITICALITY reject TYPE RL-Information-RL-SetupReqTDD PRESENCE mandatory },
  ...
}

UL-CCTrChInformationList-RL-SetupReqTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrChInformationItemIEs-RL-SetupReqTDD} }

UL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationItem-RL-SetupReqTDD CRITICALITY notify TYPE UL-CCTrChInformationItem-RL-SetupReqTDD PRESENCE mandatory },
  ...
}

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

UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrChInformationList-RL-SetupReqTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrChInformationItemIEs-RL-SetupReqTDD} }

DL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationItem-RL-SetupReqTDD CRITICALITY notify TYPE DL-CCTrChInformationItem-RL-SetupReqTDD PRESENCE mandatory },
  ...
}

DL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  dl-TFCS            TransportFormatCombinationSet,
  tFCI-Coding        TFCI-Coding,
  dl-PunctureLimit   PunctureLimit,
  iE-Extensions      ProtocolExtensionContainer { {DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

}

DCH-InformationList-RL-SetupReqTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF
DCH-InformationItem-RL-SetupReqTDD

DCH-InformationItem-RL-SetupReqTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    ul-cCtRCH-ID          CcTtRCH-ID, -- UL CcTtRCH in which the DCH is mapped
    dl-cCtRCH-ID          CcTtRCH-ID, -- DL CcTtRCH in which the DCH is mapped
    dCH-CombinationInd    DCH-CombinationInd    OPTIONAL,
    rLC-Mode              RLC-Mode,
    ul-transportFormatSet TransportFormatSet,
    dl-transportFormatSet TransportFormatSet,
    ul-BLER                BLER,
    dl-BLER                BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority  FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode             UL-FP-Mode,
    toAWS                  ToAWS,
    toAWE                  ToAWE,
    iE-Extensions          ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

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

RL-Information-RL-SetupReqTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                  C-ID,
    frameOffset           FrameOffset,
    primaryCCPCH-RSCP     PrimaryCCPCH-RSCP    OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {RL-Information-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--

```

```

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

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE optional } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-SetupRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD
      PRESENCE mandatory } |
    { ID id-UL-EbNoTarget          CRITICALITY ignore TYPE UL-EbNoTarget          PRESENCE optional } |
    { ID id-DL-EbNoTarget          CRITICALITY ignore TYPE DL-EbNoTarget          PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList { {RL-InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-SetupRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseItem-RL-SetupRspFDD PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-SetupRspFDD,
    sSDT-SupportIndicator SSDT-SupportIndicator,
    maxUL-EbNo           UL-EbNo,
    minUL-EbNo           UL-EbNo,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupRspFDD

DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE {

```

```

dl-ScramblingCode          DL-ScramblingCode,
fdd-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
-- ** NOTE: How many alternatives are there, 2 or 3? **
diversityIndication        CHOICE {
    combining                Combining-RL-SetupRspFDD,
    nonCombiningOrIENotPresent  NonCombiningOrIENotPresent-RL-SetupRspFDD  }          OPTIONAL
-- This IE is present only if the RL is not the first on in the RL Information -- ,
iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
...
}

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

Combining-RL-SetupRspFDD ::= ProtocolIE-Container {{ CombiningItemIE-RL-SetupRspFDD }}

CombiningItemIE-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-SetupRspFDD  CRITICALITY ignore  TYPE CombiningItem-RL-SetupRspFDD  PRESENCE mandatory },
    ...
}

CombiningItem-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    iE-Extensions            ProtocolExtensionContainer { { CombiningItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

CombiningItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NonCombiningOrIENotPresent-RL-SetupRspFDD ::= ProtocolIE-Container {{ NonCombiningOrIENotPresentItemIE-RL-SetupRspFDD }}

NonCombiningOrIENotPresentItemIE-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-NonCombiningOrIENotPresentItem-RL-SetupRspFDD  CRITICALITY ignore  TYPE NonCombiningOrIENotPresentItem-RL-SetupRspFDD  PRESENCE mandatory },
    ...
}

NonCombiningOrIENotPresentItem-RL-SetupRspFDD ::= SEQUENCE {
    dCH-InformationResponse-RL-SetupRspFDD  DCH-InformationResponseList-RL-SetupRspFDD  OPTIONAL,
    iE-Extensions                            ProtocolExtensionContainer { { NonCombiningOrIENotPresentItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

NonCombiningOrIENotPresentItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **

```

```
DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspFDD
```

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

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

```
-- ** NOTE: Both FDD and TDD messages use these definitions **
```

```
NeighbouringFDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF ProtocolIE-Container {{ NeighbouringFDD-CellInformationItemIE-RL-SetupRsp }}
```

```
NeighbouringFDD-CellInformationItemIE-RL-SetupRsp RNSAP-PROTOCOL-IES ::= {
    { ID id-NeighbouringFDD-CellInformationItem-RL-SetupRsp CRITICALITY ignore TYPE NeighbouringFDD-CellInformationItem-RL-SetupRsp PRESENCE mandatory
    },
    ...
}
```

```
NeighbouringFDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN               UARFCN,
    frameOffset          FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power   PrimaryCPICH-Power OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
    ...
}
```

```
NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
NeighbouringTDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF ProtocolIE-Container {{ NeighbouringTDD-CellInformationItemIE-RL-SetupRsp }}
```

```
NeighbouringTDD-CellInformationItemIE-RL-SetupRsp RNSAP-PROTOCOL-IES ::= {
    { ID id-NeighbouringTDD-CellInformationItem-RL-SetupRsp CRITICALITY ignore TYPE NeighbouringTDD-CellInformationItem-RL-SetupRsp PRESENCE mandatory
    },
    ...
}
```

```
NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    c-ID                C-ID,
```



```

cN-PS-DomainIdentifier      CN-PS-DomainIdentifier      OPTIONAL,
cN-CS-DomainIdentifier      CN-CS-DomainIdentifier      OPTIONAL,
uARFCN                      UARFCN,
frameOffset                 FrameOffset          OPTIONAL,
cellParameterID            CellParameterID,
syncCase                    SyncCase,
timeSlot                    TimeSlot          OPTIONAL
-- This IE is present only if SyncCase is Case1 -- ,
pSCH-TimeSlot              PSCH-TimeSlot          OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
ul-EbNo                     UL-EbNo          OPTIONAL,
dl-EbNo                     DL-EbNo          OPTIONAL,
iE-Extensions               ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

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

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI              CRITICALITY ignore TYPE D-RNTI PRESENCE optional } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
  { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-RL-SetupRspTDD PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
  rL-ID                      RL-ID,
  SAI                        SAI,
  ul-InterferenceLevel       ScaledUL-InterferenceLevel,
  maxUL-EbNo                 UL-EbNo,
  minUL-EbNo                 UL-EbNo,

```

```

    ul-EbNoTarget          UL-EbNo          OPTIONAL,
    dl-EbNoTarget          DL-EbNo          OPTIONAL,
    ul-CCTrCHInformation   UL-CCTrCHInformationList-RL-SetupRspTDD,
    dl-CCTrCHInformation   DL-CCTrCHInformationList-RL-SetupRspTDD,
    dCH-InformationResponse DCH-InformationResponseList-RL-SetupRspTDD,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Container {{UL-CCTrCHInformationListIEs-RL-SetupRspTDD}}

UL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationIE-RL-SetupRspTDD CRITICALITY ignore TYPE UL-CCTrCHInformationListIE-RL-SetupRspTDD PRESENCE mandatory },
    ...
}

UL-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cTrCH-ID          CCTrCH-ID,
    ul-DPCH-Information UL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions     ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationList-RL-SetupRspTDD ::= DPCH-IE-ContainerList { {UL-DPCH-InformationListIEs-RL-SetupRspTDD} }

UL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-RL-SetupRspTDD CRITICALITY ignore TYPE UL-DPCH-InformationItem-RL-SetupRspTDD PRESENCE mandatory },
    ...
}

UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID          DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    burstType        BurstType,
    midambleShift    MidambleShift,
    timeSlot         TimeSlot,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod RepetitionPeriod,
    repetitionLength  RepetitionLength,
}

```

```

    tFCI-Presence          TFCI-Presence,
    iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCHInformationList-RL-SetupRspTDD ::= ProtocolIE-Container {{DL-CCTrCHInformationListIEs-RL-SetupRspTDD}}

DL-CCTrCHInformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationIE-RL-SetupRspTDD    CRITICALITY ignore TYPE DL-CCTrCHInformationListIE-RL-SetupRspTDD    PRESENCE mandatory },
    ...
}

DL-CCTrCHInformationListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-SetupRspTDD

DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-Information       DL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions             ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationList-RL-SetupRspTDD ::=
DPCH-IE-ContainerList { {DL-DPCH-InformationListIEs-RL-SetupRspTDD} }

DL-DPCH-InformationListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationItem-RL-SetupRspTDD    CRITICALITY ignore TYPE DL-DPCH-InformationItem-RL-SetupRspTDD    PRESENCE mandatory },
    ...
}

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID                  DPCH-ID,
    tDD-ChannelisationCode   TDD-ChannelisationCode,
    burstType                 BurstType,
    midambleShift             MidambleShift,
    timeSlot                  TimeSlot,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tFCI-Presence             TFCI-Presence,
    iE-Extensions             ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Container {{DCH-InformationResponseListIEs-RL-SetupRspTDD}}

DCH-InformationResponseListIEs-RL-SetupRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponseListIE-RL-SetupRspTDD    CRITICALITY ignore    TYPE DCH-InformationResponseListIE-RL-SetupRspTDD    PRESENCE mandatory
},
    ...
}

DCH-InformationResponseListIE-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspTDD

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

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

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

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

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

RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore    TYPE D-RNTI                PRESENCE mandatory } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore    TYPE CN-PS-DomainIdentifier    PRESENCE mandatory } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore    TYPE CN-CS-DomainIdentifier    PRESENCE mandatory } |
    { ID id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
                                CRITICALITY ignore    TYPE UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
                                PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
                                CRITICALITY ignore    TYPE SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
}

```

```

        { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
        ...
    }

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
      PRESENCE mandatory },
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      PRESENCE mandatory },
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-SetupFailureFDD,
    sSDT-SupportIndicator SSDT-SupportIndicator,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    ul-EbNoTarget        UL-EbNo,
    maxUL-EbNo           UL-EbNo,
    minUL-EbNo           UL-EbNo,
    dl-EbNoTarget        DL-EbNo,
    iE-Extensions        ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= ProtocolIE-Container {{ DL-CodeInformationListItemIE-RL-SetupFailureFDD }}

DL-CodeInformationListItemIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CodeInformationListItem-RL-SetupFailureFDD  CRITICALITY ignore  TYPE DL-CodeInformationListItem-RL-SetupFailureFDD  PRESENCE mandatory
},
  ...
}
DL-CodeInformationListItem-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF
SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
  -- ** NOTE: How many alternatives are there, 2 or 3? **
  diversityIndication        CHOICE {
    combining                  Combining-RL-SetupFailureFDD,
    nonCombiningOrIENotPresent  NonCombiningOrIENotPresent-RL-SetupFailureFDD,
    ...
  }
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformationListItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CodeInformationListItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

Combining-RL-SetupFailureFDD ::= ProtocolIE-Container {{ CombiningItemIE-RL-SetupFailureFDD }}

CombiningItemIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-CombiningItem-RL-SetupFailureFDD  CRITICALITY ignore  TYPE CombiningItem-RL-SetupFailureFDD  PRESENCE mandatory },
  ...
}

CombiningItem-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions  ProtocolExtensionContainer { { CombiningItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

CombiningItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

NonCombiningOrIENotPresent-RL-SetupFailureFDD ::= ProtocolIE-Container {{ NonCombiningOrIENotPresentItemIE-RL-SetupFailureFDD }}

NonCombiningOrIENotPresentItemIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-NonCombiningOrIENotPresentItem-RL-SetupFailureFDD CRITICALITY ignore TYPE NonCombiningOrIENotPresentItem-RL-SetupFailureFDD PRESENCE
    mandatory },
    ...
}

NonCombiningOrIENotPresentItem-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-InformationResponse-RL-SetupFailureFDD DCH-InformationResponseList-RL-SetupFailureFDD OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { NonCombiningOrIENotPresentItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    ...
}

NonCombiningOrIENotPresentItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupFailureFDD

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

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

NeighbouringFDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF ProtocolIE-Container { { NeighbouringFDD-
CellInformationItemIE-RL-SetupFailureFDD }}

NeighbouringFDD-CellInformationItemIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD CRITICALITY ignore TYPE NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD
    PRESENCE mandatory },
    ...
}

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF ProtocolIE-Container {{ NeighbouringTDD-
CellInformationItemIE-RL-SetupFailureFDD }}

NeighbouringTDD-CellInformationItemIE-RL-SetupFailureFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD CRITICALITY ignore TYPE NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD
    PRESENCE mandatory },
    ...
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    cellParameterID CellParameterID,
    syncCase SyncCase,
    timeSlot TimeSlot,
    pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

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

RadioLinkSetupFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD

```



```

        { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
        ...
    }

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD ::= SEQUENCE {
    rL-ID          RL-ID,
    cause          Cause,
    iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-EbNoTarget          CRITICALITY ignore TYPE UL-EbNo          PRESENCE mandatory } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD CRITICALITY notify TYPE RL-InformationList-RL-AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-InformationList-RL-AdditionRqstFDD ::= RL-IE-ContainerList { {RL-Information-RL-AdditionRqstFDD-IEs} }

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

RL-Information-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    c-ID          C-ID,
    frameOffset    FrameOffset,
    chipOffset     ChipOffset,
    diversityControlField DiversityControlField,
}

```

```

    primaryCPICH-EcNo          PrimaryCPICH-EcNo          OPTIONAL,
    sSDT-CellID                SSDT-CellID              OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    c-ID                       C-ID,
    frameOffset                 FrameOffset,
    chipOffset                  ChipOffset,
    diversityControlField       DiversityControlField,
    primaryCCPCH-RSCP           PrimaryCCPCH-RSCP,
    iE-Extensions              ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

-- *****

```

```

--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

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

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-AdditionRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
      PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= RL-IE-ContainerList { {RL-InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-AdditionRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseItem-RL-AdditionRspFDD PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                   SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation    DL-CodeInformationList-RL-AdditionRspFDD,
    sSDT-SupportIndicator SSdT-SupportIndicator,
    maxUL-EbNo            UL-EbNo,
    minUL-EbNo            UL-EbNo,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionRspFDD ::= ProtocolIE-Container {{ DL-CodeInformationListItemIE-RL-AdditionRspFDD }}

DL-CodeInformationListItemIE-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-DL-CodeInformationListItem-RL-AdditionRspFDD  CRITICALITY ignore  TYPE DL-CodeInformationListItem-RL-AdditionRspFDD  PRESENCE mandatory
  },
  ...
}

```

```

DL-CodeInformationListItem-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF
SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
  -- ** NOTE: How many alternatives are there, 2 or 3? **
  diversityIndication        CHOICE {
    combining                Combining-RL-AdditionRspFDD,
    nonCombiningOrIENotPresent  NonCombiningOrIENotPresent-RL-AdditionRspFDD,
    ...
  }
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformationListItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

DL-CodeInformationListItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

Combining-RL-AdditionRspFDD ::= ProtocolIE-Container {{ CombiningItemIE-RL-AdditionRspFDD }}

```

```

CombiningItemIE-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-CombiningItem-RL-AdditionRspFDD  CRITICALITY ignore  TYPE CombiningItem-RL-AdditionRspFDD  PRESENCE mandatory },
  ...
}

```

```

CombiningItem-RL-AdditionRspFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions  ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

CombiningItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

NonCombiningOrIENotPresent-RL-AdditionRspFDD ::= ProtocolIE-Container {{ NonCombiningOrIENotPresentItemIE-RL-AdditionRspFDD }}

```

```

NonCombiningOrIENotPresentItemIE-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-NonCombiningOrIENotPresentItem-RL-AdditionRspFDD  CRITICALITY ignore  TYPE NonCombiningOrIENotPresentItem-RL-AdditionRspFDD  PRESENCE
mandatory },
  ...
}

```

```

NonCombiningOrIENotPresentItem-RL-AdditionRspFDD ::= SEQUENCE {
  dCH-InformationResponse-RL-AdditionRspFDD          DCH-InformationResponseList-RL-AdditionRspFDD OPTIONAL,

```

```

    iE-Extensions          ProtocolExtensionContainer { { NonCombiningOrIENotPresentItem-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    ...
}

NonCombiningOrIENotPresentItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionRspFDD

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

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

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF ProtocolIE-Container {{ NeighbouringFDD-CellInformationItemIE-RL-AdditionRsp }}

NeighbouringFDD-CellInformationItemIE-RL-AdditionRsp RNSAP-PROTOCOL-IES ::= {
    { ID id-NeighbouringFDD-CellInformationItem-RL-AdditionRsp CRITICALITY ignore TYPE NeighbouringFDD-CellInformationItem-RL-AdditionRsp PRESENCE
    mandatory },
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN              UARFCN,
    frameOffset         FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power  PrimaryCPICH-Power OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF ProtocolIE-Container {{ NeighbouringTDD-CellInformationItemIE-RL-AdditionRsp }}

```

```

NeighbouringTDD-CellInformationItemIE-RL-AdditionRsp RNSAP-PROTOCOL-IES ::= {
  { ID id-NeighbouringTDD-CellInformationItem-RL-AdditionRsp CRITICALITY ignore TYPE NeighbouringTDD-CellInformationItem-RL-AdditionRsp PRESENCE
  mandatory },
  ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
  uC-ID C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  cellParameterID CellParameterID,
  syncCase SyncCase,
  timeSlot TimeSlot,
  pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
  -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

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

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponse-RL-AdditionRspTDD
    CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics
    CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID RL-ID,

```

```

    sAI                SAI,
    ul-InterferenceLevel    ScaledUL-InterferenceLevel,
    ul-CCTrCHInformation    UL-CCTrCHInformationList-RL-AdditionRspTDD,
    dl-CCTrCHInformation    DL-CCTrCHInformationList-RL-AdditionRspTDD,
    diversityIndication    DiversityIndication-RL-AdditionRspTDD    OPTIONAL,
    minUL-EbNo            UL-EbNo,
    maxUL-EbNo            UL-EbNo,
    neighbouringFDD-CellInformation    NeighbouringFDD-CellInformationList-RL-SetupRsp    OPTIONAL,
    neighbouringTDD-CellInformation    NeighbouringTDD-CellInformationList-RL-SetupRsp    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} }    OPTIONAL,
    ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCHInformationList-RL-AdditionRspTDD ::= ProtocolIE-Container {{UL-CCTrCHInformationListIEs-RL-AdditionRspTDD}}

UL-CCTrCHInformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationIE-RL-AdditionRspTDD    CRITICALITY ignore    TYPE UL-CCTrCHInformationListIE-RL-AdditionRspTDD    PRESENCE mandatory },
    ...
}

UL-CCTrCHInformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-AdditionRspTDD

UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    ul-DPCH-Information        UL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions            ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} }    OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationList-RL-AdditionRspTDD ::= DPCH-IE-ContainerList { {UL-DPCH-InformationListIEs-RL-AdditionRspTDD} }

UL-DPCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-RL-AdditionRspTDD    CRITICALITY ignore    TYPE UL-DPCH-InformationItem-RL-AdditionRspTDD    PRESENCE mandatory },
    ...
}

UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode    TDD-ChannelisationCode,
    burstType                BurstType,
    midambleShift            MidambleShift,
    timeSlot                TimeSlot,
    offset                    Offset,
}

```

```

    tDD-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
    repetitionPeriod                RepetitionPeriod,
    repetitionLength                RepetitionLength,
    tFCI-Presence                   TFCI-Presence,
    iE-Extensions                   ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCHInformationList-RL-AdditionRspTDD ::= ProtocolIE-Container {{DL-CCTrCHInformationListIEs-RL-AdditionRspTDD}}

DL-CCTrCHInformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationIE-RL-AdditionRspTDD    CRITICALITY ignore    TYPE DL-CCTrCHInformationListIE-RL-AdditionRspTDD    PRESENCE mandatory },
    ...
}

DL-CCTrCHInformationListIE-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-AdditionRspTDD

DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-Information      DL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationList-RL-AdditionRspTDD ::= DPCH-IE-ContainerList { {DL-DPCH-InformationListIEs-RL-AdditionRspTDD} }

DL-DPCH-InformationListIEs-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationItem-RL-AdditionRspTDD    CRITICALITY ignore    TYPE DL-DPCH-InformationItem-RL-AdditionRspTDD    PRESENCE mandatory },
    ...
}

DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode  TDD-ChannelisationCode,
    burstType              BurstType,
    midambleShift          MidambleShift,
    timeSlot               TimeSlot,
    tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset,
    repetitionPeriod        RepetitionPeriod,
    repetitionLength        RepetitionLength,
    tFCI-Presence           TFCI-Presence,
    iE-Extensions           ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

```



```

}

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-AdditionRspTDD ::= ProtocolIE-Container {{DiversityIndication-RL-AdditionRspTDD}}

DiversityIndicationIE-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DiversityIndicationItem-RL-AdditionRspTDD    CRITICALITY ignore    TYPE DiversityIndicationItem-RL-AdditionRspTDD    PRESENCE mandatory },
    ...
}

DiversityIndicationItem-RL-AdditionRspTDD ::= CHOICE {
    combining          Combining,
    nonCombining       NonCombining,
    ...
}

Combining ::= ProtocolIE-Container {{CombiningIE-RL-AdditionRspTDD}}

CombiningIE-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-CombiningItem-RL-AdditionRspTDD    CRITICALITY ignore    TYPE CombiningItem-RL-AdditionRspTDD    PRESENCE mandatory },
    ...
}

CombiningItem-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID              RL-ID,
    iE-Extensions      ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    ...
}

CombiningItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NonCombining ::= ProtocolIE-Container {{NonCombiningIE-RL-AdditionRspTDD}}

NonCombiningIE-RL-AdditionRspTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-NonCombiningItem-RL-AdditionRspTDD    CRITICALITY ignore    TYPE NonCombiningItem-RL-AdditionRspTDD    PRESENCE mandatory },
    ...
}

NonCombiningItem-RL-AdditionRspTDD ::= SEQUENCE {
    dCH-InformationResponse-RL-AdditionRspFDD      DCH-InformationResponseList-RL-AdditionRspFDD,
    iE-Extensions      ProtocolExtensionContainer { { NonCombiningItem-RL-AdditionRspTDD-ExtIEs } } OPTIONAL,
    ...
}

NonCombiningItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

RadioLinkAdditionResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

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

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    PRESENCE mandatory } |
  { ID id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}

UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    PRESENCE mandatory },
  ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

```

```

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    PRESENCE mandatory },
  ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  sAI SAI,
  ul-InterferenceLevel ScaledUL-InterferenceLevel,
  dl-CodeInformation DL-CodeInformationList-RL-AdditionFailureFDD,
  sSDT-SupportIndicator SSdT-SupportIndicator,
  maxUL-EbNo UL-EbNo,
  minUL-EbNo UL-EbNo,
  neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
  neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionFailureFDD ::= ProtocolIE-Container {{ DL-CodeInformationListItemIE-RL-AdditionFailureFDD }}

DL-CodeInformationListItemIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CodeInformationListItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE DL-CodeInformationListItem-RL-AdditionFailureFDD PRESENCE
  mandatory },
  ...
}

DL-CodeInformationListItem-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF
SEQUENCE {
  dl-ScramblingCode DL-ScramblingCode,
  dl-ChannelisationCode DL-ChannelisationCode,
  diversityIndication CHOICE {
    combining Combining-RL-AdditionFailureFDD,
    nonCombiningOrIENotPresent NonCombiningOrIENotPresent-RL-AdditionFailureFDD,
    ...
  }
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions ProtocolExtensionContainer { {DL-CodeInformationListItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CodeInformationListItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

Combining-RL-AdditionFailureFDD ::= ProtocolIE-Container {{ CombiningItemIE-RL-AdditionFailureFDD }}

CombiningItemIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-CombiningItem-RL-AdditionFailureFDD   CRITICALITY ignore   TYPE CombiningItem-RL-AdditionFailureFDD   PRESENCE mandatory },
  ...
}

CombiningItem-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  iE-Extensions        ProtocolExtensionContainer { { CombiningItem-RL-AdditionFailureFDD-ExtIEs } } OPTIONAL,
  ...
}

CombiningItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

NonCombiningOrIENotPresent-RL-AdditionFailureFDD ::= ProtocolIE-Container {{ NonCombiningOrIENotPresentItemIE-RL-AdditionFailureFDD }}

NonCombiningOrIENotPresentItemIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD   CRITICALITY ignore   TYPE NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD
  PRESENCE mandatory },
  ...
}

NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD ::= SEQUENCE {
  dCH-InformationResponse-RL-AdditionFailureFDD      DCH-InformationResponseList-RL-AdditionFailureFDD OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { { NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD-ExtIEs } } OPTIONAL,
  ...
}

NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionFailureFDD

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

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

```

```
NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
ProtocolIE-Container {{ NeighbouringFDD-CellInformationItemIE-RL-AdditionFailureFDD }}
```

```
NeighbouringFDD-CellInformationItemIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE NeighbouringFDD-CellInformationItem-RL-
  AdditionFailureFDD PRESENCE mandatory },
  ...
}
```

```
NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  primaryScramblingCode PrimaryScramblingCode,
  cPICH-Power CPICH-Power OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
```

```
NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
ProtocolIE-Container {{ NeighbouringTDD-CellInformationItemIE-RL-AdditionFailureFDD }}
```

```
NeighbouringTDD-CellInformationItemIE-RL-AdditionFailureFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD CRITICALITY ignore TYPE NeighbouringTDD-CellInformationItem-RL-
  AdditionFailureFDD PRESENCE mandatory },
  ...
}
```

```
NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  cellParameterID CellParameterID,
  syncCase SyncCase,
  timeSlot TimeSlot,
  pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
  -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
```

```
NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```

}

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

-- *****
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *****

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

RadioLinkAdditionFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics             CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponse ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK DELETION REQUEST
--
-- *****

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

```

```

RadioLinkDeletionRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-DeletionRqst CRITICALITY notify TYPE RL-InformationList-RL-DeletionRqst PRESENCE mandatory },
  ...
}

RL-InformationList-RL-DeletionRqst ::= RL-IE-ContainerList { {RL-Information-RL-DeletionRqst-IEs} }

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

RL-Information-RL-DeletionRqst ::= SEQUENCE {
  rL-ID RL-ID,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-DeletionRqst-ExtIEs} } OPTIONAL,
  ...
}

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

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

-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

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

RadioLinkDeletionResponse-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--

```

-- \*\*\*\*\*

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

```
RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime          CRITICALITY reject TYPE AllowedQueuingTime          PRESENCE mandatory } |
  { ID id-UL-DPCH-Information         CRITICALITY reject TYPE UL-DPCH-Information         PRESENCE optional } |
  { ID id-DL-DPCH-Information         CRITICALITY reject TYPE DL-DPCH-Information         PRESENCE optional } |
  { ID id-DCH-ModifyList-RL-ReconfPrepFDD CRITICALITY reject TYPE DCH-ModifyList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DCH-AddList-RL-ReconfPrepFDD CRITICALITY reject TYPE DCH-AddList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DCH-DeleteList-RL-ReconfPrepFDD CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY reject TYPE RL-InformationList-RL-ReconfPrepFDD PRESENCE mandatory }
  ...
}
```

```
UL-DPCH-Information ::= SEQUENCE {
  ul-ScramblingCode          UL-ScramblingCode          OPTIONAL,
  minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength OPTIONAL,
  maxNrOfUL-DPDCHs          MaxNrOfUL-DPDCHs          OPTIONAL
  -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 --,
  ul-PunctureLimit          PunctureLimit              OPTIONAL,
  tFCS                      TransportFormatCombinationSet OPTIONAL,
  ul-DPCCH-SlotFormat        UL-DPCCH-SlotFormat        OPTIONAL,
  sSDT-CellIDLength          SSDT-CellID-Length          OPTIONAL,
  s-FieldLength              S-FieldLength              OPTIONAL,
  meanBitRate                MeanBitRate                OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { {UL-DPCH-Information-ExtIEs} } OPTIONAL,
  ...
}
```

```
UL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
DL-DPCH-Information ::= SEQUENCE {
  tFCS                      TransportFormatCombinationSet OPTIONAL,
  dl-DPCCH-SlotFormat        DL-DPCCH-SlotFormat        OPTIONAL,
  tFCI-SignallingMode        TFCI-SignallingMode        OPTIONAL,
  tFCI-Presence              TFCI-Presence              OPTIONAL
  -- This IE is present if Slot Format is from 12 to 16 --,
  multiplexingPosition        MultiplexingPosition        OPTIONAL,
  meanBitRate                MeanBitRate                OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { {DL-DPCH-Information-ExtIEs} } OPTIONAL,
  ...
}
```

```
DL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```



```

}
...
}
DCH-ModifyList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
    dCH-ID DCH-ID,
    ul-TransportformatSet TransportFormatSet OPTIONAL,
    dl-TransportformatSet TransportFormatSet OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority FrameHandlingPriority OPTIONAL,
    ul-FP-Mode UL-FP-Mode OPTIONAL,
    toAWS ToAWS OPTIONAL,
    toAWE ToAWE OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DCH-ModifyList-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}
DCH-ModifyList-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-AddList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
    dCH-ID DCH-ID,
    rLC-Mode RLC-Mode,
    dCH-CombinationInd DCH-CombinationInd OPTIONAL,
    ul-TransportformatSet TransportFormatSet,
    dl-TransportformatSet TransportFormatSet,
    ul-BLER BLER,
    dl-BLER BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode UL-FP-Mode,
    toAWS ToAWS,
    toAWE ToAWE,
    iE-Extensions ProtocolExtensionContainer { {DCH-AddList-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}
DCH-AddList-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
    dCH-ID DCH-ID,
    iE-Extensions ProtocolExtensionContainer { {DCH-DeleteList-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

DCH-DeleteList-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-ReconfPrepFDD ::= RL-IE-ContainerList { {RL-Information-RL-ReconfPrepFDD-IEs} }

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

RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sSDT-Indication      SSdT-Indication    OPTIONAL,
    sSDT-CellIdentity    SSdT-CellID       OPTIONAL
    -- The IE may be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime    CRITICALITY reject  TYPE AllowedQueuingTime    PRESENCE optional  } |
    { ID id-UL-MeanBitRate        CRITICALITY reject  TYPE MeanBitRate          PRESENCE optional  } |
    { ID id-DL-MeanBitRate        CRITICALITY reject  TYPE MeanBitRate          PRESENCE optional  } |
    { ID id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD
      CRITICALITY notify  TYPE UL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE mandatory } |
    { ID id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD
      CRITICALITY notify  TYPE DL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE mandatory } |
    { ID id-DCH-ModifyList-RL-ReconfPrepTDD    CRITICALITY reject  TYPE DCH-ModifyList-RL-ReconfPrepTDD    PRESENCE mandatory } |
    { ID id-DCH-AddList-RL-ReconfPrepTDD       CRITICALITY reject  TYPE DCH-AddList-RL-ReconfPrepTDD       PRESENCE mandatory } |
    { ID id-DCH-DeleteList-RL-ReconfPrepTDD    CRITICALITY reject  TYPE DCH-DeleteList-RL-ReconfPrepTDD    PRESENCE mandatory } |
}

```

```

}
...
}
UL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs} }

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

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

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

DL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs} }

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

DL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
  cCtTrCH-ID          CCTrCH-ID,
  tFCS                TransportFormatCombinationSet OPTIONAL,
  tFCI-Coding         TFCI-Coding OPTIONAL,
  punctureLimit       PunctureLimit OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

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

DCH-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfPrepTDD

DCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dCH-ID              DCH-ID,
  ul-CCTrCH-ID        CCTrCH-ID OPTIONAL,
  dl-CCTrCH-ID        CCTrCH-ID OPTIONAL,
  ul-TransportformatSet TransportFormatSet OPTIONAL,
}

```

```

dl-TransportformatSet      TransportFormatSet OPTIONAL,
allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
frameHandlingPriority      FrameHandlingPriority  OPTIONAL,
ul-FP-Mode                UL-FP-Mode           OPTIONAL,
toAWS                     ToAWS               OPTIONAL,
toAWE                     ToAWE               OPTIONAL,
iE-Extensions             ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

```

```

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

```

```

DCH-AddList-RL-ReconfPrepTDD          ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfPrepTDD

```

```

DCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
dCH-ID                DCH-ID,
rLC-Mode              RLC-Mode,
ul-CCTrCH-ID         CCTrCH-ID,
dl-CCTrCH-ID         CCTrCH-ID,
dCH-CombinationInd   DCH-CombinationInd OPTIONAL,
ul-TransportformatSet TransportFormatSet,
dl-TransportformatSet TransportFormatSet,
ul-BLER              BLER,
dl-BLER              BLER,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority FrameHandlingPriority,
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode           UL-FP-Mode,
toAWS                ToAWS,
toAWE                ToAWE,
iE-Extensions       ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

```

```

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

```

```

DCH-DeleteList-RL-ReconfPrepTDD      ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepTDD

```

```

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

```

```

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

```

```

}
...
}
RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- RADIO LINK RECONFIGURATION READY FDD
--
-- *****

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

RadioLinkReconfigurationReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseList-RL-ReconfReadyFDD
      CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfReadyFDD
      PRESENCE optional } |
    { ID id-CriticalityDiagnostics
      CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-ReconfReadyFDD ::= RL-IE-ContainerList { {RL-InformationResponse-RL-ReconfReadyFDD-IEs} }

RL-InformationResponse-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfReadyFDD
      CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfReadyFDD
      PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    max-UL-EbNo   UL-EbNo,
    min-UL-EbNo   UL-EbNo,
    dl-CodeInformationList DL-CodeInformationList-RL-ReconfReadyFDD OPTIONAL,
    dCHsToBeAdded  DCH-AddList-RL-ReconfReadyFDD OPTIONAL,
    dCHsToBeModified DCH-ModifyList-RL-ReconfReadyFDD OPTIONAL,
    iE-Extensions  ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DL-CodeInformationList-RL-ReconfReadyFDD ::= ProtocolIE-Container { { DL-CodeInformationListItemIE-RL-ReconfReadyFDD } }

DL-CodeInformationListItemIE-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CodeInformationListItem-RL-ReconfReadyFDD          CRITICALITY ignore  TYPE DL-CodeInformationListItem-RL-ReconfReadyFDD  PRESENCE
mandatory  },
  ...
}

DL-CodeInformationListItem-RL-ReconfReadyFDD ::= SEQUENCE (SIZE (0..maxNrOfDL-Codes)) OF
SEQUENCE {
  dl-ScramblingCode          DL-ScramblingCode,
  fdd-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
  iE-Extensions              ProtocolExtensionContainer { { DL-CodeInformationList-RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,
  ...
}

DL-CodeInformationList-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-AddList-RL-ReconfReadyFDD ::= ProtocolIE-Container { { DCH-AddListItemIE-RL-ReconfReadyFDD } }

DCH-AddListItemIE-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddListItem-RL-ReconfReadyFDD          CRITICALITY ignore  TYPE DCH-AddListItem-RL-ReconfReadyFDD  PRESENCE mandatory  },
  ...
}

DCH-AddListItem-RL-ReconfReadyFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
  dCH-ID          DCH-ID,
  bindingID       BindingID,
  transportLayerAddress  TransportLayerAddress,
  iE-Extensions   ProtocolExtensionContainer { { DCH-AddListItem-RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,
  ...
}

DCH-AddListItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-ModifyList-RL-ReconfReadyFDD ::= ProtocolIE-Container { { DCH-ModifyListItemIE-RL-ReconfReadyFDD } }

DCH-ModifyListItemIE-RL-ReconfReadyFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyListItem-RL-ReconfReadyFDD          CRITICALITY ignore  TYPE DCH-ModifyListItem-RL-ReconfReadyFDD  PRESENCE mandatory  },
  ...
}

DCH-ModifyListItem-RL-ReconfReadyFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
  dCH-ID          DCH-ID,
  bindingID       BindingID,

```

```

        transportLayerAddress      TransportLayerAddress,
        iE-Extensions              ProtocolExtensionContainer { {DCH-ModifyListItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
        ...
    }

DCH-ModifyListItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION READY TDD
--
-- *****

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

RadioLinkReconfigurationReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponse-RL-ReconfReadyTDD
      CRITICALITY ignore TYPE RL-InformationResponse-RL-ReconfReadyTDD PRESENCE optional } |
    { ID id-CriticalityDiagnostics
      CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponse-RL-ReconfReadyTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    max-UL-EbNo          UL-EbNo,
    min-UL-EbNo          UL-EbNo,
    ul-CCTrCH-Information  UL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
    dl-CCTrCH-Information  DL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
    dCHsToBeAdded         DCH-AddList-RL-ReconfReadyTDD OPTIONAL,
    dCHsToBeModified      DCH-ModifyList-RL-ReconfReadyTDD OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Container {{UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD}}

UL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE UL-CCTrCHInformationListIE-RL-ReconfReadyTDD  PRESENCE mandatory
  },
  ...
}
UL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-ReconfReadyTDD

UL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  ul-DPCH-Information  UL-DPCH-InformationList-RL-ReconfReadyTDD,
  iE-Extensions       ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

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

UL-DPCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Container {{UL-DPCH-InformationListIEs-RL-ReconfReadyTDD}}

UL-DPCH-InformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-DPCH-InformationListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE UL-DPCH-InformationListIE-RL-ReconfReadyTDD  PRESENCE mandatory
  },
  ...
}

UL-DPCH-InformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationItem-RL-ReconfReadyTDD

UL-DPCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
  dPCH-ID          DPCH-ID,
  tDD-ChannelisationCode  TDD-ChannelisationCode  OPTIONAL,
  burstType          BurstType  OPTIONAL,
  midambleShift      MidambleShift  OPTIONAL,
  timeSlot           TimeSlot  OPTIONAL,
  tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset  OPTIONAL,
  repetitionPeriod   RepetitionPeriod  OPTIONAL,
  repetitionLength   RepetitionLength  OPTIONAL,
  tFCI-Presence      TFCI-Presence  OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {UL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Container {{DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD}}

DL-CCTrCHInformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD  CRITICALITY ignore  TYPE DL-CCTrCHInformationListIE-RL-ReconfReadyTDD  PRESENCE mandatory
  },

```



```

}
...
DL-CCTrCHInformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-ReconfReadyTDD
DL-CCTrCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-Information      DL-DPCH-InformationList-RL-ReconfReadyTDD,
    iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DL-DPCH-InformationList-RL-ReconfReadyTDD ::= ProtocolIE-Container { {DL-DPCH-InformationListIEs-RL-ReconfReadyTDD} }

DL-DPCH-InformationListIEs-RL-ReconfReadyTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationListIE-RL-ReconfReadyTDD    CRITICALITY ignore    TYPE DL-DPCH-InformationListIE-RL-ReconfReadyTDD    PRESENCE mandatory
    },
    ...
}

DL-DPCH-InformationListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationItem-RL-ReconfReadyTDD
DL-DPCH-InformationItem-RL-ReconfReadyTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode    OPTIONAL,
    burstType              BurstType                OPTIONAL,
    midambleShift          MidambleShift            OPTIONAL,
    timeSlot               TimeSlot                OPTIONAL,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset    OPTIONAL,
    repetitionPeriod       RepetitionPeriod        OPTIONAL,
    repetitionLength       RepetitionLength        OPTIONAL,
    tFCI-Presence          TFCI-Presence           OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {DL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfReadyTDD ::= ProtocolIE-Container { {DCH-AddList-RL-ReconfReadyTDD-IEs} }

DCH-AddList-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddListIE    CRITICALITY ignore    TYPE DCH-AddListIE-RL-ReconfReadyTDD    PRESENCE mandatory
    },
    ...
}

DCH-AddListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfReadyTDD

```

```

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

DCH-AddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfReadyTDD ::= ProtocolIE-Container { {DCH-ModifyList-RL-ReconfReadyTDD-IEs} }

DCH-ModifyList-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyListIE          CRITICALITY ignore TYPE DCH-ModifyListIE-RL-ReconfReadyTDD PRESENCE mandatory },
    ...
}

DCH-ModifyListIE-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfReadyTDD

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

DCH-ModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

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

RadioLinkReconfigurationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CFN          CRITICALITY ignore TYPE CFN          PRESENCE mandatory },

```

```

}
...
}
RadioLinkReconfigurationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

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

RadioLinkReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
    { ID id-RL-ReconfigurationFailureList-RL-ReconfFail
      CRITICALITY ignore TYPE RL-ReconfigurationFailureList-RL-ReconfFail
      PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}

RL-ReconfigurationFailureList-RL-ReconfFail ::= RL-IE-ContainerList { {RL-ReconfigurationFailure-RL-ReconfFail-IEs} }

RL-ReconfigurationFailure-RL-ReconfFail-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-ReconfigurationFailure-RL-ReconfFail CRITICALITY ignore TYPE RL-ReconfigurationFailure-RL-ReconfFail PRESENCE mandatory },
    ...
}

RL-ReconfigurationFailure-RL-ReconfFail ::= SEQUENCE {
    rL-ID          RL-ID,
    cause          Cause,
    iE-Extensions  ProtocolExtensionContainer { {RL-ReconfigurationFailure-RL-ReconfFail-ExtIEs} } OPTIONAL,
    ...
}

RL-ReconfigurationFailure-RL-ReconfFail-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****

```

```

--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

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

RadioLinkReconfigurationCancel-IEs RNSAP-PROTOCOL-IES ::= {
    ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

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

RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY reject TYPE AllowedQueuingTime          PRESENCE mandatory } |
    { ID id-UL-DPCH-Information          CRITICALITY reject TYPE UL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DL-DPCH-Information          CRITICALITY reject TYPE DL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfRqstFDD CRITICALITY reject TYPE DCH-ModifyList-RL-ReconfRqstFDD PRESENCE mandatory } |
    { ID id-DCH-AddList-RL-ReconfRqstFDD CRITICALITY reject TYPE DCH-AddList-RL-ReconfRqstFDD PRESENCE mandatory } |
    { ID id-DCH-DeleteList-RL-ReconfRqstFDD CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfRqstFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS          TransportFormatCombinationSet OPTIONAL,
    meanBitRate   MeanBitRate OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS                TransportFormatCombinationSet  OPTIONAL,
    tFCI-SignallingMode TFCI-SignallingMode OPTIONAL,
    meanBitRate         MeanBitRate  OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
DCH-ModifyList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
    dCH-ID                DCH-ID,
    ul-TransportformatSet TransportFormatSet  OPTIONAL,
    dl-TransportformatSet TransportFormatSet  OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority  FrameHandlingPriority  OPTIONAL,
    ul-FP-Mode             UL-FP-Mode  OPTIONAL,
    toAWS                  ToAWS  OPTIONAL,
    toAWE                  ToAWE  OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {DCH-ModifyList-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DCH-ModifyList-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
DCH-AddList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
    dCH-ID                DCH-ID,
    rLC-Mode              RLC-Mode,
    dCH-CombinationInd    DCH-CombinationInd  OPTIONAL,
    ul-TransportformatSet TransportFormatSet,
    dl-TransportformatSet TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority  FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode            UL-FP-Mode,
    toAWS                 ToAWS,
    toAWE                 ToAWE,
    iE-Extensions         ProtocolExtensionContainer { {DCH-AddList-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DCH-AddList-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```

DCH-DeleteList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
    dCH-ID DCH-ID,
    iE-Extensions ProtocolExtensionContainer { {DCH-DeleteList-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteList-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime CRITICALITY reject TYPE AllowedQueuingTime PRESENCE optional } |
    { ID id-UL-MeanBitRate CRITICALITY reject TYPE MeanBitRate PRESENCE optional } |
    { ID id-DL-MeanBitRate CRITICALITY reject TYPE MeanBitRate PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD
        CRITICALITY notify TYPE UL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE optional } |
    { ID id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD
        CRITICALITY notify TYPE DL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfRqstTDD CRITICALITY reject TYPE DCH-ModifyList-RL-ReconfRqstTDD PRESENCE optional } |
    { ID id-DCH-AddList-RL-ReconfRqstTDD CRITICALITY reject TYPE DCH-AddList-RL-ReconfRqstTDD PRESENCE optional } |
    { ID id-DCH-DeleteList-RL-ReconfRqstTDD CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfRqstTDD PRESENCE optional },
    ...
}

UL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-InformationList-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-InformationList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationItem-RL-ReconfRqstTDD CRITICALITY notify TYPE UL-CCTrCH-InformationItem-RL-ReconfRqstTDD PRESENCE mandatory },
    ...
}

UL-CCTrCH-InformationItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,

```

```

    tFCS                TransportFormatCombinationSet,
    iE-Extensions       ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-InformationList-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-InformationList-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationItem-RL-ReconfRqstTDD CRITICALITY notify TYPE DL-CCTrCH-InformationItem-RL-ReconfRqstTDD PRESENCE mandatory },
    ...
}

DL-CCTrCH-InformationItem-RL-ReconfRqstTDD ::= SEQUENCE {
    cCtRch-ID           CCTrCH-ID,
    tFCS                TransportFormatCombinationSet,
    iE-Extensions       ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DCH-ModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF DCH-ModifyItem-RL-ReconfRqstTDD

DCH-ModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID              DCH-ID,
    ul-CCTrCH-ID        CCTrCH-ID OPTIONAL,
    dl-CCTrCH-ID        CCTrCH-ID OPTIONAL,
    ul-TransportformatSet TransportFormatSet OPTIONAL,
    dl-TransportformatSet TransportFormatSet OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority FrameHandlingPriority OPTIONAL,
    ul-FP-Mode          UL-FP-Mode OPTIONAL,
    toAWS               ToAWS OPTIONAL,
    toAWE               ToAWE OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DCH-AddList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF DCH-AddItem-RL-ReconfRqstTDD

```

```

DCH-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    rLC-Mode              RLC-Mode,
    ul-CCTrCH-ID         CCTrCH-ID,
    dl-CCTrCH-ID         CCTrCH-ID,
    dCH-CombinationInd   DCH-CombinationInd OPTIONAL,
    ul-TransportformatSet TransportFormatSet,
    dl-TransportformatSet TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    ul-FP-Mode           UL-FP-Mode,
    toAWS                ToAWS,
    toAWE                ToAWE,
    iE-Extensions        ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DCH-DeleteList-RL-ReconfRqstTDD          ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD

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

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

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

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE FDD
--
-- *****

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

```



```

RadioLinkReconfigurationResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseList-RL-ReconfRsp      CRITICALITY ignore      TYPE RL-InformationResponseList-RL-ReconfRsp      PRESENCE
mandatory } |
  { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}

RL-InformationResponseList-RL-ReconfRsp ::= RL-IE-ContainerList { {RL-InformationResponse-RL-ReconfRsp-IEs} }

RL-InformationResponse-RL-ReconfRsp-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-ReconfRsp      CRITICALITY ignore  TYPE RL-InformationResponseItem-RL-ReconfRsp      PRESENCE mandatory },
  ...
}

RL-InformationResponseItem-RL-ReconfRsp ::= SEQUENCE {
  rL-ID                RL-ID,
  max-UL-EbNo          UL-EbNo          OPTIONAL,
  min-UL-EbNo          UL-EbNo          OPTIONAL,
  dCHsToBeAdded        DCH-AddList-RL-ReconfRsp          OPTIONAL,
  dCHsToBeModified    DCH-ModifyList-RL-ReconfRsp        OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfRsp-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-AddList-RL-ReconfRsp ::= ProtocolIE-Container { {DCH-AddListItemIE-RL-ReconfRsp} }

DCH-AddListItemIE-RL-ReconfRsp RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddListItem-RL-ReconfRsp      CRITICALITY ignore  TYPE DCH-AddListItem-RL-ReconfRsp      PRESENCE mandatory },
  ...
}

DCH-AddListItem-RL-ReconfRsp ::= SEQUENCE (SIZE(1..maxNrOfDCHs)) OF
SEQUENCE {
  dCH-ID                DCH-ID,
  bindingID             BindingID,
  transportLayerAddress TransportLayerAddress,
  iE-Extensions        ProtocolExtensionContainer { {DCH-AddListItem-RL-ReconfRspFDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-AddListItem-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-ModifyList-RL-ReconfRsp ::= ProtocolIE-Container { {DCH-ModifyListItemIE-RL-ReconfRsp} }

DCH-ModifyListItemIE-RL-ReconfRsp RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-DCH-ModifyListItem-RL-ReconfRsp CRITICALITY ignore TYPE DCH-ModifyListItem-RL-ReconfRsp PRESENCE mandatory },
    ...
}

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

DCH-ModifyListItem-RL-ReconfRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE TDD
--
-- *****

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

RadioLinkReconfigurationResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

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

-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

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

```

```

}

RadioLinkFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-FailureInd   CRITICALITY ignore   TYPE RL-InformationList-RL-FailureInd   PRESENCE mandatory   },
  ...
}

RL-InformationList-RL-FailureInd          ::= RL-IE-ContainerList { {RL-Information-RL-FailureInd-IEs} }

RL-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-FailureInd       CRITICALITY ignore   TYPE RL-Information-RL-FailureInd       PRESENCE mandatory   },
  ...
}

RL-Information-RL-FailureInd ::= SEQUENCE {
  rL-ID                RL-ID,
  cause                Cause,
  iE-Extensions       ProtocolExtensionContainer { {RL-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
  ...
}

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

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

-- *****
--
-- RADIO LINK RESTORE INDICATION
--
-- *****

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

RadioLinkRestoreIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-RestoreInd   CRITICALITY ignore   TYPE RL-InformationList-RL-RestoreInd   PRESENCE mandatory   },
  ...
}

RL-InformationList-RL-RestoreInd          ::= RL-IE-ContainerList { {RL-Information-RL-RestoreInd-IEs} }

RL-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-RestoreInd       CRITICALITY ignore   TYPE RL-Information-RL-RestoreInd       PRESENCE mandatory   },

```

```

}
...
}
RL-Information-RL-RestoreInd ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,
  ...
}

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

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

-- *****
--
-- DOWNLINK POWER CONTROL REQUEST
--
-- *****

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

DL-PowerControlRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-ProcedureScope-DL-PC-Rqst          CRITICALITY ignore  TYPE ProcedureScope-DL-PC-Rqst          PRESENCE mandatory  },
  ...
}

ProcedureScope-DL-PC-Rqst ::= CHOICE {
  allRLs          AllRLs-DL-PC-Rqst,
  individualRLs   IndividualRLs-DL-PC-Rqst,
  ...
}

AllRLs-DL-PC-Rqst ::= ProtocolIE-Container {{ AllRLsItemIE-DL-PC-Rqst }}

AllRLsItemIE-DL-PC-Rqst RNSAP-PROTOCOL-IES ::= {
  { ID id-AllRLsItem-DL-PC-Rqst          CRITICALITY ignore  TYPE AllRLsItem-DL-PC-Rqst          PRESENCE mandatory  },
  ...
}

AllRLsItem-DL-PC-Rqst ::= SEQUENCE {
  dl-ReferencePower DL-Power,
  iE-Extensions    ProtocolExtensionContainer { { AllRLsItem-DL-PC-Rqst-ExtIEs} } OPTIONAL,
  ...
}

```

```

}

AllRlsItem-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

IndividualRls-DL-PC-Rqst ::= ProtocolIE-Container {{ IndividualRlsItemIE-DL-PC-Rqst }}

IndividualRlsItemIE-DL-PC-Rqst RNSAP-PROTOCOL-IES ::= {
    { ID id-IndividualRlsItem-DL-PC-Rqst CRITICALITY ignore TYPE IndividualRlsItem-DL-PC-Rqst PRESENCE mandatory },
    ...
}

IndividualRlsItem-DL-PC-Rqst ::= SEQUENCE {
    dl-ReferencePowerInformationList DL-ReferencePowerInformationList-DL-PC-Rqst,
    iE-Extensions ProtocolExtensionContainer { { IndividualRlsItem-DL-PC-Rqst-ExtIEs } } OPTIONAL,
    ...
}

IndividualRlsItem-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= ProtocolIE-Container { {DL-ReferencePowerInformationListItemIE-DL-PC-Rqst} }

DL-ReferencePowerInformationListItemIE-DL-PC-Rqst RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-ReferencePowerInformationListItem-DL-PC-Rqst CRITICALITY ignore TYPE DL-ReferencePowerInformationListItem-DL-PC-Rqst PRESENCE mandatory
    },
    ...
}

DL-ReferencePowerInformationListItem-DL-PC-Rqst ::= SEQUENCE (SIZE(1..maxNrOfRLs)) OF
SEQUENCE {
    rL-ID RL-ID,
    dl-Power DL-Power,
    iE-Extensions ProtocolExtensionContainer { {DL-ReferencePowerInformationListItem-DL-PC-Rqst-ExtIEs} } OPTIONAL,
    ...
}

DL-ReferencePowerInformationListItem-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-PowerControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST FDD
--

```

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

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

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

RL-Information-PhyChReconfRqstFDD ::= SEQUENCE {
    rL-ID                        RL-ID,
    dl-CodeInformations          DL-CodeInformationList-PhyChReconfRqstFDD,
    iE-Extensions                ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

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

DL-CodeInformationList-PhyChReconfRqstFDD ::= ProtocolIE-Container { {DL-CodeInformationListItemIE-PhyChReconfRqstFDD} }

DL-CodeInformationListItemIE-PhyChReconfRqstFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CodeInformationListItem-PhyChReconfRqstFDD    CRITICALITY notify    TYPE DL-CodeInformationListItem-PhyChReconfRqstFDDPRESENCE mandatory
    },
    ...
}

DL-CodeInformationListItem-PhyChReconfRqstFDD ::= SEQUENCE (SIZE(1..maxNrOfDL-Codes)) OF
    SEQUENCE {
        dl-scramblingCode          DL-ScramblingCode,
        fDD-DL-ChannelisationCodeNumber    FDD-DL-ChannelisationCodeNumber,
        iE-Extensions              ProtocolExtensionContainer { {DL-CodeInformationListItem-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
        ...
    }

DL-CodeInformationListItem-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST TDD
```

```

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

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

RL-Information-PhyChReconfRqstTDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    ul-CCTrCH-Information      UL-CCTrCH-InformationList-PhyChReconfRqstTDD,
    dl-CCTrCH-Information      DL-CCTrCH-InformationList-PhyChReconfRqstTDD,
    iE-Extensions              ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

UL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Container { {UL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs} }

UL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD    CRITICALITY reject    TYPE UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD    PRESENCE
    mandatory    } ,
    ...
}

UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-PhyChReconfRqstTDD

UL-CCTrCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    cCtRCH-ID                  CCTrCH-ID,
    ul-DPCH-Information        UL-DPCH-InformationList-PhyChReconfRqstTDD,
    iE-Extensions              ProtocolExtensionContainer { {UL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

UL-DPCH-InformationList-PhyChReconfRqstTDD ::= DPCH-IE-ContainerList { {UL-DPCH-InformationListIEs-PhyChReconfRqstTDD} }

UL-DPCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationItem-PhyChReconfRqstTDD    CRITICALITY notify    TYPE UL-DPCH-InformationItem-PhyChReconfRqstTDD    PRESENCE mandatory    },
    ...
}

```

```

}

UL-DPCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType              BurstType OPTIONAL,
    midambleShift          MidambleShift OPTIONAL,
    timeSlot               TimeSlot OPTIONAL,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    repetitionPeriod       RepetitionPeriod OPTIONAL,
    repetitionLength       RepetitionLength OPTIONAL,
    tFCI-Presence          TFCI-Presence OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= ProtocolIE-Container { {DL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs} }

DL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD CRITICALITY reject TYPE DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD PRESENCE
    mandatory } ,
    ...
}

DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-PhyChReconfRqstTDD

DL-CCTrCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-Information      DL-DPCH-InformationList-PhyChReconfRqstTDD,
    iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCH-InformationItem-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

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

DL-DPCH-InformationList-PhyChReconfRqstTDD ::= DPCH-IE-ContainerList {{DL-DPCH-InformationListIEs-PhyChReconfRqstTDD}}

DL-DPCH-InformationListIEs-PhyChReconfRqstTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationItem-PhyChReconfRqstTDD CRITICALITY notify TYPE DL-DPCH-InformationItem-PhyChReconfRqstTDD PRESENCE mandatory },
    ...
}

DL-DPCH-InformationItem-PhyChReconfRqstTDD ::= SEQUENCE {
    dPCH-ID                DPCH-ID,

```



```

tDD-ChannelisationCode          TDD-ChannelisationCode          OPTIONAL,
burstType                       BurstType                     OPTIONAL,
midambleShift                   MidambleShift          OPTIONAL,
timeSlot                        TimeSlot                OPTIONAL,
tDD-PhysicalChannelOffset       TDD-PhysicalChannelOffset OPTIONAL,
repetitionPeriod                RepetitionPeriod       OPTIONAL,
repetitionLength                RepetitionLength       OPTIONAL,
tFCI-Presence                   TFCI-Presence          OPTIONAL,
iE-Extensions                   ProtocolExtensionContainer { {DL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

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

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION COMMAND
--
-- *****

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

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

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

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION FAILURE
--
-- *****

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

```

```

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

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

-- *****
--
-- UPLINK SIGNALLING TRANSFER INDICATION
--
-- *****

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

UplinkSignallingTransferIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UC-ID          CRITICALITY ignore TYPE UC-ID          PRESENCE mandatory } |
  { ID id-SAI            CRITICALITY ignore TYPE SAI            PRESENCE mandatory } |
  { ID id-C-RNTI        CRITICALITY ignore TYPE C-RNTI        PRESENCE mandatory } |
  { ID id-S-RNTI        CRITICALITY ignore TYPE S-RNTI        PRESENCE mandatory } |
  { ID id-D-RNTI        CRITICALITY ignore TYPE D-RNTI        PRESENCE optional } |
  { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE mandatory } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
  { ID id-URA-ID        CRITICALITY ignore TYPE URA-ID        PRESENCE mandatory } |
  { ID id-MultipleURAsIndicator CRITICALITY ignore TYPE MultipleURAsIndicator PRESENCE mandatory } |
  { ID id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind
    CRITICALITY ignore TYPE RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind
    PRESENCE mandatory },
  ...
}

-- All RNC-IDs share same criticality!
RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind ::= SEQUENCE (SIZE (1..maxRNCinURA)) OF
SEQUENCE {
  rNC-ID          RNC-ID,
  iE-Extensions   ProtocolExtensionContainer { {RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind-ExtIEs} } OPTIONAL,
  ...
}

RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
UplinkSignallingTransferIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- DOWNLINK SIGNALLING TRANSFER REQUEST
--
-- *****

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

DownlinkSignallingTransferRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-C-ID          CRITICALITY ignore TYPE C-ID          PRESENCE mandatory } |
    { ID id-D-RNTI       CRITICALITY ignore TYPE D-RNTI        PRESENCE mandatory } |
    { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE mandatory } |
    { ID id-D-RNTI-ReleaseIndication CRITICALITY ignore TYPE D-RNTI-ReleaseIndication PRESENCE mandatory },
    ...
}

DownlinkSignallingTransferRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- RELOCATION COMMIT
--
-- *****

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

RelocationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI       CRITICALITY ignore TYPE D-RNTI        PRESENCE mandatory } |
    { ID id-RANAP-RelocationInformation CRITICALITY ignore TYPE RANAP-RelocationInformation PRESENCE mandatory },
    ...
}

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

```

```

}

-- *****
--
-- PAGING REQUEST
--
-- *****

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

PagingRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-PagingArea-PagingRqst          CRITICALITY ignore TYPE PagingArea-PagingRqst          PRESENCE mandatory } |
    { ID id-SRNC-ID                        CRITICALITY ignore TYPE SRNC-ID                    PRESENCE mandatory } |
    { ID id-S-RNTI                          CRITICALITY ignore TYPE S-RNTI                    PRESENCE mandatory } |
    { ID id-DRX-Parameter                   CRITICALITY ignore TYPE DRX-Parameter          PRESENCE mandatory },
    ...
}

PagingArea-PagingRqst ::= CHOICE {
    uRA                URA-ID,
    cell                C-ID,
    ...
}

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

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****

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

DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID                    CRITICALITY reject TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rqst PRESENCE mandatory } |
    { ID id-MeasurementCharacteristics        CRITICALITY reject TYPE MeasurementCharacteristics PRESENCE mandatory } |
    { ID id-ReportCharacteristics             CRITICALITY reject TYPE ReportCharacteristics   PRESENCE mandatory },
    ...
}

```

```

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
    rLs                RLS-DM-Rqst,
    ...
}

RLS-DM-Rqst ::= ProtocolIE-Container {{ RLSItemIE-DM-Rqst }}

RLSItemIE-DM-Rqst RNSAP-PROTOCOL-IES ::= {
    { ID id-RLSItem-DM-Rqst    CRITICALITY reject    TYPE    RLSItem-DM-Rqst    PRESENCE    mandatory },
    ...
}

RLSItem-DM-Rqst ::= SEQUENCE {
    rL-InformationList        RL-InformationList-DM-Rqst,
    iE-Extensions            ProtocolExtensionContainer { { RLSItem-DM-Rqst-ExtIEs } } OPTIONAL,
    ...
}

RLSItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rqst                ::= RL-IE-ContainerList { {RL-Information-DM-Rqst-IEs} }

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

RL-InformationItem-DM-Rqst ::= SEQUENCE {
    rL-ID                RL-ID,
    dPCH-ID            DPCH-ID    OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {RL-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

```

```

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

DedicatedMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rspns CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rspns PRESENCE mandatory } |
    { ID id-CFN                    CRITICALITY ignore TYPE CFN                    PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

DedicatedMeasurementObjectType-DM-Rspns ::= CHOICE {
    rLs          RLS-DM-Rspns,
    allRL        ALLRL-DM-Rspns,
    ...
}

RLs-DM-Rspns ::= ProtocolIE-Container {{ RLSItemIE-DM-Rspns }}

RLsItemIE-DM-Rspns RNSAP-PROTOCOL-IES ::= {
    { ID id-RLsItem-DM-Rspns CRITICALITY ignore TYPE RLSItem-DM-Rspns PRESENCE mandatory },
    ...
}

RLsItem-DM-Rspns ::= SEQUENCE {
    rL-InformationList          RL-InformationList-DM-Rspns,
    iE-Extensions               ProtocolExtensionContainer { {RLsItem-DM-Rspns-ExtIEs} } OPTIONAL,
    ...
}

RLsItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rspns ::= RL-IE-ContainerList { {RL-Information-DM-Rspns-IEs} }

RL-Information-DM-Rspns-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rspns CRITICALITY ignore TYPE RL-InformationItem-DM-Rspns PRESENCE mandatory },
    ...
}

RL-InformationItem-DM-Rspns ::= SEQUENCE {
    rL-ID          RL-ID,
    dPCH-ID        DPCH-ID          OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    iE-Extensions ProtocolExtensionContainer { {RL-InformationItem-DM-Rspns-ExtIEs} } OPTIONAL,
    ...
}

```

```
RL-InformationItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
  
ALLRL-DM-Rspns ::= ProtocolIE-Container {{ ALLRLItemIE-DM-Rspns }}  
  
ALLRLItemIE-DM-Rspns RNSAP-PROTOCOL-IES ::= {  
    { ID id-ALLRLItem-DM-Rspns CRITICALITY ignore TYPE ALLRLItem-DM-Rspns PRESENCE mandatory },  
    ...  
}
```

```

ALLRLItem-DM-Rspns ::= SEQUENCE {
    allRL-Information          AllRL-Information-DM-Rspns,
    iE-Extensions              ProtocolExtensionContainer { { ALLRLItem-DM-Rspns-ExtIEs } } OPTIONAL,
    ...
}

ALLRLItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllRL-Information-DM-Rspns ::= SEQUENCE {
    dedicatedMeasurementValue    DedicatedMeasurementValue,
    iE-Extensions                ProtocolExtensionContainer { {AllRL-Information-DM-Rspns-ExtIEs} } OPTIONAL,
    ...
}

AllRL-Information-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- DEDICATED MEASUREMENT INITIATION FAILURE
--
-- *****

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

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

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

-- *****
--
-- DEDICATED MEASUREMENT REPORT
--

```



```

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

DedicatedMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rprt CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rprt PRESENCE mandatory } |
    { ID id-CFN                    CRITICALITY ignore TYPE CFN                    PRESENCE optional },
    ...
}

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
    rLs                RLs-DM-Rprt,
    allRL              ALLRL-DM-Rprt,
    ...
}

RLs-DM-Rprt ::= ProtocolIE-Container {{ RLsItemIE-DM-Rprt }}

RLsItemIE-DM-Rprt RNSAP-PROTOCOL-IES ::= {
    { ID id-RLsItem-DM-Rprt CRITICALITY ignore TYPE RLsItem-DM-Rprt PRESENCE mandatory },
    ...
}

RLsItem-DM-Rprt ::= SEQUENCE {
    rL-InformationList          RL-InformationList-DM-Rprt,
    iE-Extensions              ProtocolExtensionContainer { { RLsItem-DM-Rprt-ExtIEs } } OPTIONAL,
    ...
}

RLsItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rprt ::= RL-IE-ContainerList { {RL-Information-DM-Rprt-IEs} }

RL-Information-DM-Rprt-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rprt CRITICALITY ignore TYPE RL-InformationItem-DM-Rprt PRESENCE mandatory },
    ...
}

RL-InformationItem-DM-Rprt ::= SEQUENCE {
    rL-ID                    RL-ID,
    dPCH-ID                  DPCH-ID          OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    iE-Extensions           ProtocolExtensionContainer { {RL-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
    ...
}

```

```

}

RL-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

ALLRL-DM-Rprt ::= ProtocolIE-Container {{ ALLRLItemIE-DM-Rprt }}

ALLRLItemIE-DM-Rprt RNSAP-PROTOCOL-IES ::= {
    { ID id-ALLRLItem-DM-Rprt    CRITICALITY ignore    TYPE ALLRLItem-DM-Rprt    PRESENCE mandatory },
    ...
}

ALLRLItem-DM-Rprt ::= SEQUENCE {
    allRL-Information-DM-Rprt    AllRL-Information-DM-Rprt,
    iE-Extensions                ProtocolExtensionContainer { { ALLRLItem-DM-Rprt-ExtIEs } } OPTIONAL,
    ...
}

ALLRLItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllRL-Information-DM-Rprt ::= SEQUENCE {
    dedicatedMeasurementValue    DedicatedMeasurementValue,
    iE-Extensions                ProtocolExtensionContainer { {AllRL-Information-DM-Rprt-ExtIEs} } OPTIONAL,
    ...
}

AllRL-Information-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
--
-- *****

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

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

```

```

}
...
}
DedicatedMeasurementTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
-- *****

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

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

DedicatedMeasurementFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}
-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST
--
-- *****

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

CommonTransportChannelResourcesReleaseRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI              CRITICALITY ignore TYPE D-RNTI              PRESENCE mandatory } |
    { ID id-C-RNTI              CRITICALITY ignore TYPE C-RNTI              PRESENCE optional },
    ...
}

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

```

```

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES REQUEST
--
-- *****

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

CommonTransportChannelResourcesRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY reject TYPE D-RNTI          PRESENCE mandatory } |
    { ID id-TransportBearerRequestIndicator CRITICALITY reject TYPE TransportBearerRequestIndicator PRESENCE mandatory } |
    { ID id-TransportBearerID CRITICALITY reject TYPE TransportBearerID PRESENCE mandatory },
    ...
}

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

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE FDD
--
-- *****

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

CommonTransportChannelResourcesResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-FACH-InfoForS-CCPCH-CoupledToPRACH CRITICALITY ignore TYPE FACH-InfoForS-CCPCH-CoupledToPRACH PRESENCE mandatory } |
    { ID id-FACH-InfoForOptionals-CCPCH-FDD CRITICALITY ignore TYPE FACH-InfoForOptionals-CCPCH-FDD PRESENCE optional } |
    { ID id-TransportLayerAddress CRITICALITY ignore TYPE TransportLayerAddress PRESENCE optional } |
    { ID id-BindingID        CRITICALITY ignore TYPE BindingID        PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

FACH-InfoForS-CCPCH-CoupledToPRACH ::= SEQUENCE {
    priorityIndicatorAndInitialWindowSizees PriorityIndicatorAndInitialWindowSizeList,
    IE-Extensions ProtocolExtensionContainer { {FACH-InfoForS-CCPCH-CoupledToPRACH-ExtIEs} } OPTIONAL,
    ...
}

```

```

FACH-InfoForS-CCPCH-CoupledToPRACH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
PriorityIndicatorAndInitialWindowSizeList ::= ProtocolIE-Container {{PriorityIndicatorAndInitialWindowSizeList-IEs}}

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

PriorityIndicatorAndInitialWindowSizeListIE ::= SEQUENCE (SIZE (1..16)) OF
    SEQUENCE {
        FACH-PriorityIndicator          FACH-PriorityIndicator,
        MAC-c-SDU-Lengths                MAC-c-SDU-LengthList,
        FACH-InitialWindowSize           FACH-InitialWindowSize,
        IE-Extensions                    ProtocolExtensionContainer { {PriorityIndicatorAndInitialWindowSizeList-ExtIEs} } OPTIONAL,
        ...
    }

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

MAC-c-SDU-LengthList ::= ProtocolIE-Container {{ MAC-c-SDU-LengthListItemIE }}

MAC-c-SDU-LengthListItemIE RNSAP-PROTOCOL-IES ::= {
    { ID id-MAC-c-SDU-LengthListItem CRITICALITY ignore TYPE MAC-c-SDU-LengthListItem PRESENCE mandatory },
    ...
}

MAC-c-SDU-LengthListItem ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
    SEQUENCE {
        MAC-c-SDU-Length                MAC-c-SDU-Length,
        IE-Extensions                    ProtocolExtensionContainer { {MAC-c-SDU-LengthList-ExtIEs} } OPTIONAL,
        ...
    }

MAC-c-SDU-LengthList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-InfoForOptionalS-CCPCH-FDD ::= SEQUENCE {
    FDD-S-CCPCH-Offset                  FDD-S-CCPCH-Offset,
    dl-ScramblingCode                   DL-ScramblingCode,
    FDD-DL-ChannelisationCodeNumber     FDD-DL-ChannelisationCodeNumber,
    dl-TFCS                              TransportFormatCombinationSet,
    secondaryCCPCH-SlotFormat            SecondaryCCPCH-SlotFormat,
    pilotBitsUsedIndicator                PilotBitsUsedIndicator,
    multiplexingPosition                  MultiplexingPosition,
    sSDT-Indication                      SSDT-Indication,
    priorityIndicatorAndInitialWindowSizeList PriorityIndicatorAndInitialWindowSizeList2,

```

```

    iE-Extensions          ProtocolExtensionContainer { {FACH-InfoForOptionalS-CCPCH-ExtIEs} } OPTIONAL,
    ...
}

FACH-InfoForOptionalS-CCPCH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PriorityIndicatorAndInitialWindowSizeList2 ::= ProtocolIE-Container {{PriorityIndicatorAndInitialWindowSizeList2-IEs}}

PriorityIndicatorAndInitialWindowSizeList2-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-PriorityIndicatorAndInitialWindowSizeList2IE    CRITICALITY ignore    TYPE PriorityIndicatorAndInitialWindowSizeList2IE    PRESENCE mandatory
    },
    ...
}

PriorityIndicatorAndInitialWindowSizeList2IE ::= SEQUENCE (SIZE (1..16)) OF
    SEQUENCE {
        FACH-PriorityIndicator          FACH-PriorityIndicator,
        dataFrameSize                   DataFrameSizeList,
        FACH-InitialWindowSize          FACH-InitialWindowSize,
        iE-Extensions                   ProtocolExtensionContainer { {PriorityIndicatorAndInitialWindowSizeList2-ExtIEs} } OPTIONAL,
        ...
    }

PriorityIndicatorAndInitialWindowSizeList2-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DataFrameSizeList ::= ProtocolIE-Container {{ DataFrameSizeListItemIE }}

DataFrameSizeListItemIE RNSAP-PROTOCOL-IES ::= {
    { ID id-DataFrameSizeListItem    CRITICALITY ignore    TYPE DataFrameSizeListItem    PRESENCE mandatory },
    ...
}

DataFrameSizeListItem ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
    SEQUENCE {
        mAC-c-SDU-Length                MAC-c-SDU-Length,
        iE-Extensions                   ProtocolExtensionContainer { {MAC-c-SDU-LengthList2-ExtIEs} } OPTIONAL,
        ...
    }

MAC-c-SDU-LengthList2-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****

```

```

--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE TDD
--
-- *****

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

CommonTransportChannelResourcesResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-FACH-InfoForS-CCPCH-CoupledToPRACH CRITICALITY ignore TYPE FACH-InfoForS-CCPCH-CoupledToPRACH PRESENCE optional } |
    { ID id-FACH-InfoForOptionalGroupS-CCPCH-CTCRRsp-TDD CRITICALITY ignore TYPE FACH-InfoForOptionalGroupOfS-CCPCH-CTCRRsp-TDD PRESENCE optional } |
    { ID id-TransportLayerAddress CRITICALITY ignore TYPE TransportLayerAddress PRESENCE optional } |
    { ID id-BindingID CRITICALITY ignore TYPE BindingID PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

FACH-InfoForOptionalGroupOfS-CCPCH-CTCRRsp-TDD ::= SEQUENCE {
    dl-TFCS          TransportFormatCombinationSet,
    secondaryCCPCHs SecondaryCCPCH-List-CTCRRsp-TDD,
    IE-Extensions   ProtocolExtensionContainer { {FACH-InfoForOptionalGroupOfS-CCPCH-ExtIEs} } OPTIONAL,
    ...
}

FACH-InfoForOptionalGroupOfS-CCPCH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCCPCH-List-CTCRRsp-TDD ::= ProtocolIE-Container {{SecondaryCCPCH-List-CTCRRsp-TDD-IEs}}

SecondaryCCPCH-List-CTCRRsp-TDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SecondaryCCPCH-ListIE-CTCRRsp-TDD CRITICALITY ignore TYPE SecondaryCCPCH-ListIE-CTCRRsp-TDD PRESENCE mandatory },
    ...
}

SecondaryCCPCH-ListIE-CTCRRsp-TDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF
SEQUENCE {
    tDD-ChannelisationCode TDD-ChannelisationCode,
    timeSlot               TimeSlot,
    burstType              BurstType,
    midambleShift          MidambleShift,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod       RepetitionPeriod,
    repetitionLength       RepetitionLength,
    sSDT-Indication        SSdT-Indication,
    priorityIndicatorAndInitialWindowSizeList PriorityIndicatorAndInitialWindowSizeList2,
}

```

```

        iE-Extensions          ProtocolExtensionContainer { {SecondaryCCPCH-TDD-List-ExtIEs} } OPTIONAL,
        ...
    }

SecondaryCCPCH-TDD-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES FAILURE
--
-- *****

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

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

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

-- *****
--
-- COMPRESSED MODE PREPARE
--
-- *****

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

CompressedModePrepare-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-TGP1          CRITICALITY reject TYPE GapPeriod          PRESENCE mandatory } |
    { ID id-TGP2          CRITICALITY reject TYPE GapPeriod          PRESENCE optional } |
    { ID id-TGL           CRITICALITY reject TYPE TGL                PRESENCE mandatory } |

```



```

{ ID id-TGD                CRITICALITY reject  TYPE TGD                PRESENCE mandatory } |
{ ID id-PD                 CRITICALITY reject  TYPE PD                 PRESENCE mandatory } |
{ ID id-UL-DL-CompressedModeSelection  CRITICALITY reject  TYPE UL-DL-CompressedModeSelection  PRESENCE mandatory } |
{ ID id-CompressedModeMethod          CRITICALITY reject  TYPE CompressedModeMethod          PRESENCE mandatory } |
{ ID id-GapPositionMode              CRITICALITY reject  TYPE GapPositionMode              PRESENCE mandatory } |
{ ID id-SN                          CRITICALITY reject  TYPE SN                          PRESENCE conditional
-- This IE is present only if "GapPositionMode" equals to "flexible" --
} |
{ ID id-DL-FrameType              CRITICALITY reject  TYPE DL-FrameType              PRESENCE mandatory } |
{ ID id-ScramblingCodeChange      CRITICALITY reject  TYPE ScramblingCodeChange      PRESENCE conditional
-- This IE is present only if "CompressedModeMethod" equals to "SF/2" --
} |
{ ID id-PowerControlMode          CRITICALITY reject  TYPE PowerControlMode          PRESENCE mandatory } |
{ ID id-PowerResumeMode          CRITICALITY reject  TYPE PowerResumeMode          PRESENCE mandatory } |
{ ID id-UL-DeltaEbNo             CRITICALITY reject  TYPE UL-EbNo                   PRESENCE mandatory } |
{ ID id-UL-DeltaEbNoAfter        CRITICALITY reject  TYPE UL-EbNo                   PRESENCE mandatory },
...
}

```

```

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

```

```

-- *****
--
-- COMPRESSED MODE READY
--
-- *****

```

```

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

```

```

CompressedModeReady-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}

```

```

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

```

```

-- *****
--
-- COMPRESSED MODE FAILURE
--
-- *****

```

```

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

```

```

}
...
}
CompressedModeFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}
CompressedModeFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****
--
-- COMPRESSED MODE COMMIT
--
-- *****

CompressedModeCommit ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CompressedModeCommit-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{CompressedModeCommit-Extensions}}
  ...
}
CompressedModeCommit-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CFN          CRITICALITY ignore TYPE CFN          PRESENCE mandatory },
  ...
}
CompressedModeCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****
--
-- COMPRESSED MODE CANCEL
--
-- *****

CompressedModeCancel ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CompressedModeCancel-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{CompressedModeCancel-Extensions}}
  ...
}
CompressedModeCancel-IEs RNSAP-PROTOCOL-IES ::= {
  ...
}
CompressedModeCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
-- *****
--
-- ERROR INDICATION
--
-- *****

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

ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause                CRITICALITY ignore TYPE Cause                PRESENCE conditional
    -- At least either of Cause IE or Criticality IE shall be present --      } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE conditional
    -- At least either of Cause IE or Criticality IE shall be present --      },
    ...
}

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

-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
    privateExtensions          PrivateExtensionContainer {{PrivateExtensions}},
    ...
}

PrivateExtensions RNSAP-PRIVATE-EXTENSION ::= {
    ...
}

END

9.3.4 Information Element Definitions
-- *****
--
-- Information Element Definitions
--
-- *****

```

```
RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxTTI-Count
FROM RNSAP-Constants

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

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

AllocationRetentionPriority ::= FrameHandlingPriority

AllowedQueuingTime ::= INTEGER (0..60)
-- seconds

-- B

-- ** NOTE: Size in tabular 1..4,... **
BindingID ::= OCTET STRING (SIZE (1..MAX))

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

BurstType ::= ENUMERATED {
    type1 (1),
    type2 (2)
}

-- C

Cause ::= CHOICE {
    radioNetwork          CauseRadioNetwork,
    transmissionNetwork   CauseTransmissionNetwork,
    protocol              CauseProtocol,
    misc                  CauseMisc,
}
```

```
    ...
}

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

CauseProtocol ::= ENUMERATED {
    transaction-not-allowed,
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    unspecified,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    measurement-not-supported-for-the-object,
    macrodiversity-combining-not-possible,
    reconfiguration-not-allowed,
    synchronisation-failure,
    unspecified,
    ...
}

CauseTransmissionNetwork ::= ENUMERATED {
    transmission-link-failure,
    transmission-port-not-available,
    unspecified,
    ...
}

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

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

CellParameterID     ::= INTEGER (0..127)

CFN                 ::= INTEGER (0..255)
```

```

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

-- ** TODO **
ChipOffset          ::= INTEGER

CodingRate ::= ENUMERATED {
    half,
    third--,
-- ...
}

CompressedModeMethod ::= ENUMERATED {
    none,
    puncturing,
    sF2,
    gating
}

CPICH-EcIo          ::= INTEGER

CRC-Size            ::= INTEGER (0| 8| 12| 16| 24)

CriticalityDiagnostics ::= SEQUENCE {
    procedureCode      ProcedureCode          OPTIONAL,
    triggeringMessage  TriggeringMessage     OPTIONAL,
    criticalityResponse Criticality           OPTIONAL,
    transactionID      TransactionID         OPTIONAL,
    iEsCriticalityResponses CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

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

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
SEQUENCE {
    criticalityResponse Criticality,
    iE-ID                ProtocolIE-ID,
    iE-Extensions        ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
    ...
}

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

```

```
}

-- ** TODO **
CTFC ::= INTEGER
-- See formula (must be resolved)

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

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

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

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

-- **TODO**
CPICH-Power ::= INTEGER

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

-- D

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

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

DedicatedMeasurementObjectType ::= ENUMERATED {
    r1,
    all-r1,
    ...
}
-- ** OR:
-- DedicatedMeasurementObjectType ::= INTEGER {
--    rL(0),
--    allRL(1)
-- } (0..255)
-- **

DedicatedMeasurementType ::= ENUMERATED {
```

```

    sir,
    sir-error,
    transmitted-code-power,
    rSCP,
    ...
}
-- timeslotTSCP is used by TDD only

-- ** OR:
-- DedicatedMeasurementType ::= INTEGER {
--   sIR(0),
--   sIR-Error(1),
--   transmittedCodePower(2),
--   rSCP(3)
-- } (0..255)
-- **

-- ** NOTE: Extensibility added **
-- **TODO**

DedicatedMeasurementValue ::= SEQUENCE {
    sIR-Value          ScaledSIR-Value          OPTIONAL,
    sIR-ErrorValue     ScaledSIR-ErrorValue     OPTIONAL,
    transmittedCodePowerValue ScaledTransmittedCodePowerValue OPTIONAL, -- Relative to CPICH
    rSCP               TBD                     OPTIONAL, -- TDD only
    iE-Extensions      ProtocolExtensionContainer { {DedicatedMeasurementValue-ExtIEs} } OPTIONAL,
    ...
}

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

-- ** TODO **
DiversityControlField ::= INTEGER

-- ** TODO **
DiversityMode ::= INTEGER

-- ** TODO **
DL-ChannelisationCode ::= INTEGER

-- ** TODO **
DL-DPCCH-SlotFormat ::= INTEGER

-- ** TODO **
DL-DPCH-SlotNumber ::= INTEGER

DL-EbNo ::= ScaledUL-EbNo

DL-EbNoTarget ::= ScaledUL-EbNo

```



```
-- ** TODO **
DL-Power ::= INTEGER

D-RNTI ::= INTEGER (0..1048576)
-- ** OR:
-- D-RNTI ::= BIT STRING (SIZE (20))
-- **

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

-- ** TODO **
DL-ScramblingCode ::= INTEGER

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

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

-- **TODO**
DRX-Parameter ::= TBD

-- **TODO**
DSCH-TransportFormatCombinationSet ::= INTEGER

-- **TODO**
DSCH-TFS ::= INTEGER

-- **TODO**
D-FieldLength ::= INTEGER

-- E

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

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

EventB ::= SEQUENCE {
```

```

    measurementTreshold      MeasurementThreshold,
    measurementHysteresisTime ScaledMeasurementHysteresisTime  OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {EventB-ExtIEs} } OPTIONAL,
    ...
}

EventC ::= SEQUENCE {
    measurementIncreaseThreshold      MeasurementIncreaseThreshold,
    measurementChangeTime            ScaledMeasurementChangeTime,
    ...
}

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

EventD ::= SEQUENCE {
    measurementDecreaseThreshold      MeasurementDecreaseThreshold,
    measurementChangeTime            ScaledMeasurementChangeTime,
    iE-Extensions                    ProtocolExtensionContainer { {EventD-ExtIEs} } OPTIONAL,
    ...
}

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

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

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

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

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

```

```
}  
  
-- F  
  
FACH-DataFrameSize      ::= INTEGER (1..5000)  
-- Size of data frame in number of bits  
  
FACH-InitialWindowSize  ::= INTEGER { unlimited(255) } (0..255)  
-- Number of FACH data frames.  
-- 255 = Unlimited number of FACH data frames  
  
-- ** TODO **  
FACH-InfoForOptionalS-CCPCH  ::= INTEGER  
  
-- ** TODO **  
FACH-InfoForS-CCPCH-CoupledToPRACH ::= INTEGER  
  
-- ** TODO **  
FDD-DL-ChannelisationCodeNumber ::= INTEGER  
  
-- ** TODO **  
FDD-FL-ChannelisationCodeNumber ::= INTEGER  
  
-- ** TODO **  
FDD-S-CCPCH-Offset        ::= INTEGER  
  
FACH-PriorityIndicator    ::= INTEGER { lowest(0), highest(15) } (0..15)  
FrameHandlingPriority     ::= INTEGER { lowest(0), highest(15) } (0..15)  
  
FrameOffset              ::= INTEGER (0..255)  
-- Frames  
  
-- G  
  
GapPositionMode ::= ENUMERATED {  
    fixed,  
    flexible  
}  
  
GapPeriod              ::= INTEGER (0..255)  
  
-- H  
-- I  
  
-- **TODO**  
InitialDL-TX-Power     ::= INTEGER  
  
-- J  
-- K  
-- L
```

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

-- ** TODO **
L3-Information ::= INTEGER

-- M

-- ** TODO **
MaxNrOfUL-DPCHs ::= INTEGER

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

-- **TODO**
MACd-MACsh-TransportFormatSet ::= INTEGER

-- **NOTE: extensibility**
MeasurementCharacteristics ::= SEQUENCE {
    measurementFrequency TBD,
    averagingDuration TBD,
    IE-Extensions ProtocolExtensionContainer { {MeasurementCharacteristics-ExtIEs} } OPTIONAL,
    ...
}

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

-- ** TODO **
MeanBitRate ::= INTEGER

MeasurementID ::= INTEGER (0..1048576)
-- **OR:
-- MeasurementID ::= BIT STRING (SIZE (20))
-- **

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

-- ** TODO **
MCC-Digit ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008

-- ** TODO **
MNC-Digit ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008
```

```

ScaledMeasurementChangeTime ::= INTEGER (1..1000)
-- MeasurementChangeTime = ScaledMeasurementChangeTime * 10
-- Unit is ms

-- ** TODO **
MeasurementDecreaseThreshold ::= INTEGER

ScaledMeasurementHysteresisTime ::= INTEGER (1..1000)
-- MeasurementHysteresisTime = ScaledMeasurementHysteresisTime * 10
-- Unit is ms

-- ** TODO **
MeasurementIncreaseThreshold ::= INTEGER

-- ** TODO **
MeasurementThreshold ::= INTEGER

MidambleShift ::= INTEGER (0..15)

MinUL-ChannelisationCodeLength ::= INTEGER

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- N
NrOfTransportBlocks ::= INTEGER (0..4095)

-- O
Offset ::= INTEGER (0..63)

-- P
PD ::= INTEGER (0..2047, ...)

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-not-included,
    crc-included--,
    ...
}

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

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

```

```

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

-- ** TODO **
PilotBitsUsedIndicator ::= INTEGER

-- ** TODO **
PLMN-ID ::= SEQUENCE {
    mCC-digit          MCC-Digit,
    iE-Extensions     ProtocolExtensionContainer { {PLMN-ID-ExtIEs} } OPTIONAL,
    mNC-digit          MNC-Digit
}
-- FFS

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

PowerControlMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

PowerOffset ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

-- ** TODO **
PrimaryCPICH-Power ::= INTEGER

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

-- ** TODO **
PrimaryCCPCH-RSCP ::= INTEGER

PrimaryScramblingCode ::= ScramblingCode

PropagationDelay ::= INTEGER (0..255)

SyncCase ::= ENUMERATED {
    case1,
    case2,
    case3--,
-- ...

```

```
}

-- ** TODO **
PSCH-CCPCH-TimeSlot      ::= TimeSlot

-- ** TODO **
PSCH-PCCPCH-TimeSlot    ::= TimeSlot

-- ** TODO **
P-CPICH-Power           ::= INTEGER

PunctureLimit           ::= INTEGER (0..100)
-- Unit is %

-- Q
-- R

-- ** TODO **
RAC                     ::= INTEGER

-- ** TODO **
-- OCTET STRING?
RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute   ::= INTEGER (1..maxRateMatching)

RepetitionLength        ::= INTEGER (1..63)

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

-- This is changed from the tabular format because it seems that
-- this is what is wanted.
ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF,
    ...
}
```

```
}

-- Changed
ReportPeriodicity ::= CHOICE {
    msec          INTEGER (1..1000),
    min           INTEGER (1..60)
}

RLC-Mode ::= ENUMERATED {
    acknowledged-mode,
    unacknowledged-mode,
    transparent-mode
}

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

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

-- S

-- Changed BIT STRING -> OCTET STRING
SAC            ::= OCTET STRING (SIZE (2))

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

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

-- ** TODO **
ScramblingCode          ::= INTEGER

ScramblingCodeChange ::= ENUMERATED {
    no-code-change,
    code-change
}

ScaledSIR-ErrorValue    ::= INTEGER (-100..100)
-- ScaledSIR-ErrorValue = SIR-ErrorValue * 10
-- If SIR-ErrorValue <= -10 ScaledSIR-ErrorValue shall be set to -100
-- If SIR-ErrorValue >= 10 ScaledSIR-ErrorValue shall be set to 100
-- SIR-ErrorValue step 0.1 dB

ScaledSIR-Value         ::= INTEGER (-100..200)
-- ScaledSIR-Value = SIR-Value * 10
-- SIR-Value step 0.1 dB
```



```
ScaledTransmittedCodePowerValue ::= INTEGER (-350..150)
-- ScaledTransmittedCodePowerValue = TransmittedCodePowerValue * 10
-- TransmittedCodePowerValue step 0.1 dB

-- ** TODO **
SharedChannelType ::= INTEGER

-- ** TODO **
SecondaryCCPCH-SlotFormat ::= INTEGER

SN ::= TimeSlot

SpreadingFactorOfChannelisationCode ::= ENUMERATED {
    v256,
    v128,
    v64,
    v32,
    v16,
    v8,
    v4,
    v2,
    v1
}

-- Changed
S-FieldLength ::= INTEGER (1..2)

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

-- ** TODO **
SRNC-ID ::= INTEGER

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

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

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

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

-- T

-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)

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

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

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

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}
```

```

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
-- ...
}

TransportBearerID ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize ::= INTEGER (1..5000)
-- Unit is bits

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC CTFC,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatCombinationSet-ExtIEs} } OPTIONAL,
        ...
    }

TransportFormatCombinationSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts TransportFormatSet-DynamicPartList,
    semi-staticPart TransportFormatSet-Semi-staticPart,
    iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEQUENCE {
        nrOfTransportBlocks NrOfTransportBlocks,
        transportBlockSize TransportBlockSize OPTIONAL
        -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
        mode TransportFormatSet-ModeDP,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-ExtIEs} } OPTIONAL,
    }

```

```

    }
    ...
}

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd          TransmissionTimeIntervalList,
    -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
    ...
}

TransmissionTimeIntervalList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
    SEQUENCE {
        transmissionTimeInterval    TransmissionTimeInterval,
        iE-Extensions               ProtocolExtensionContainer { {TransmissionTimeIntervalList-ExtIEs} } OPTIONAL,
        ...
    }

TransmissionTimeIntervalList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
    transmissionTime          TransmissionTimeInterval,
    channelCoding             ChannelCodingType,
    codingRate                CodingRate OPTIONAL
    -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
    rateMatchingAttribute     RateMatchingAttribute,
    cRC-Size                 CRC-Size,
    mode                     TransportFormatSet-ModeSSP OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd          SecondInterleavingMode,
    ...
}

SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeslot-related,
    ...
}

```

```

-- TransportLayerAddress      ::= BIT STRING (1..160, ...)
TransportLayerAddress        ::= OCTET STRING (SIZE (1..20, ...))

-- U

UARFCN                       ::= INTEGER (0..698, ...)

UL-DL-CompressedModeSelection ::= ENUMERATED {
    ul-only,
    dl-only,
    both
}

UL-DeltaEbNo                 ::= INTEGER (-60..100)

UL-DeltaEbNoAfter            ::= INTEGER (-60..100)

-- ** TODO **
UL-EbNo                      ::= INTEGER

-- ** TODO **
UL-EbNoTarget                ::= INTEGER

UC-ID ::= SEQUENCE {
    rNC-ID                    RNC-ID,
    c-ID                      C-ID,
    iE-Extensions             ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
    ...
}

UC-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCCH-SlotFormat          ::= INTEGER (0..5)

ScaledUL-EbNo                ::= INTEGER (0..255)
-- Ul-EbNo = ScaledUL-EbNo / 10

UL-FP-Mode ::= ENUMERATED {
    normal,
    silent--,
    ...
}

ScaledUL-InterferenceLevel   ::= INTEGER (-1280..-600)
-- UL-InterferenceLevel = UL-InterferenceLevel / 10

-- Relation to the ScramblingCode??
UL-ScramblingCode ::= SEQUENCE {
    ul-ScramblingCodeNumber   UL-ScramblingCodeNumber,

```

```

    ul-ScramblingCodeLength      UL-ScramblingCodeLength,
    iE-Extensions                 ProtocolExtensionContainer { {UL-ScramblingCode-ExtIEs} } OPTIONAL
}

```

```

UL-ScramblingCode-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}

```

```

UL-ScramblingCodeNumber ::= INTEGER (0..16777215)

```

```

URA-ID ::= INTEGER (0..65535)

```

```

-- V
-- W
-- X
-- Y
-- Z

```

```

END

```

#### 9.3.5 Common Definitions

```

-- *****
--
-- Common definitions
--
-- *****

```

```

RNSAP-CommonDataTypes -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

```

```

BEGIN

```

```

Criticality ::= ENUMERATED { reject, ignore, notify }

```

```

Presence ::= ENUMERATED { optional, conditional, mandatory }

```

```

PrivateExtensionID ::= CHOICE {
    local          INTEGER (0..65535),
    global         OBJECT IDENTIFIER
}

```

```

ProcedureCode ::= INTEGER (0..255)

```

```

ProcedureID ::= SEQUENCE {
    procedureCode ProcedureCode,
    ddMode        ENUMERATED { tdd, fdd, common }
}

```

```

}

ProtocolExtensionID ::= INTEGER (0..65535)

ProtocolIE-ID      ::= INTEGER (0..65535)

TransactionID     ::= INTEGER (0..65535)

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome, outcome }

```

END

### 9.3.6 Constant Definitions

```

-- *****
--
-- Constant definitions
--
-- *****

```

```

RNSAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

```

BEGIN

```

-- *****
--
-- Elementary Procedures
--
-- *****

```

```

id-commonTransportChannelResourcesInitiationFDD      INTEGER ::= 0
id-commonTransportChannelResourcesInitiationTDD      INTEGER ::= 1
id-commonTransportChannelResourcesRelease            INTEGER ::= 2
id-compressedModeCancellationFDD                    INTEGER ::= 3
id-compressedModeCommitFDD                          INTEGER ::= 4
id-compressedModePrepareFDD                         INTEGER ::= 5
id-downlinkPowerControl                             INTEGER ::= 6
id-downlinkSignallingTransfer                        INTEGER ::= 7
id-errorIndication                                  INTEGER ::= 8
id-measurementFailure                               INTEGER ::= 9
id-measurementInitiation                            INTEGER ::= 10
id-measurementReporting                              INTEGER ::= 11
id-measurementTermination                           INTEGER ::= 12
id-pagingRequest                                    INTEGER ::= 13
id-physicalChannelReconfiguration                    INTEGER ::= 14
id-privateMessage                                   INTEGER ::= 15
id-radioLinkAddition                                INTEGER ::= 16
id-radioLinkDeletion                                INTEGER ::= 17
id-radioLinkFailure                                 INTEGER ::= 18
id-radioLinkRestoration                             INTEGER ::= 19
id-radioLinkSetup                                   INTEGER ::= 20
id-srnsRelocationCommit                             INTEGER ::= 21

```

```

id-synchronisedRadioLinkReconfigurationCancellation      INTEGER ::= 22
id-synchronisedRadioLinkReconfigurationCommit          INTEGER ::= 23
id-synchronisedRadioLinkReconfigurationPrepare          INTEGER ::= 24
id-unSynchronisedRadioLinkReconfiguration              INTEGER ::= 25
id-uplinkSignallingTransfer                            INTEGER ::= 26

```

```

-- *****
--
-- Extension constants
--
-- *****

```

```

maxPrivateExtensions          INTEGER ::= 65535
maxProtocolExtensions         INTEGER ::= 65535
maxProtocolIEs                INTEGER ::= 65535

```

```

-- *****
--
-- Lists
--
-- *****

```

```

maxRateMatching              INTEGER ::= 10
maxNrOfTFCs                  INTEGER ::= 10
maxNrOfTFs                   INTEGER ::= 10

```

```

maxNoOfDL-Codes              INTEGER ::= 10
maxNrOfCCTrCHs               INTEGER ::= 10
maxNrOfDCHs                  INTEGER ::= 10
maxNrOfDL-Codes              INTEGER ::= 10
maxNrOfDPCHs                 INTEGER ::= 10
maxNrOfErrors                INTEGER ::= 10
maxNrOfFACH-FD-Size          INTEGER ::= 10
maxNrOfFDD-Neighbours        INTEGER ::= 10
maxNrOfMACcSDU-Length        INTEGER ::= 10
maxNrOfTDD-Neighbours        INTEGER ::= 10
maxNrOfRLs                   INTEGER ::= 10
maxNrOfSCCPCHs               INTEGER ::= 10
maxRNCinURA                 INTEGER ::= 10
maxTTI-Count                 INTEGER ::= 10

```

```

-- *****
--
-- IEs
--
-- *****

```

```

id-AllowedQueuingTime        INTEGER ::= 0
id-AllRLsItem-DL-PC-Rqst     INTEGER ::= 1
id-ALLRLItem-DM-Rprt         INTEGER ::= 2
id-ALLRLItem-DM-Rspns        INTEGER ::= 3

```



|   |                |
|---|----------------|
| id-BindingID                                    | INTEGER ::= 4  |
| id-C-ID   | INTEGER ::= 5  |
| id-C-RNTI                                       | INTEGER ::= 6  |
| id-CCTrCH-ID                                    | INTEGER ::= 7  |
| id-CFN  | INTEGER ::= 8  |
| id-CN-CS-DomainIdentifier                       | INTEGER ::= 9  |
| id-CN-PS-DomainIdentifier                       | INTEGER ::= 10 |
| id-Cause  | INTEGER ::= 11 |
| id-CombiningItem-RL-AdditionFailureFDD          | INTEGER ::= 12 |
| id-CombiningItem-RL-AdditionRspFDD              | INTEGER ::= 13 |
| id-CombiningItem-RL-AdditionRspTDD              | INTEGER ::= 14 |
| id-CombiningItem-RL-SetupFailureFDD             | INTEGER ::= 15 |
| id-CombiningItem-RL-SetupRspFDD                 | INTEGER ::= 16 |
| id-CompressedModeMethod                         | INTEGER ::= 17 |
| id-D-RNTI                                       | INTEGER ::= 18 |
| id-D-RNTI-ReleaseIndication                     | INTEGER ::= 19 |
| id-DCH-AddListIE                                | INTEGER ::= 20 |
| id-DCH-AddItem-RL-ReconfPrepTDD                 | INTEGER ::= 21 |
| id-DCH-AddItem-RL-ReconfReadyFDD                | INTEGER ::= 22 |
| id-DCH-AddItem-RL-ReconfRqstTDD                 | INTEGER ::= 23 |
| id-DCH-AddListItem-RL-ReconfReadyFDD            | INTEGER ::= 24 |
| id-DCH-AddListItem-RL-ReconfRsp                 | INTEGER ::= 25 |
| id-DCH-AddListItem-RL-ReconfPrepFDD             | INTEGER ::= 26 |
| id-DCH-AddList-RL-ReconfPrepTDD                 | INTEGER ::= 27 |
| id-DCH-AddList-RL-ReconfRqstFDD                 | INTEGER ::= 28 |
| id-DCH-AddList-RL-ReconfRqstTDD                 | INTEGER ::= 29 |
| id-DCH-DeleteItem-RL-ReconfPrepTDD              | INTEGER ::= 30 |
| id-DCH-DeleteItem-RL-ReconfRqstFDD              | INTEGER ::= 31 |
| id-DCH-DeleteItem-RL-ReconfRqstTDD              | INTEGER ::= 32 |
| id-DCH-DeleteList-RL-ReconfPrepFDD              | INTEGER ::= 33 |
| id-DCH-DeleteList-RL-ReconfPrepTDD              | INTEGER ::= 34 |
| id-DCH-DeleteList-RL-ReconfRqstFDD              | INTEGER ::= 35 |
| id-DCH-DeleteList-RL-ReconfRqstTDD              | INTEGER ::= 36 |
| id-DCH-Information-RL-SetupReqFDD               | INTEGER ::= 37 |
| id-DCH-InformationItem-RL-SetupReqTDD           | INTEGER ::= 38 |
| id-DCH-InformationList-RL-SetupReqTDD           | INTEGER ::= 39 |
| id-DCH-InformationResponseListIE-RL-SetupRspTDD | INTEGER ::= 40 |
| id-DCH-ModifyListIE                             | INTEGER ::= 41 |
| id-DCH-ModifyItem-RL-ReconfPrepTDD              | INTEGER ::= 42 |
| id-DCH-ModifyItem-RL-ReconfReadyFDD             | INTEGER ::= 43 |
| id-DCH-ModifyItem-RL-ReconfRqstTDD              | INTEGER ::= 44 |
| id-DCH-ModifyListItem-RL-ReconfReadyFDD         | INTEGER ::= 45 |
| id-DCH-ModifyListItem-RL-ReconfRsp              | INTEGER ::= 46 |
| id-DCH-ModifyList-RL-ReconfPrepFDD              | INTEGER ::= 47 |
| id-DCH-ModifyList-RL-ReconfPrepTDD              | INTEGER ::= 48 |
| id-DCH-ModifyList-RL-ReconfRqstFDD              | INTEGER ::= 49 |
| id-DCH-ModifyList-RL-ReconfRqstTDD              | INTEGER ::= 50 |
| id-DL-CCTrCH-Information-RL-ReconfPrepTDD       | INTEGER ::= 51 |
| id-DL-CCTrCH-InformationIE-RL-AdditionRspTDD    | INTEGER ::= 52 |
| id-DL-CCTrCH-InformationIE-RL-SetupRspTDD       | INTEGER ::= 53 |
| id-DL-CCTrCH-InformationItem-RL-ReconfRqstTDD   | INTEGER ::= 54 |

|  |                 |  |
|--|-----------------|--|
| id-DL-CCTrCH-InformationListIE-PhyChReconfRqstTDD            | INTEGER ::= 55  |  |
| id-DL-CCTrCH-InformationListIE-RL-ReconfReadyTDD             | INTEGER ::= 56  |  |
| id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD                | INTEGER ::= 57  |  |
| id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD                | INTEGER ::= 58  |  |
| id-DL-CCTrCH-InformationItem-RL-SetupReqTDD                  | INTEGER ::= 59  |  |
| id-DL-CCTrCH-InformationList-RL-SetupReqTDD                  | INTEGER ::= 60  |  |
| id-DL-CodeInformationListItem-PhyChReconfRqstFDD             | INTEGER ::= 61  |  |
| id-DL-CodeInformationListItem-RL-AdditionFailureFDD          | INTEGER ::= 62  |  |
| id-DL-CodeInformationListItem-RL-AdditionRspFDD              | INTEGER ::= 63  |  |
| id-DL-CodeInformationListItem-RL-ReconfReadyFDD              | INTEGER ::= 64  |  |
| id-DL-CodeInformationListItem-RL-SetupFailureFDD             | INTEGER ::= 65  |  |
| id-DL-DPCH-Information                                       | INTEGER ::= 66  |  |
| id-DL-DPCH-Information-RL-SetupReqFDD                        | INTEGER ::= 67  |  |
| id-DL-DPCH-InformationItem-RL-SetupRspTDD                    | INTEGER ::= 68  |  |
| id-DL-DPCH-InformationItem-RL-AdditionRspTDD                 | INTEGER ::= 69  |  |
| id-DL-DPCH-InformationItem-PhyChReconfRqstTDD                | INTEGER ::= 70  |  |
| id-DL-DPCH-InformationListIE-RL-ReconfReadyTDD               | INTEGER ::= 71  |  |
| id-DL-DPCH-InformationList-PhyChReconfRqstTDD                | INTEGER ::= 72  |  |
| id-DL-DPCH-InformationList-RL-ReconfReadyTDD                 | INTEGER ::= 73  |  |
| id-DL-EbNoTarget   | INTEGER ::= 74  |  |
| id-DL-FrameType  | INTEGER ::= 75  |  |
| id-DL-MeanBitRate  | INTEGER ::= 76  |  |
| id-DL-ReferencePowerInformationListItem-DL-PC-Rqst           | INTEGER ::= 77  |  |
| id-DRX-Parameter   | INTEGER ::= 78  |  |
| id-DataFrameSizeListItem                                     | INTEGER ::= 79  |  |
| id-DedicatedMeasurementObjectType-DM-Rprt                    | INTEGER ::= 80  |  |
| id-DedicatedMeasurementObjectType-DM-Rqst                    | INTEGER ::= 81  |  |
| id-DedicatedMeasurementObjectType-DM-Rspns                   | INTEGER ::= 82  |  |
| id-DiversityIndicationItem-RL-AdditionRspTDD                 | INTEGER ::= 83  |  |
| id-FACH-InfoForOptionalGroupS-CCPCH                          | INTEGER ::= 84  |  |
| id-FACH-InfoForOptionalS-CCPCH-FDD                           | INTEGER ::= 85  |  |
| id-FACH-InfoForOptionalGroupS-CCPCH-CTCRRsp-TDD              | INTEGER ::= 86  |  |
| id-FACH-InfoForS-CCPCH-CoupledToPRACH                        | INTEGER ::= 87  |  |
| id-GapPositionMode   | INTEGER ::= 88  |  |
| id-IndividualRLsItem-DL-PC-Rqst                              | INTEGER ::= 89  |  |
| id-L3-Information  | INTEGER ::= 90  |  |
| id-MAC-c-SDU-LengthListItem                                  | INTEGER ::= 91  |  |
| id-MeasurementCharacteristics                                | INTEGER ::= 92  |  |
| id-MeasurementID   | INTEGER ::= 93  |  |
| id-MultipleURAsIndicator                                     | INTEGER ::= 94  |  |
| id-NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD | INTEGER ::= 95  |  |
| id-NeighbouringFDD-CellInformationItem-RL-AdditionRsp        | INTEGER ::= 96  |  |
| id-NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD    | INTEGER ::= 97  |  |
| id-NeighbouringFDD-CellInformationItem-RL-SetupRsp           | INTEGER ::= 98  |  |
| id-NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD | INTEGER ::= 99  |  |
| id-NeighbouringTDD-CellInformationItem-RL-AdditionRsp        | INTEGER ::= 100 |  |
| id-NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD    | INTEGER ::= 101 |  |
| id-NeighbouringTDD-CellInformationItem-RL-SetupRsp           | INTEGER ::= 102 |  |
| id-NonCombiningItem-RL-AdditionRspTDD                        | INTEGER ::= 103 |  |
| id-NonCombiningOrIENotPresentItem-RL-AdditionFailureFDD      | INTEGER ::= 104 |  |
| id-NonCombiningOrIENotPresentItem-RL-AdditionRspFDD          | INTEGER ::= 105 |  |

|  |                 |
|--|-----------------|
| id-NonCombiningOrIENotPresentItem-RL-SetupFailureFDD | INTEGER ::= 106 |
| id-NonCombiningOrIENotPresentItem-RL-SetupRspFDD     | INTEGER ::= 107 |
| id-PD  | INTEGER ::= 108 |
| id-PagingArea-PagingRqst                             | INTEGER ::= 109 |
| id-PowerControlMode                                  | INTEGER ::= 110 |
| id-PowerResumeMode                                   | INTEGER ::= 111 |
| id-PriorityIndicatorAndInitialWindowSizeListIE       | INTEGER ::= 112 |
| id-PriorityIndicatorAndInitialWindowSizeList2IE      | INTEGER ::= 113 |
| id-ProcedureScope-DL-PC-Rqst                         | INTEGER ::= 114 |
| id-RANAP-RelocationInformation                       | INTEGER ::= 115 |
| id-RL-Information-PhyChReconfRqstFDD                 | INTEGER ::= 116 |
| id-RL-Information-PhyChReconfRqstTDD                 | INTEGER ::= 117 |
| id-RL-Information-RL-AdditionRqstFDD                 | INTEGER ::= 118 |
| id-RL-Information-RL-AdditionRqstTDD                 | INTEGER ::= 119 |
| id-RL-Information-RL-DeletionRqst                    | INTEGER ::= 120 |
| id-RL-Information-RL-FailureInd                      | INTEGER ::= 121 |
| id-RL-Information-RL-ReconfPrepFDD                   | INTEGER ::= 122 |
| id-RL-Information-RL-RestoreInd                      | INTEGER ::= 123 |
| id-RL-Information-RL-SetupReqFDD                     | INTEGER ::= 124 |
| id-RL-Information-RL-SetupReqTDD                     | INTEGER ::= 125 |
| id-RL-InformationItem-DM-Rprt                        | INTEGER ::= 126 |
| id-RL-InformationItem-DM-Rqst                        | INTEGER ::= 127 |
| id-RL-InformationItem-DM-Rspns                       | INTEGER ::= 128 |
| id-RL-InformationItem-RL-SetupReqFDD                 | INTEGER ::= 129 |
| id-RL-InformationList-RL-AdditionRqstFDD             | INTEGER ::= 130 |
| id-RL-InformationList-RL-DeletionRqst                | INTEGER ::= 131 |
| id-RL-InformationList-RL-FailureInd                  | INTEGER ::= 132 |
| id-RL-InformationList-RL-ReconfPrepFDD               | INTEGER ::= 133 |
| id-RL-InformationList-RL-RestoreInd                  | INTEGER ::= 134 |
| id-RL-InformationResponse-RL-AdditionRspTDD          | INTEGER ::= 135 |
| id-RL-InformationResponse-RL-ReconfReadyTDD          | INTEGER ::= 136 |
| id-RL-InformationResponse-RL-SetupRspTDD             | INTEGER ::= 137 |
| id-RL-InformationResponseItem-RL-AdditionRspFDD      | INTEGER ::= 138 |
| id-RL-InformationResponseItem-RL-ReconfReadyFDD      | INTEGER ::= 139 |
| id-RL-InformationResponseItem-RL-ReconfRsp           | INTEGER ::= 140 |
| id-RL-InformationResponseItem-RL-SetupRspFDD         | INTEGER ::= 141 |
| id-RL-InformationResponseList-RL-AdditionRspFDD      | INTEGER ::= 142 |
| id-RL-InformationResponseList-RL-ReconfReadyFDD      | INTEGER ::= 143 |
| id-RL-InformationResponseList-RL-ReconfRsp           | INTEGER ::= 144 |
| id-RL-InformationResponseList-RL-SetupRspFDD         | INTEGER ::= 145 |
| id-RL-ReconfigurationFailure-RL-ReconfFail           | INTEGER ::= 146 |
| id-RL-ReconfigurationFailureList-RL-ReconfFail       | INTEGER ::= 147 |
| id-RLsItem-DM-Rprt                                   | INTEGER ::= 148 |
| id-RLsItem-DM-Rqst                                   | INTEGER ::= 149 |
| id-RLsItem-DM-Rspns                                  | INTEGER ::= 150 |
| id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind      | INTEGER ::= 151 |
| id-ReportCharacteristics                             | INTEGER ::= 152 |
| id-S-RNTI  | INTEGER ::= 153 |
| id-SAI   | INTEGER ::= 154 |
| id-SN  | INTEGER ::= 155 |
| id-SRNC-ID   | INTEGER ::= 156 |

```

id-ScramblingCodeChange                INTEGER ::= 157
id-SecondaryCCPCH-ListIE-CTCRRsp-TDD   INTEGER ::= 158
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD  INTEGER ::= 159
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD     INTEGER ::= 160
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD  INTEGER ::= 161
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD   INTEGER ::= 162
id-TGD                                  INTEGER ::= 163
id-TGL                                  INTEGER ::= 164
id-TGP1                                 INTEGER ::= 165
id-TGP2                                 INTEGER ::= 166
id-TransportBearerID                    INTEGER ::= 167
id-TransportBearerRequestIndicator       INTEGER ::= 168
id-TransportLayerAddress                 INTEGER ::= 169
id-UC-ID                                INTEGER ::= 170
id-UL-CCTrCH-InformationIE-RL-SetupRspTDD  INTEGER ::= 171
id-UL-CCTrCH-InformationIE-RL-AdditionRspTDD  INTEGER ::= 172
id-UL-CCTrCH-InformationItem-RL-ReconfRqstTDD  INTEGER ::= 173
id-UL-CCTrCH-InformationItem-RL-SetupReqTDD  INTEGER ::= 174
id-UL-CCTrCH-InformationListIE-RL-ReconfReadyTDD  INTEGER ::= 175
id-UL-CCTrCH-InformationListIE-PhyChReconfRqstTDD  INTEGER ::= 176
id-UL-CCTrCH-InformationList-RL-SetupReqTDD  INTEGER ::= 177
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD  INTEGER ::= 178
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD  INTEGER ::= 179
id-UL-CCTrCH-Information-RL-ReconfPrepTDD      INTEGER ::= 180
id-UL-DL-CompressedModeSelection         INTEGER ::= 181
id-UL-DPCH-Information                   INTEGER ::= 182
id-UL-DPCH-Information-RL-SetupReqFDD       INTEGER ::= 183
id-UL-DPCH-InformationItem-RL-SetupRspTDD    INTEGER ::= 184
id-UL-DPCH-InformationItem-RL-AdditionRspTDD  INTEGER ::= 185
id-UL-DPCH-InformationItem-PhyChReconfRqstTDD  INTEGER ::= 186
id-UL-DPCH-InformationListIE-RL-ReconfReadyTDD  INTEGER ::= 187
id-UL-DPCH-InformationList-PhyChReconfRqstTDD  INTEGER ::= 188
id-UL-DPCH-InformationList-RL-ReconfReadyTDD  INTEGER ::= 189
id-UL-DeltaEbNo                          INTEGER ::= 190
id-UL-DeltaEbNoAfter                      INTEGER ::= 191
id-UL-EbNoTarget                          INTEGER ::= 192
id-UL-MeanBitRate                          INTEGER ::= 193
id-URA-ID                                INTEGER ::= 194
id-UnsuccessfulRL-InformationResponse        INTEGER ::= 195
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD  INTEGER ::= 196
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD     INTEGER ::= 197
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD     INTEGER ::= 198
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD  INTEGER ::= 199
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD   INTEGER ::= 200
id-CriticalityDiagnostics                  INTEGER ::= 201

```

END

### 9.3.7 Container Definitions

```

-- *****
--
-- Container definitions

```

```

--
-- *****
RNSAP-Containers -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    Criticality,
    Presence,
    PrivateExtensionID,
    ProtocolExtensionID,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes

    maxPrivateExtensions,
    maxProtocolExtensions,
    maxProtocolIEs
FROM RNSAP-Constants;

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

RNSAP-PROTOCOL-IES ::= CLASS {
    &id          ProtocolIE-ID          UNIQUE,
    &criticality Criticality,
    &Value,
    &presence    Presence
}
WITH SYNTAX {
    ID          &id
    CRITICALITY &criticality
    TYPE        &Value
    PRESENCE    &presence
}

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

```

```

RNSAP-PROTOCOL-IES-PAIR ::= CLASS {
    &id                ProtocolIE-ID                UNIQUE,
    &firstCriticality  Criticality,
    &FirstValue,
    &secondCriticality Criticality,
    &SecondValue,
    &presence          Presence
}
WITH SYNTAX {
    ID                &id
    FIRST CRITICALITY &firstCriticality
    FIRST TYPE        &FirstValue
    SECOND CRITICALITY &secondCriticality
    SECOND TYPE       &SecondValue
    PRESENCE          &presence
}

-- *****
--
-- Class Definition for Protocol Extensions
--
-- *****

RNSAP-PROTOCOL-EXTENSION ::= CLASS {
    &id                ProtocolExtensionID          UNIQUE,
    &criticality        Criticality,
    &Extension
}
WITH SYNTAX {
    ID                &id
    CRITICALITY        &criticality
    EXTENSION          &Extension
}

-- *****
--
-- Class Definition for Private Extensions
--
-- *****

RNSAP-PRIVATE-EXTENSION ::= CLASS {
    &id                PrivateExtensionID,
    &criticality        Criticality,
    &Extension
}
WITH SYNTAX {
    ID                &id
    CRITICALITY        &criticality
    EXTENSION          &Extension
}

```

```

-- *****
--
-- Container for Protocol IEs
--
-- *****

ProtocolIE-Container {RNSAP-PROTOCOL-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (0..maxProtocolIEs)) OF
  ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {RNSAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
  id          RNSAP-PROTOCOL-IES.&id          ({IEsSetParam}),
  criticality RNSAP-PROTOCOL-IES.&criticality ({IEsSetParam}@id)},
  value       RNSAP-PROTOCOL-IES.&Value       ({IEsSetParam}@id)}
}

-- *****
--
-- Container for Protocol IE Pairs
--
-- *****

--ProtocolIE-ContainerPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
-- SEQUENCE (SIZE (0..maxProtocolIEs)) OF
-- ProtocolIE-FieldPair {{IEsSetParam}}

-- ProtocolIE-FieldPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
-- id          RNSAP-PROTOCOL-IES-PAIR.&id          ({IEsSetParam}),
-- firstCriticality RNSAP-PROTOCOL-IES-PAIR.&firstCriticality ({IEsSetParam}@id)},
-- firstValue      RNSAP-PROTOCOL-IES-PAIR.&FirstValue      ({IEsSetParam}@id)},
-- secondCriticality RNSAP-PROTOCOL-IES-PAIR.&secondCriticality ({IEsSetParam}@id)},
-- secondValue     RNSAP-PROTOCOL-IES-PAIR.&SecondValue     ({IEsSetParam}@id)}
--}

-- *****
--
-- Container Lists for Protocol IE Containers
--
-- *****

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
  ProtocolIE-Container {{IEsSetParam}}

-- ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
-- SEQUENCE (SIZE (lowerBound..upperBound)) OF
-- ProtocolIE-ContainerPair {{IEsSetParam}}

-- *****
--

```

```
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
    ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
  id                RNSAP-PROTOCOL-EXTENSION.&id                ({ExtensionSetParam}),
  criticality       RNSAP-PROTOCOL-EXTENSION.&criticality       ({ExtensionSetParam}{@id}),
  extensionValue    RNSAP-PROTOCOL-EXTENSION.&Extension        ({ExtensionSetParam}{@id})
}

-- *****
--
-- Container for Private Extensions
--
-- *****

PrivateExtensionContainer {RNSAP-PRIVATE-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxPrivateExtensions)) OF
    PrivateExtensionField {{ExtensionSetParam}}

PrivateExtensionField {RNSAP-PRIVATE-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
  id                RNSAP-PRIVATE-EXTENSION.&id                ({ExtensionSetParam}),
  criticality       RNSAP-PRIVATE-EXTENSION.&criticality       ({ExtensionSetParam}{@id}),
  extensionValue    RNSAP-PRIVATE-EXTENSION.&Extension        ({ExtensionSetParam}{@id})
}

END
```





## 9.1.4 RADIO LINK SETUP RESPONSE

## 9.1.4.1 FDD Message

| IE/Group Name                                | Presence     | Range                      | IE type and reference | Semantics description                                       |
|--|--------------|----------------------------|-----------------------|---|
| Message Type                                 | M            |                            |                       |   |
| Transaction ID                               | M            |                            |                       |   |
| D-RNTI                                       | O            |                            |                       |   |
| CN PS Domain Identifier                      | O            |                            |                       |   |
| CN CS Domain Identifier                      | O            |                            |                       |   |
| <b>RL Information Response</b>               |              | 1..<maxnoofRLs>            |                       |   |
| RL ID  | M            |                            |                       |   |
| SAI  | M            |                            |                       |   |
| UL Interference Level                        | M            |                            |                       |   |
| <b>DL Code Information</b>                   |              | 1..<maxnoofDLCode s>       |                       |   |
| DL Scrambling Code                           | M            |                            |                       |   |
| FDD DL Channelisation Code Number            | M            |                            |                       |   |
| Diversity Indication                         | C-NotFirstRL |                            |                       |   |
| CHOICE <i>diversity Indication Combining</i> |              |                            |                       |   |
| RL ID  | M            |                            |                       | Reference RL ID for the combining                           |
| <i>Non Combining or IE not present</i>       |              |                            |                       | "IE not present" is equivalent to "First RL".               |
| <b>DCH Information Response</b>              |              | 0..<maxnoofDCHs >          |                       | Only one DCH per set of co-ordinated DCHs shall be included |
| DCH ID                                       | M            |                            |                       |   |
| Binding ID                                   | M            |                            |                       |   |
| Transport Layer Address                      | M            |                            |                       |   |
| SSDT Support Indicator                       | M            |                            |                       |   |
| Maximum Uplink Eb/No                         | M            |                            | Uplink Eb/No          |   |
| Minimum Uplink Eb/No                         | M            |                            | Uplink Eb/No          |   |
| <b>Neighbouring FDD Cell Information</b>     |              | 0..<maxnoofFDDn eighbours> |                       |   |
| UC-Id  | M            |                            |                       |   |
| CN PS Domain Identifier                      | O            |                            |                       |   |
| CN CS Domain Identifier                      | O            |                            |                       |   |
| UARFCN                                       | M            |                            |                       |   |
| Frame Offset                                 | O            |                            |                       |   |
| Primary Scrambling Code                      | M            |                            |                       |   |
| Primary CPICH Power                          | O            |                            |                       |   |
| <b>Neighbouring TDD Cell Information</b>     | O            | 0..<maxnoofTDDn eighbours> |                       |   |
| UC-Id  | M            |                            |                       |   |
| CN PS Domain Identifier                      | O            |                            |                       |   |
| CN CS Domain Identifier                      | O            |                            |                       |   |
| UARFCN                                       | M            |                            |                       |   |
| Frame Offset                                 | O            |                            |                       |   |
| Cell Parameter ID                            | M            |                            |                       |   |
| Sync Case                                    | M            |                            |                       |   |
| Time Slot                                    | C-Case1      |                            |                       |   |
| PSCH Time Slot                               | C-Case2&3    |                            |                       |   |
| Uplink Eb/No Target                          | O            |                            | Uplink Eb/No          |   |

|                         |   |  |  |  |
|-------------------------|---|--|--|--|
| Downlink Eb/No Target   | O |  |  |  |
| Criticality Diagnostics | O |  |  |  |

| Condition  | Explanation  |
|------------|--|
| IfComb     | This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.     |
| IfNotComb  | This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B. |
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information                   |
| Case1      | This IE is present only if Sync Case = Case1.  |
| Case2&3    | This IE is present only if Sync Case = Case2 or Case3.                                       |

| Range bound          | Explanation   |
|----------------------|---|
| MaxnoofRLs           | Maximum no. of RLs for one UE.                        |
| MaxnoofDCHs          | Maximum no. of DCHs for one UE.                       |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell. |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell. |

## 9.1.4.2 TDD Message

| IE/Group Name                               | Presence | Range                         | IE type and reference | Semantics description   |
|---|----------|-------------------------------|-----------------------|---|
| Message Type                                | M        |                               |                       |   |
| Transaction ID                              | M        |                               |                       |   |
| D-RNTI                                      | O        |                               |                       |   |
| CN PS Domain Identifier                     | O        |                               |                       |   |
| CN CS Domain Identifier                     | O        |                               |                       |   |
| <b>RL Information Response</b>              |          | 1                             |                       |   |
| RL ID                                       | M        |                               |                       |   |
| SAI   | M        |                               |                       |   |
| <b><u>UL Interference per Time Slot</u></b> |          | <u>1..&lt;maxnoofULts&gt;</u> |                       | <u>Interference Level for each UL time slot within the Radio Link</u> |
| Time Slot                                   | M        |                               |                       |   |
| UL Interference Level                       | M        |                               |                       |   |
| Maximum Uplink Eb/No                        | M        |                               | Uplink Eb/No          |   |
| Minimum Uplink Eb/No                        | M        |                               | Uplink Eb/No          |   |
| Uplink Eb/No Target                         | O        |                               | Uplink Eb/No          |   |
| Downlink Eb/No Target                       | O        |                               |                       |   |
| <b>UL CCTrCH Information</b>                |          | 1..<maxnoofCCTrCHs>           |                       |   |
| CCTrCH ID                                   | M        |                               |                       |   |
| <b>UL DPCH Information</b>                  |          | 1..<MaxnoofDPC Hs>            |                       |   |
| DPCH ID                                     | M        |                               |                       |   |
| TDD Channelisation Code                     | M        |                               |                       |   |
| Burst Type                                  | M        |                               |                       |   |
| Midamble Shift                              | M        |                               |                       |   |
| Time Slot                                   | M        |                               |                       |   |
| TDD Physical Channel Offset                 | M        |                               |                       |   |
| Repetition Period                           | M        |                               |                       |   |
| Repetition Length                           | M        |                               |                       |   |
| TFCI Presence                               | M        |                               |                       |   |
| <b>DL CCTrCH Information</b>                |          | 1..<maxnoofCCTrCHs>           |                       |   |
| CCTrCH ID                                   | M        |                               |                       |   |
| <b>DL DPCH Information</b>                  |          | 1..<MaxnoofDPC Hs>            |                       |   |
| DPCH ID                                     | M        |                               |                       |   |
| TDD Channelisation Code                     | M        |                               |                       |   |
| Burst Type                                  | M        |                               |                       |   |
| Midamble Shift                              | M        |                               |                       |   |
| Time Slot                                   | M        |                               |                       |   |
| TDD Physical Channel Offset                 | M        |                               |                       |   |
| Repetition Period                           | M        |                               |                       |   |
| Repetition Length                           | M        |                               |                       |   |
| TFCI Presence                               | M        |                               |                       |   |
| <b>DCH Information Response</b>             |          | 1..<maxnoofDCHs >             |                       | Only one DCH per set of co-ordinated DCHs shall be included.          |
| DCH ID                                      | M        |                               |                       |   |
| Binding ID                                  | M        |                               |                       |   |
| Transport Layer Address                     | M        |                               |                       |   |
| <b>Neighbouring FDD Cell Information</b>    | O        | 0..<maxnoofFDDn eighbours>    |                       |   |
| UC-Id                                       | M        |                               |                       |   |
| CN PS Domain Identifier                     | O        |                               |                       |   |

|  |               |  |  |  |
|--|---------------|--|--|--|
| CN CS Domain Identifier                  | O             |  |  |  |
| UARFCN                                   | M             |  |  |  |
| Frame Offset                             | O             |  |  |  |
| Primary Scrambling Code                  | M             |  |  |  |
| Primary CPICH Power                      | O             |  |  |  |
| <b>Neighbouring TDD Cell Information</b> | O             | <i>0..&lt;maxnoofTDDn<br/>neighbours&gt;</i> |  |  |
| UC-Id                                    | M             |  |  |  |
| CN PS Domain Identifier                  | O             |  |  |  |
| CN CS Domain Identifier                  | O             |  |  |  |
| UARFCN                                   | M             |  |  |  |
| Frame Offset                             | O             |  |  |  |
| Cell Parameter ID                        | M             |  |  |  |
| Sync Case                                | M             |  |  |  |
| Time Slot                                | C-Case1       |  |  |  |
| PSCH Time Slot                           | C-<br>Case2&3 |  |  |  |
| Criticality Diagnostics                  | O             |  |  |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range bound                 | Explanation  |
|-----------------------------|--|
| MaxnoofDPCHs                | Maximum no. of DPCHs for one CCTrCH.                               |
| MaxnoofDCHs                 | Maximum no. of DCHs for one UE.                                    |
| MaxnoofFDDneighbours        | Maximum number of neighbouring FDD cell for one cell               |
| MaxnoofTDDneighbours        | Maximum number of neighbouring TDD cell for one cell               |
| MaxnoofCCTrCHs              | Maximum no. of CCTrCH for one UE.                                  |
| <a href="#">MaxnoofULts</a> | <a href="#">Maximum number of Uplink time slots per Radio Link</a> |

## 9.1.7 RADIO LINK ADDITION RESPONSE

## 9.1.7.1 FDD Message

| IE/Group Name                            | Presence  | Range                      | IE type and reference | Semantics description  |
|--|-----------|----------------------------|-----------------------|--|
| Message Type                             | M         |                            |                       |  |
| Transaction ID                           | M         |                            |                       |  |
| <b>RL Information Response</b>           |           | 1..<maxnoofRLs-1>          |                       |  |
| RL ID                                    | M         |                            |                       |  |
| SAI                                      | M         |                            |                       |  |
| UL Interference Level                    | M         |                            |                       |  |
| <b>DL Code Information</b>               |           | 1..<maxnoofDLCodes>        |                       |  |
| DL Scrambling Code                       | M         |                            |                       |  |
| DL Channelisation Code                   | M         |                            |                       |  |
| Diversity Indication                     | M         |                            |                       |  |
| CHOICE <i>diversity indication</i>       |           |                            |                       |  |
| <i>Combining</i>                         |           |                            |                       |  |
| RL ID                                    | M         |                            |                       | Reference RL-Id  |
| <i>Non combining</i>                     |           |                            |                       |  |
| <b>DCH Information Response</b>          |           | 1..<maxnoofDCHs>           |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                   | M         |                            |                       |  |
| Binding ID                               | M         |                            |                       |  |
| Transport Layer Address                  | M         |                            |                       |  |
| SSDT Support Indicator                   | M         |                            |                       |  |
| Minimum Uplink Eb/No                     | M         |                            | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                     | M         |                            | Uplink Eb/No          |  |
| <b>Neighbouring FDD Cell Information</b> |           | 0..<maxnoofFDD Neighbours> |                       |  |
| UC-Id                                    | M         |                            |                       |  |
| CN PS Domain Identifier                  | O         |                            |                       |  |
| CN CS Domain Identifier                  | O         |                            |                       |  |
| UARFCN                                   | M         |                            |                       |  |
| Frame Offset                             | O         |                            |                       |  |
| Primary Scrambling Code                  | M         |                            |                       |  |
| Primary CPICH Power                      | O         |                            |                       |  |
| <b>Neighbouring TDD Cell Information</b> |           | 0..<maxnoofTDD Neighbours> |                       |  |
| UC-Id                                    | M         |                            |                       |  |
| CN PS Domain Identifier                  | O         |                            |                       |  |
| CN CS Domain Identifier                  | O         |                            |                       |  |
| UARFCN                                   | M         |                            |                       |  |
| Frame Offset                             | O         |                            |                       |  |
| Cell Parameter ID                        | M         |                            |                       |  |
| Sync Case                                | M         |                            |                       |  |
| Time Slot                                | C-Case1   |                            |                       |  |
| PSCH Time Slot                           | C-Case2&3 |                            |                       |  |
| Criticality Diagnostics                  | O         |                            |                       |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| <b>Range bound</b>   | <b>Explanation</b>                                    |
|----------------------|---|
| MaxnoofDCHs          | Maximum number of dedicated channels on one RL        |
| MaxnoofRLs           | Maximum number of radio links for one UE              |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one cell |
| MaxnoofDLCodes       | Maximum number of DL code information                 |

## 9.1.7.2 TDD Message

| IE/Group Name                               | Presence | Range                      | IE type and reference | Semantics description  |
|---|----------|----------------------------|-----------------------|--|
| Message Type                                | M        |                            |                       |  |
| Transaction ID                              | M        |                            |                       |  |
| <b>RL Information Response</b>              |          | 1                          |                       |  |
| RL ID                                       | M        |                            |                       |  |
| SAI   | M        |                            |                       |  |
| <b><u>UL Interference per Time Slot</u></b> |          | 1..<br><maxnoofULts>       |                       | <a href="#">Interference Level for each UL time slot within the Radio Link</a> |
| <u>Time Slot</u>                            | M        |                            |                       |  |
| UL Interference Level                       | M        |                            |                       |  |
| <b>UL CCTrCH Information</b>                |          | 1..<maxnoof CCTrCHs>       |                       |  |
| CCTrCH ID                                   | M        |                            |                       |  |
| <b>UL DPCH Information</b>                  |          | 1..<maxnoOfDPC Hs>         |                       |  |
| DPCH ID                                     | M        |                            |                       |  |
| TDD Channelisation Code                     | M        |                            |                       |  |
| Burst Type                                  | M        |                            |                       |  |
| Midamble Shift                              | M        |                            |                       |  |
| Time Slot                                   | M        |                            |                       |  |
| TDD Physical Channel Offset                 | M        |                            |                       |  |
| Repetition Period                           | M        |                            |                       |  |
| Repetition Length                           | M        |                            |                       |  |
| TFCI Presence                               | M        |                            |                       |  |
| <b>DL CCTrCH Information</b>                |          | 1..<maxnoof CCTrCHs>       |                       |  |
| CCTrCH ID                                   | M        |                            |                       |  |
| <b>DL DPCH information</b>                  |          | 1..<maxnoOfDPC Hs>         |                       |  |
| DPCH ID                                     | M        |                            |                       |  |
| TDD Channelisation Code                     | M        |                            |                       |  |
| Burst Type                                  | M        |                            |                       |  |
| Midamble Shift                              | M        |                            |                       |  |
| Time Slot                                   | M        |                            |                       |  |
| TDD Physical Channel Offset                 | M        |                            |                       |  |
| Repetition Period                           | M        |                            |                       |  |
| Repetition Length                           | M        |                            |                       |  |
| TFCI Presence                               | M        |                            |                       |  |
| Diversity Indication                        | M        |                            |                       |  |
| CHOICE <i>diversity indication</i>          |          |                            |                       |  |
| <i>Combining</i>                            |          |                            |                       |  |
| RL ID                                       | M        |                            |                       | Reference RL   |
| <i>Non combining</i>                        |          |                            |                       |  |
| <b>DCH Information Response</b>             |          | 1..<maxnoofDCHs >          |                       | Only one DCH per set of co-ordinated DCHs shall be included.                   |
| DCH ID                                      | M        |                            |                       |  |
| Binding ID                                  | M        |                            |                       |  |
| Transport Layer Address                     | M        |                            |                       |  |
| Minimum Uplink Eb/No                        | M        |                            | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                        | M        |                            | Uplink Eb/No          |  |
| <b>Neighbouring FDD Cell Information</b>    |          | 0..<maxnoofFDD Neighbours> |                       |  |



|  |           |   |  |  |
|--|-----------|---|--|--|
| UC-Id                                    | M         |   |  |  |
| CN PS Domain Identifier                  | O         |   |  |  |
| CN CS Domain Identifier                  | O         |   |  |  |
| UARFCN                                   | M         |   |  |  |
| Frame Offset                             | O         |   |  |  |
| Primary Scrambling Code                  | M         |   |  |  |
| Primary CPICH Power                      | O         |   |  |  |
| <b>Neighbouring TDD Cell Information</b> |           | <i>0..&lt;maxnoofTDD Neighbours&gt;</i> |  |  |
| UC-Id                                    | M         |   |  |  |
| CN PS Domain Identifier                  | O         |   |  |  |
| CN CS Domain Identifier                  | O         |   |  |  |
| UARFCN                                   | M         |   |  |  |
| Frame Offset                             | O         |   |  |  |
| Cell Parameter ID                        | M         |   |  |  |
| Sync Case                                | M         |   |  |  |
| Time Slot                                | C-Case1   |   |  |  |
| PSCH Time Slot                           | C-Case2&3 |   |  |  |
| Criticality Diagnostics                  | O         |   |  |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1           |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range Bound                 | Explanation  |
|-----------------------------|--|
| MaxnoofDCHs                 | Maximum number of dedicated channels on one RL                     |
| MaxnoofFDDNeighbours        | Maximum number of neighbouring FDD cells for one cell              |
| MaxnoofTDDNeighbours        | Maximum number of neighbouring TDD cells for one cell              |
| MaxnoofDLCodes              | Maximum number of DL code information                              |
| MaxnoOfDPCHs                | Maximum number of DPCH in one CCTrCH                               |
| MaxnoofCCTrCHs              | no. of CCTrCH for one UE.  |
| <a href="#">MaxnoofULts</a> | <a href="#">Maximum number of Uplink time slots per Radio Link</a> |

### 9.2.1.58 UL Interference Level

The parameter indicates the UL Interference Level in a cell[FDD]/time slot[TDD]. The UL Interference Level is used by the UE to calculate its initial UL power for the cell.

| IE/Group Name         | Presence | Range | IE type and reference           | Semantics description          |
|-----------------------|----------|-------|---------------------------------|--------------------------------|
| UL Interference Level |          |       | ENUMERATED<br>ED<br>(-128..-60) | Unit: dBm,<br>Step size=0.1 dB |

### 9.3.3 PDU Definitions

```
-- *****
--
-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,
```

DL-ScramblingCode,  
DPCH-ID,  
DRX-Parameter,  
DedicatedMeasurementValue,  
DiversityControlField,  
DiversityMode,  
FACH-DataFrameSize,  
FACH-InitialWindowSize,  
FACH-PriorityIndicator,  
FDD-DL-ChannelisationCodeNumber,  
FDD-S-CCPCH-Offset,  
FrameHandlingPriority,  
FrameOffset,  
GapPeriod,  
GapPositionMode,  
L3-Information,  
MAC-c-SDU-Length,  
MaxNrOfUL-DPCHs,  
MeanBitRate,  
MeasurementCharacteristics,  
MeasurementID,  
MidambleShift,  
MinUL-ChannelisationCodeLength,  
MultipleURAsIndicator,  
MultiplexingPosition,  
Offset,  
PD,  
PSCH-PCCPCH-TimeSlot,  
PSCH-TimeSlot,  
PayloadCRC-PresenceIndicator,  
PilotBitsUsedIndicator,  
PowerControlMode,  
PowerOffset,  
PowerResumeMode,  
PrimaryCCPCH-RSCP,  
PrimaryCPICH-EcNo,  
PrimaryCPICH-Power,  
PrimaryScramblingCode,  
PropagationDelay,  
PunctureLimit,  
RANAP-RelocationInformation,  
RL-ID,  
RLC-Mode,  
RNC-ID,  
RepetitionLength,  
RepetitionPeriod,  
ReportCharacteristics,  
S-FieldLength,  
S-RNTI,  
SAI,  
SN,

```

SRNC-ID,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
ScaledUL-InterferenceLevel,
ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-PhysicalChannelOffset,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSet,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
UC-ID,
UL-DL-CompressedModeSelection,
UL-DPCCCH-SlotFormat,
UL-EbNo,
UL-EbNoTarget,
UL-FP-Mode,
UL-ScramblingCode,
URA-ID
FROM RNSAP-IEs

PrivateExtensionContainer{},
ProtocolExtensionContainer{},
ProtocolIE-ContainerList{},
ProtocolIE-ContainerPair{},
ProtocolIE-ContainerPairList{},
ProtocolIE-Container{},
RNSAP-PRIVATE-EXTENSION,
RNSAP-PROTOCOL-EXTENSION,
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers

maxNoOfDL-Codes,
maxNrOfCCTrCHs,

```

maxNrOfDCHs ,  
maxNrOfDL-Codes ,  
maxNrOfDPCHs ,  
maxNrOfFACH-FD-Size ,  
maxNrOfFDD-Neighbours ,  
maxNrOfMACcSDU-Length ,  
maxNrOfTDD-Neighbours ,  
maxNrOfRLs ,  
maxNrOfSCCPCHs ,  
maxNrOfULTs ,  
maxRNCinURA ,

```

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

RadioLinkSetupResponseTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupResponseTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupResponseTDD-Extensions}}          OPTIONAL,
    ...
}

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
    { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-RL-SetupRspTDD PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID          RL-ID,
    sAI            SAI,
    ul-InterferenceLevel          ScaledUL-InterferenceLevel,
    ul-InterferencePerTimeslot UL-InterferenceList-RL-SetupRspTDD
    maxUL-EbNo     UL-EbNo,
    minUL-EbNo     UL-EbNo,
    ul-EbNoTarget  UL-EbNo          OPTIONAL,
    dl-EbNoTarget  DL-EbNo          OPTIONAL,
    dl-CCTrCHInformation          UL-CCTrCHInformationList-RL-SetupRspTDD,
    dl-CCTrCHInformation          DL-CCTrCHInformationList-RL-SetupRspTDD,
    dCH-InformationResponse       DCH-InformationResponseList-RL-SetupRspTDD,
    neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation          NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-InterferenceList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfULTs)) OF UL-InterferenceItem-RL-SetupRspTDD

UL-InterferenceItem-RL-SetupRspTDD ::= SEQUENCE {
    timeSlot          TimeSlot,
    ul-InterferenceLevel          ScaledUL-InterferenceLevel,
}
}

```

```

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

RadioLinkAdditionResponseTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionResponseTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{RadioLinkAdditionResponseTDD-Extensions}}
    ...
}

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
    { ID id-RL-InformationResponse-RL-AdditionRspTDD
      CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics
      CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID          RL-ID,
    sAI            SAI,
    ul-InterferenceLevel          ScaledUL-InterferenceLevel,
    ul-InteferencePerTimeslot      UL-InterferenceList-RL-AdditionRspTDD
    ul-CCTrCHInformation          UL-CCTrCHInformationList-RL-AdditionRspTDD,
    dl-CCTrCHInformation          DL-CCTrCHInformationList-RL-AdditionRspTDD,
    diversityIndication           CHOICE {
        combining                SEQUENCE {
            rL-ID                RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-AdditionRspFDD
            DCH-InformationResponseList-RL-AdditionRspFDD OPTIONAL
        }
    }
    ...
}
OPTIONAL,
maxUL-EbNo          UL-EbNo,
minUL-EbNo          UL-EbNo,
neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-AdditionRspTDD OPTIONAL,
neighbouringTDD-CellInformation          NeighbouringTDD-CellInformationList-RL-AdditionRspTDD OPTIONAL,
iE-Extensions      ProtocolExtensionContainer { {RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-InterferenceList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfULTs)) OF UL-InterferenceItem-RL-AdditionRspTDD
UL-InterferenceItem-RL-AdditionRspTDD ::= SEQUENCE {
    timeSlot          TimeSlot,

```



ul-InterferenceLevel ScaledUL-InterferenceLevel,  
}

## 9.3.6 Constant Definitions

```

-- *****
--
-- Constant definitions
--
-- *****

RNSAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- Elementary Procedures
--
-- *****

id-commonTransportChannelResourcesInitiationFDD          INTEGER ::= 0
id-commonTransportChannelResourcesInitiationTDD          INTEGER ::= 1
id-commonTransportChannelResourcesRelease                INTEGER ::= 2
id-compressedModeCancellationFDD                        INTEGER ::= 3
id-compressedModeCommitFDD                              INTEGER ::= 4
id-compressedModePrepareFDD                             INTEGER ::= 5
id-downlinkPowerControl                                 INTEGER ::= 6
id-downlinkSignallingTransfer                            INTEGER ::= 7
id-errorIndication                                     INTEGER ::= 8
id-measurementFailure                                  INTEGER ::= 9
id-measurementInitiation                                INTEGER ::= 10
id-measurementReporting                                  INTEGER ::= 11
id-measurementTermination                               INTEGER ::= 12
id-pagingRequest                                       INTEGER ::= 13
id-physicalChannelReconfiguration                       INTEGER ::= 14
id-privateMessage                                       INTEGER ::= 15
id-radioLinkAddition                                    INTEGER ::= 16
id-radioLinkDeletion                                    INTEGER ::= 17
id-radioLinkFailure                                     INTEGER ::= 18
id-radioLinkRestoration                                 INTEGER ::= 19
id-radioLinkSetup                                       INTEGER ::= 20
id-srnsRelocationCommit                                 INTEGER ::= 21
id-synchronisedRadioLinkReconfigurationCancellation     INTEGER ::= 22
id-synchronisedRadioLinkReconfigurationCommit           INTEGER ::= 23
id-synchronisedRadioLinkReconfigurationPrepare          INTEGER ::= 24
id-unSynchronisedRadioLinkReconfiguration              INTEGER ::= 25
id-uplinkSignallingTransfer                             INTEGER ::= 26

-- *****
--

```

```
-- Extension constants
--
-- *****

maxPrivateExtensions          INTEGER ::= 65535
maxProtocolExtensions        INTEGER ::= 65535
maxProtocolIEs               INTEGER ::= 65535

-- *****
--
-- Lists
--
-- *****

maxRateMatching              INTEGER ::= 10
maxNrOfTFCs                  INTEGER ::= 10
maxNrOfTFS                    INTEGER ::= 10

maxNoOfDL-Codes              INTEGER ::= 10
maxNrOfCCTrCHs               INTEGER ::= 10
maxNrOfDCHs                   INTEGER ::= 10
maxNrOfDL-Codes              INTEGER ::= 10
maxNrOfDPCHs                  INTEGER ::= 10
maxNrOfErrors                 INTEGER ::= 10
maxNrOfFACH-FD-Size          INTEGER ::= 10
maxNrOfFDD-Neighbours        INTEGER ::= 10
maxNrOfMACcSDU-Length        INTEGER ::= 10
maxNrOfTDD-Neighbours        INTEGER ::= 10
maxNrOfRLs                    INTEGER ::= 10
maxNrOfSCCPCHs               INTEGER ::= 10
maxNrOfULTs                   INTEGER ::= 15
maxRNCinURA                  INTEGER ::= 10
maxTTI-Count                  INTEGER ::= 10
```

**TSG-RAN Working Group 3 Meeting #11**  
**Sophia Antipolis, France, 28<sup>th</sup> February– 3<sup>rd</sup>**  
**March 2000**

**Document R3-000942**

e.g. for 3GPP use the format TP-99xxx  
or for SMG, use the format P-99-xxx

## CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

**25.423 CR 048r2**

Current Version: **3.0.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG RAN #7**  
list expected approval meeting # here ↑

for approval   
for information

strategic   
non-strategic  (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:** (U)SIM  ME  UTRAN / Radio  Core Network   
(at least one should be marked with an X)

**Source:** RAN-WG3 **Date:** 28 February 2000

**Subject:** Additional IEs to Neighbouring Cell Information regarding Tx Diversity

**Work item:**

|  |   |                                     |                                     |                          |                          |
|--|---|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| <b>Category:</b><br><i>(only one category shall be marked with an X)</i> | F Correction  | <input type="checkbox"/>            | <b>Release:</b>                     | Phase 2                  | <input type="checkbox"/> |
|  | A Corresponds to a correction in an earlier release | <input type="checkbox"/>            |                                     | Release 96               | <input type="checkbox"/> |
|  | B Addition of feature                               | <input checked="" type="checkbox"/> |                                     | Release 97               | <input type="checkbox"/> |
|  | C Functional modification of feature                | <input type="checkbox"/>            |                                     | Release 98               | <input type="checkbox"/> |
| D Editorial modification   | <input type="checkbox"/>                            | Release 99                          | <input checked="" type="checkbox"/> |                          |                          |
|  |   |                                     | Release 00                          | <input type="checkbox"/> |                          |

**iReason for change:**

In multi-vendor environment, it is expected to have different Tx Diversity configuration among various cells. One Cell may support three Tx diversity modes (i.e. STTD, CL mode1, and CL mode2) while other cell may only support one out of those three, and one cell may even support none of them.

Current RNSAP has capability to notify drift RNS of the requested Tx Diversity mode by RADIO LINK SETUP REQUEST message. However, the method for an SRNC to obtain the supporting Tx Diversity modes in the particular cell in advance has not been clear. As a result, there is no mechanism to obtain the Tx Diversity capability of the particular cell in DRNS in advance unless all the RNS themselves store the supporting Tx Diversity modes of all other remaining RNS within the UTRAN. Such way of doing is not practical in the real world.

This CR proposes to introduce a new feature that the SRNC obtain the Tx Diversity capability of the particular cell prior to performing Radio Link Setup/Addition procedure to the cell. Four new IEs for “Neighbouring Cell Information” have been introduced in this CR.

“Tx diversity indicator” indicates if the following three conditions are satisfied:

- P-CPICH is broadcast from two antennas
- STTD is applied to P-CCPCH
- TSTD is applied to P-SCH and S-SCH

“STTD Support Indicator” indicates if STTD can be applied to DL DPCH in the cell

“Closed Loop Mode1 Support Indicator” indicates if the cell supports Closed loop mode1

“Closed Loop Mode2 Support Indicator” indicates if the cell supports Closed loop mode2

**Clauses affected:** 8.3.1 Radio Link Setup  
8.3.2 Radio Link Addition

- 9.1.4 RADIO LINK SETUP RESPONSE
- 9.1.5 RADIO LINK SETUP FAILURE
- 9.1.7 RADIO LINK ADDITION RESPONSE
- 9.1.8 RADIO LINK ADDITION FAILURE
- 9.2.2 FDD Specific Parameters
- 9.3.3 PDU Definitions
  
- 9.3.4 Information Element Definitions

**Other specs affected:**

- Other 3G core specifications  → List of CRs:
- Other GSM core specifications  → List of CRs:
- MS test specifications  → List of CRs:
- BSS test specifications  → List of CRs:
- O&M specifications  → List of CRs:

**Other comments:**



help.doc

←←----- double-click here for help and instructions on how to create a CR.

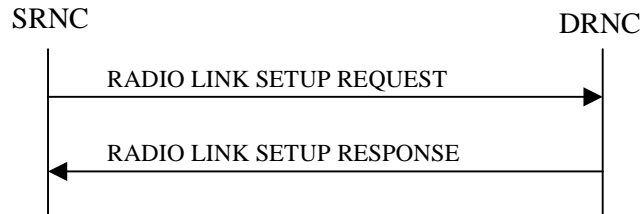
## 8.3.1 Radio Link Setup

### 8.3.1.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more radio links.

This procedure shall use the connection-oriented service of the signalling bearer.

### 8.3.1.2 Successful Operation



**Figure 15: Radio Link Setup procedure: Successful Operation**

When the SRNC makes an algorithmic decision to add the first cell or set of cells from a DRNS to the active set of a specific RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message is also used to establish the connection-oriented service of the signalling bearer in the DRNC. The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The Diversity Control Field indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When an RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

If the *Initial DL TX Power* IE and *UL Eb/No Target* IE [FDD] are present in the message, the DRNS shall use the indicated DL TX Power and UL Eb/No Target [FDD] as initial value.

If the *Primary CPICH Eb/No* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] is present, the DRNC should use them when deciding the Initial DL TX Power.

If the RADIO LINK SETUP REQUEST message includes the *DCH Combination Indicator* IE for a DCH, the DRNS shall treat all DCHs with the same value of this IE as a set of co-ordinated DCHs. The included *RLC Mode* IE of the DCH may be used by the DRNS to optimise the power control.

The *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH as the new DCH FP Mode in the Uplink of the user plane for this DCH.

The DRNS shall use the included *ToAWS* IE for a DCH as the new Time of Arrival Window Start Point in the user plane for this DCH.

The DRNS shall use the included *ToAWE* IE for a DCH as the new Time of Arrival Window End Point in the user plane for this DCH.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity* IE, the DRNS may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE.]

At the reception of the RADIO LINK SETUP REQUEST message, DRNS allocates requested type of channelisation codes and other physical channel resources for each RL and assigns a binding identifier and a transport layer address for each DCH or set of co-ordinated DCHs. This information shall be sent to the SRNS in the message RADIO LINK SETUP RESPONSE when all the RLs have been successfully setup.

If the *Initial DL TX Power* and the *UL Eb/No Target* IEs are not present in the RADIO LINK SETUP REQUEST message, then DRNC shall include the suggested initial UL Eb/No Target and the DL Eb/No Target in the RADIO LINK SETUP RESPONSE message.

In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference RL ID shall be included to indicate with which RL the combination is performed. The Reference RL ID shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.

In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK SETUP RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

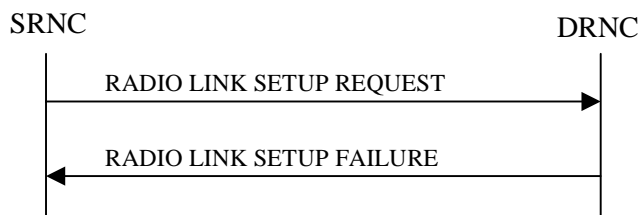
[FDD - Irrespective of SSSDT activation, the DRNS shall include in the RADIO LINK SETUP RESPONSE message an indication concerning the capability to support SSSDT on this RL. Only if the RADIO LINK SETUP REQUEST message requested SSSDT activation and the RADIO LINK SETUP RESPONSE message indicates that the SSSDT capability is supported for this RL, SSSDT is activated in the DRNS.]

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id) and information of the neighbouring cells to the cell(s) where the radio link(s) are added.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC, CN domain nodes) of the RNC controlling the neighbouring cell. [FDD – If the information is available, the DRNC shall include the Tx diversity indicator and Tx diversity capability (i.e. STTD Support Indicator, Closed Loop mode1 Support Indicator, and Closed Loop mode2 Support Indicator) in Neighbouring FDD Cell Information]

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received the DRNC shall include the node identifications of the CN Domain nodes that the RNC is connected to (using LAC and RAC of the current cell), and the D-RNTI in the RADIO LINK SETUP RESPONSE message.

### 8.3.1.3 Unsuccessful Operation



**Figure 26: Radio Link Setup procedure: Unsuccessful Operation**

In unsuccessful case (i.e. one or more RLs can not be setup) the RADIO LINK SETUP FAILURE message shall be sent to the SRNC, indicating the reason for failure. If some radio links were established successfully, the DRNC shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.

Typical cause values are:

#### Radio Network Layer Causes:

- UL Scrambling Code Already in Use
- DL Radio Resources not Available

- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Requested Configuration not Supported
- Cell not Available
- Power Level not Supported

**Transport Layer Causes:**

- Transport Link Failure

**Protocol Causes:**

- Transaction not Allowed

**Miscellaneous Causes:**

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

### 8.3.1.4 Abnormal Conditions

If the DRNC receives either an S-RNTI or a D-RNTI which already has RL(s) established the DRNC shall send the RADIO LINK SETUP FAILURE message to the SRNC, indicating the reason for failure.

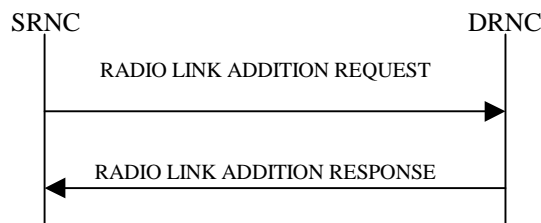
## 8.3.2 Radio Link Addition

### 8.3.2.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more additional RLs towards a UE when there is already at least one RL established to the concerning UE via this DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

### 8.3.2.2 Successful Operation



**Figure 37: 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.

[FDD - The Diversity Control Field indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS



shall decide for any of the alternatives. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the *Primary CCPCH Ec/Io* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] measured by the UE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power. If the *Primary CCPCH Ec/Io* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.

[FDD - The DRNS shall use the provided UL Eb/No Target value as the current target for the inner-loop power control.]

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, SSDT may be activated for the concerned new RL, with the indicated SSDT Cell Identity used for that RL.]

The DRNS shall activate any feedback mode diversity according to the received settings.

If all requested RLs are successfully added, the DRNC shall respond with a RADIO LINK ADDITION RESPONSE message.

In the case of combining an RL with existing RL(s) the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that the RL is combined. In this case the Reference RL ID shall be included to indicate one of the existing RLs that the new RL is combined with.

In the case of not combining an RL with existing RL(s), the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the Transport Layer Address and the binding ID for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message.

In case of co-ordinated DCH, the binding ID and the transport address shall be included for only one of the co-ordinated DCHs.

[FDD - Irrespective of SSDT activation, the DRNS shall include in the RADIO LINK ADDITION RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK ADDITION REQUEST message requested SSDT activation and the RADIO LINK ADDITION RESPONSE message indicates that the SSDT capability is supported for this RL, SSDT is activated in the DRNS.]

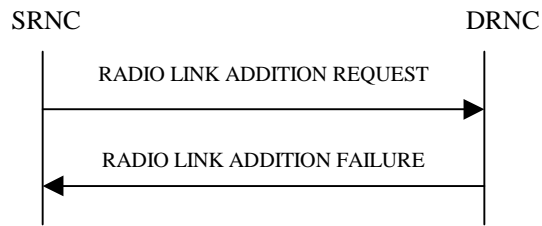
For any cell neighbouring of a cell in which a RL was added, the DRNC shall provide in the RADIO LINK ADDITION RESPONSE message the UTRAN Cell Identifier (UC-Id), the Frequency Number, the Primary Scrambling Code and the node identification of CN nodes connected to the RNC controlling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the CPICH Power level, ~~and~~ Frame Offset of the neighbouring cell, Tx diversity indicator [FDD], and Tx diversity capability[FDD] (i.e. STTD Support Indicator, Closed Loop mode1 Support Indicator, and Closed Loop mode2 Support Indicator).

The DRNC shall also provide the configured uplink Maximum Eb/No and UL Minimum Eb/No 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 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.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the Iur user plane as specified in ref. [Error! Reference source not found.3].

### 8.3.2.3 Unsuccessful Operation



**Figure 48: 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
- Unknown C-ID
- Macrodiversity Combining not Possible
- Cell not Available
- Power Level not Supported

**Transport Layer Causes:**

- Transport Link Failure

**Miscellaneous Causes:**

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

### 8.3.2.4 Abnormal Conditions

-

## 9.1.4 RADIO LINK SETUP RESPONSE

## 9.1.4.1 FDD Message

| IE/Group Name                                | Presence     | Range                      | IE type and reference | Semantics description                                       |
|--|--------------|----------------------------|-----------------------|---|
| Message Type                                 | M            |                            |                       |   |
| Transaction ID                               | M            |                            |                       |   |
| D-RNTI                                       | O            |                            |                       |   |
| CN PS Domain Identifier                      | O            |                            |                       |   |
| CN CS Domain Identifier                      | O            |                            |                       |   |
| <b>RL Information Response</b>               |              | 1..<maxnoofRLs>            |                       |   |
| RL ID  | M            |                            |                       |   |
| SAI  | M            |                            |                       |   |
| UL Interference Level                        | M            |                            |                       |   |
| <b>DL Code Information</b>                   |              | 1..<maxnoofDLCode s>       |                       |   |
| DL Scrambling Code                           | M            |                            |                       |   |
| FDD DL Channelisation Code Number            | M            |                            |                       |   |
| Diversity Indication                         | C-NotFirstRL |                            |                       |   |
| CHOICE <i>diversity Indication Combining</i> |              |                            |                       |   |
| RL ID  | M            |                            |                       | Reference RL ID for the combining                           |
| <i>Non Combining or IE not present</i>       |              |                            |                       | "IE not present" is equivalent to "First RL".               |
| <b>DCH Information Response</b>              |              | 0..<maxnoofDCHs >          |                       | Only one DCH per set of co-ordinated DCHs shall be included |
| DCH ID                                       | M            |                            |                       |   |
| Binding ID                                   | M            |                            |                       |   |
| Transport Layer Address                      | M            |                            |                       |   |
| SSDT Support Indicator                       | M            |                            |                       |   |
| Maximum Uplink Eb/No                         | M            |                            | Uplink Eb/No          |   |
| Minimum Uplink Eb/No                         | M            |                            | Uplink Eb/No          |   |
| <b>Neighbouring FDD Cell Information</b>     |              | 0..<maxnoofFDDn eighbours> |                       |   |
| UC-Id  | M            |                            |                       |   |
| CN PS Domain Identifier                      | O            |                            |                       |   |
| CN CS Domain Identifier                      | O            |                            |                       |   |
| UARFCN                                       | M            |                            |                       |   |
| Frame Offset                                 | O            |                            |                       |   |
| Primary Scrambling Code                      | M            |                            |                       |   |
| Primary CPICH Power                          | O            |                            |                       |   |
| >>Tx diversity Indicator                     | <u>O</u>     |                            |                       |   |
| >>STTD Support Indicator                     | <u>O</u>     |                            |                       |   |
| >>Closed Loop mode1 Support Indicator        | <u>O</u>     |                            |                       |   |
| >>Closed Loop mode2 Support Indicator        | <u>O</u>     |                            |                       |   |
| <b>Neighbouring TDD Cell Information</b>     | O            | 0..<maxnoofTDDn eighbours> |                       |   |
| UC-Id  | M            |                            |                       |   |
| CN PS Domain Identifier                      | O            |                            |                       |   |
| CN CS Domain Identifier                      | O            |                            |                       |   |
| UARFCN                                       | M            |                            |                       |   |
| Frame Offset                                 | O            |                            |                       |   |
| Cell Parameter ID                            | M            |                            |                       |   |

|                         |           |  |              |  |
|-------------------------|-----------|--|--------------|--|
| Sync Case               | M         |  |              |  |
| Time Slot               | C-Case1   |  |              |  |
| PSCH Time Slot          | C-Case2&3 |  |              |  |
| Uplink Eb/No Target     | O         |  | Uplink Eb/No |  |
| Downlink Eb/No Target   | O         |  |              |  |
| Criticality Diagnostics | O         |  |              |  |

| Condition  | Explanation  |
|------------|--|
| IfComb     | This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.     |
| IfNotComb  | This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B. |
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information                   |
| Case1      | This IE is present only if Sync Case = Case1.  |
| Case2&3    | This IE is present only if Sync Case = Case2 or Case3.                                       |

| Range bound          | Explanation   |
|----------------------|---|
| MaxnoofRLs           | Maximum no. of RLs for one UE.                        |
| MaxnoofDCHs          | Maximum no. of DCHs for one UE.                       |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell. |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell. |

## 9.1.4.2 TDD Message

| IE/Group Name                            | Presence | Range                      | IE type and reference | Semantics description  |
|--|----------|----------------------------|-----------------------|--|
| Message Type                             | M        |                            |                       |  |
| Transaction ID                           | M        |                            |                       |  |
| D-RNTI                                   | O        |                            |                       |  |
| CN PS Domain Identifier                  | O        |                            |                       |  |
| CN CS Domain Identifier                  | O        |                            |                       |  |
| <b>RL Information Response</b>           |          | 1                          |                       |  |
| RL ID                                    | M        |                            |                       |  |
| SAI                                      | M        |                            |                       |  |
| UL Interference Level                    | M        |                            |                       |  |
| Maximum Uplink Eb/No                     | M        |                            | Uplink Eb/No          |  |
| Minimum Uplink Eb/No                     | M        |                            | Uplink Eb/No          |  |
| Uplink Eb/No Target                      | O        |                            | Uplink Eb/No          |  |
| Downlink Eb/No Target                    | O        |                            |                       |  |
| <b>UL CCTrCH Information</b>             |          | 1..<maxnoofCCTrCHs>        |                       |  |
| CCTrCH ID                                | M        |                            |                       |  |
| <b>UL DPCH Information</b>               |          | 1..<MaxnoofDPC Hs>         |                       |  |
| DPCH ID                                  | M        |                            |                       |  |
| TDD Channelisation Code                  | M        |                            |                       |  |
| Burst Type                               | M        |                            |                       |  |
| Midamble Shift                           | M        |                            |                       |  |
| Time Slot                                | M        |                            |                       |  |
| TDD Physical Channel Offset              | M        |                            |                       |  |
| Repetition Period                        | M        |                            |                       |  |
| Repetition Length                        | M        |                            |                       |  |
| TFCI Presence                            | M        |                            |                       |  |
| <b>DL CCTrCH Information</b>             |          | 1..<maxnoofCCTrCHs>        |                       |  |
| CCTrCH ID                                | M        |                            |                       |  |
| <b>DL DPCH Information</b>               |          | 1..<MaxnoofDPC Hs>         |                       |  |
| DPCH ID                                  | M        |                            |                       |  |
| TDD Channelisation Code                  | M        |                            |                       |  |
| Burst Type                               | M        |                            |                       |  |
| Midamble Shift                           | M        |                            |                       |  |
| Time Slot                                | M        |                            |                       |  |
| TDD Physical Channel Offset              | M        |                            |                       |  |
| Repetition Period                        | M        |                            |                       |  |
| Repetition Length                        | M        |                            |                       |  |
| TFCI Presence                            | M        |                            |                       |  |
| <b>DCH Information Response</b>          |          | 1..<maxnoofDCHs >          |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                   | M        |                            |                       |  |
| Binding ID                               | M        |                            |                       |  |
| Transport Layer Address                  | M        |                            |                       |  |
| <b>Neighbouring FDD Cell Information</b> | O        | 0..<maxnoofFDDn eighbours> |                       |  |
| UC-Id                                    | M        |                            |                       |  |
| CN PS Domain Identifier                  | O        |                            |                       |  |
| CN CS Domain Identifier                  | O        |                            |                       |  |
| UARFCN                                   | M        |                            |                       |  |
| Frame Offset                             | O        |                            |                       |  |

|  |           |   |  |  |
|--|-----------|---|--|--|
| Primary Scrambling Code                  | M         |   |  |  |
| Primary CPICH Power                      | O         |   |  |  |
| >>Tx diversity Indicator                 | <u>O</u>  |   |  |  |
| >>STTD Support Indicator                 | <u>O</u>  |   |  |  |
| >>Closed Loop mode1 Support Indicator    | <u>O</u>  |   |  |  |
| >>Closed Loop mode2 Support Indicator    | <u>O</u>  |   |  |  |
| <b>Neighbouring TDD Cell Information</b> | O         | <i>0..&lt;maxnoofTDDn eighbours&gt;</i> |  |  |
| UC-Id                                    | M         |   |  |  |
| CN PS Domain Identifier                  | O         |   |  |  |
| CN CS Domain Identifier                  | O         |   |  |  |
| UARFCN                                   | M         |   |  |  |
| Frame Offset                             | O         |   |  |  |
| Cell Parameter ID                        | M         |   |  |  |
| Sync Case                                | M         |   |  |  |
| Time Slot                                | C-Case1   |   |  |  |
| PSCH Time Slot                           | C-Case2&3 |   |  |  |
| Criticality Diagnostics                  | O         |   |  |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range bound          | Explanation  |
|----------------------|--|
| MaxnoofDPCHs         | Maximum no. of DPCHs for one CCTrCH.                 |
| MaxnoofDCHs          | Maximum no. of DCHs for one UE.                      |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell |
| MaxnoofCCTrCHs       | Maximum no. of CCTrCH for one UE.                    |

## 9.1.5 RADIO LINK SETUP FAILURE

## 9.1.5.1 FDD Message

| IE/Group Name                                | Presence | Range                | IE type and reference | Semantics description  |
|--|----------|----------------------|-----------------------|--|
| Message Type                                 | M        |                      |                       |  |
| Transaction ID                               | M        |                      |                       |  |
| D-RNTI                                       | O        |                      |                       |  |
| CN PS Domain Identifier                      | O        |                      |                       |  |
| CN CS Domain Identifier                      | O        |                      |                       |  |
| <b>Unsuccessful RL Information Response</b>  |          | 1...<maxnoofRLs>     |                       |  |
| RL ID  | M        |                      |                       |  |
| Cause  | M        |                      |                       |  |
| <b>Successful RL Information Response</b>    |          | 0..<maxnoofRLs-1>    |                       |  |
| RL ID  | M        |                      |                       |  |
| SAI  | M        |                      |                       |  |
| UL Interference Level                        | M        |                      |                       |  |
| <b>DL Code Information</b>                   |          | 1..<maxnoofDL Codes> |                       |  |
| DL Scrambling Code                           | M        |                      |                       |  |
| FDD DL Channelisation Code Number            | M        |                      |                       |  |
| Diversity Indication                         | M        |                      |                       |  |
| CHOICE <i>diversity Indication Combining</i> |          |                      |                       |  |
| RL ID  | M        |                      |                       | Reference RL ID for the combining                            |
| <i>Non Combining or IE not present</i>       |          |                      |                       | "IE not present" is equivalent to "First RL".                |
| <b>DCH Information Response</b>              |          | 0..<maxnoofDCHs>     |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                       | M        |                      |                       |  |
| Binding ID                                   | M        |                      |                       |  |
| Transport Layer Address                      | M        |                      |                       |  |
| SSDT Support Indicator                       | M        |                      |                       |  |
| <b>Neighbouring FDD Cell Information</b>     | O        |                      |                       |  |
| UC-Id  | M        |                      |                       |  |
| CN PS Domain Identifier                      | O        |                      |                       |  |
| CN CS Domain Identifier                      | O        |                      |                       |  |
| UARFCN                                       | M        |                      |                       |  |
| Frame Offset                                 | O        |                      |                       |  |
| Primary Scrambling Code                      | M        |                      |                       |  |
| Primary CPICH Power                          | O        |                      |                       |  |
| >>Tx diversity Indicator                     | <u>O</u> |                      |                       |  |
| >>STTD Support Indicator                     | <u>O</u> |                      |                       |  |
| >>Closed Loop mode1 Support Indicator        | <u>O</u> |                      |                       |  |
| >>Closed Loop mode2 Support Indicator        | <u>O</u> |                      |                       |  |
| <b>Neighbouring TDD Cell Information</b>     | O        |                      |                       |  |
| UC-Id  | M        |                      |                       |  |
| CN PS Domain Identifier                      | O        |                      |                       |  |
| CN CS Domain Identifier                      | O        |                      |                       |  |
| UARFCN                                       | M        |                      |                       |  |
| Frame Offset                                 | O        |                      |                       |  |
| Cell Parameter ID                            | M        |                      |                       |  |

|                         |           |  |              |  |
|-------------------------|-----------|--|--------------|--|
| Sync Case               | M         |  |              |  |
| Time Slot               | C-Case3   |  |              |  |
| PSCH Time Slot          | C-Case2&3 |  |              |  |
| Uplink Eb/No Target     | O         |  | Uplink Eb/No |  |
| Maximum Uplink Eb/No    | M         |  | Uplink Eb/No |  |
| Minimum Uplink Eb/No    | M         |  | Uplink Eb/No |  |
| Downlink Eb/No Target   | O         |  |              |  |
| Criticality Diagnostics | O         |  |              |  |

| Condition  | Explanation  |
|------------|--|
| IfComb     | This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.     |
| IfNotComb  | This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B. |
| NotFirstRL | The IE is present only if the RL is not the first RL in the RL Information                   |
| Case1      | This IE is present only if Sync Case = Case1.  |
| Case2&3    | This IE is present only if Sync Case = Case2 or Case3.                                       |

| Range bound | Explanation                     |
|-------------|---------------------------------|
| MaxnoofRLs  | Maximum no. of RLs for one UE.  |
| MaxnoofDCHs | Maximum no. of DCHs for one UE. |

### 9.1.5.2 TDD Message

| IE/Group Name                               | Presence | Range | IE type and reference | Semantics description |
|---|----------|-------|-----------------------|-----------------------|
| Message Type                                | M        |       |                       |                       |
| Transaction ID                              | M        |       |                       |                       |
| <b>Unsuccessful RL Information Response</b> |          | 1     |                       |                       |
| RL ID                                       | M        |       |                       |                       |
| Cause                                       | M        |       |                       |                       |
| Criticality Diagnostics                     | O        |       |                       |                       |



## 9.1.7 RADIO LINK ADDITION RESPONSE

## 9.1.7.1 FDD Message

| IE/Group Name                            | Presence  | Range                      | IE type and reference | Semantics description  |
|--|-----------|----------------------------|-----------------------|--|
| Message Type                             | M         |                            |                       |  |
| Transaction ID                           | M         |                            |                       |  |
| <b>RL Information Response</b>           |           | 1..<maxnoofRLs-1>          |                       |  |
| RL ID                                    | M         |                            |                       |  |
| SAI                                      | M         |                            |                       |  |
| UL Interference Level                    | M         |                            |                       |  |
| <b>DL Code Information</b>               |           | 1..<maxnoofDLCodes>        |                       |  |
| DL Scrambling Code                       | M         |                            |                       |  |
| DL Channelisation Code                   | M         |                            |                       |  |
| Diversity Indication                     | M         |                            |                       |  |
| CHOICE <i>diversity indication</i>       |           |                            |                       |  |
| <i>Combining</i>                         |           |                            |                       |  |
| RL ID                                    | M         |                            |                       | Reference RL-Id  |
| <i>Non combining</i>                     |           |                            |                       |  |
| <b>DCH Information Response</b>          |           | 1..<maxnoofDCHs>           |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                   | M         |                            |                       |  |
| Binding ID                               | M         |                            |                       |  |
| Transport Layer Address                  | M         |                            |                       |  |
| SSDT Support Indicator                   | M         |                            |                       |  |
| Minimum Uplink Eb/No                     | M         |                            | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                     | M         |                            | Uplink Eb/No          |  |
| <b>Neighbouring FDD Cell Information</b> |           | 0..<maxnoofFDD Neighbours> |                       |  |
| UC-Id                                    | M         |                            |                       |  |
| CN PS Domain Identifier                  | O         |                            |                       |  |
| CN CS Domain Identifier                  | O         |                            |                       |  |
| UARFCN                                   | M         |                            |                       |  |
| Frame Offset                             | O         |                            |                       |  |
| Primary Scrambling Code                  | M         |                            |                       |  |
| Primary CPICH Power                      | O         |                            |                       |  |
| >>Tx diversity Indicator                 | O         |                            |                       |  |
| >>STTD Support Indicator                 | O         |                            |                       |  |
| >>Closed Loop mode1 Support Indicator    | O         |                            |                       |  |
| >>Closed Loop mode2 Support Indicator    | O         |                            |                       |  |
| <b>Neighbouring TDD Cell Information</b> |           | 0..<maxnoofTDD Neighbours> |                       |  |
| UC-Id                                    | M         |                            |                       |  |
| CN PS Domain Identifier                  | O         |                            |                       |  |
| CN CS Domain Identifier                  | O         |                            |                       |  |
| UARFCN                                   | M         |                            |                       |  |
| Frame Offset                             | O         |                            |                       |  |
| Cell Parameter ID                        | M         |                            |                       |  |
| Sync Case                                | M         |                            |                       |  |
| Time Slot                                | C-Case1   |                            |                       |  |
| PSCH Time Slot                           | C-Case2&3 |                            |                       |  |
| Criticality Diagnostics                  | O         |                            |                       |  |

| <b>Condition</b> | <b>Explanation</b>                                     |
|------------------|--|
| Case1            | This IE is present only if Sync Case = Case1.          |
| Case2&3          | This IE is present only if Sync Case = Case2 or Case3. |

| <b>Range bound</b>   | <b>Explanation</b>                                    |
|----------------------|---|
| MaxnoofDCHs          | Maximum number of dedicated channels on one RL        |
| MaxnoofRLs           | Maximum number of radio links for one UE              |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one cell |
| MaxnoofDLCodes       | Maximum number of DL code information                 |

## 9.1.7.2 TDD Message

| IE/Group Name                            | Presence | Range                      | IE type and reference | Semantics description  |
|--|----------|----------------------------|-----------------------|--|
| Message Type                             | M        |                            |                       |  |
| Transaction ID                           | M        |                            |                       |  |
| <b>RL Information Response</b>           |          | 1                          |                       |  |
| RL ID                                    | M        |                            |                       |  |
| SAI                                      | M        |                            |                       |  |
| UL Interference Level                    | M        |                            |                       |  |
| <b>UL CCTrCH Information</b>             |          | 1..<maxnoof CCTrCHs>       |                       |  |
| CCTrCH ID                                | M        |                            |                       |  |
| <b>UL DPCH Information</b>               |          | 1..<maxnoOfDPC Hs>         |                       |  |
| DPCH ID                                  | M        |                            |                       |  |
| TDD Channelisation Code                  | M        |                            |                       |  |
| Burst Type                               | M        |                            |                       |  |
| Midamble Shift                           | M        |                            |                       |  |
| Time Slot                                | M        |                            |                       |  |
| TDD Physical Channel Offset              | M        |                            |                       |  |
| Repetition Period                        | M        |                            |                       |  |
| Repetition Length                        | M        |                            |                       |  |
| TFCI Presence                            | M        |                            |                       |  |
| <b>DL CCTrCH Information</b>             |          | 1..<maxnoof CCTrCHs>       |                       |  |
| CCTrCH ID                                | M        |                            |                       |  |
| <b>DL DPCH information</b>               |          | 1..<maxnoOfDPC Hs>         |                       |  |
| DPCH ID                                  | M        |                            |                       |  |
| TDD Channelisation Code                  | M        |                            |                       |  |
| Burst Type                               | M        |                            |                       |  |
| Midamble Shift                           | M        |                            |                       |  |
| Time Slot                                | M        |                            |                       |  |
| TDD Physical Channel Offset              | M        |                            |                       |  |
| Repetition Period                        | M        |                            |                       |  |
| Repetition Length                        | M        |                            |                       |  |
| TFCI Presence                            | M        |                            |                       |  |
| Diversity Indication                     | M        |                            |                       |  |
| CHOICE <i>diversity indication</i>       |          |                            |                       |  |
| <i>Combining</i>                         |          |                            |                       |  |
| RL ID                                    | M        |                            |                       | Reference RL   |
| <i>Non combining</i>                     |          |                            |                       |  |
| <b>DCH Information Response</b>          |          | 1..<maxnoofDCHs >          |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                   | M        |                            |                       |  |
| Binding ID                               | M        |                            |                       |  |
| Transport Layer Address                  | M        |                            |                       |  |
| Minimum Uplink Eb/No                     | M        |                            | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                     | M        |                            | Uplink Eb/No          |  |
| <b>Neighbouring FDD Cell Information</b> |          | 0..<maxnoofFDD Neighbours> |                       |  |
| UC-Id                                    | M        |                            |                       |  |
| CN PS Domain Identifier                  | O        |                            |                       |  |
| CN CS Domain Identifier                  | O        |                            |                       |  |
| UARFCN                                   | M        |                            |                       |  |
| Frame Offset                             | O        |                            |                       |  |

|  |           |   |  |  |
|--|-----------|---|--|--|
| Primary Scrambling Code                  | M         |   |  |  |
| Primary CPICH Power                      | O         |   |  |  |
| >>Tx diversity Indicator                 | <u>O</u>  |   |  |  |
| >>STTD Support Indicator                 | <u>O</u>  |   |  |  |
| >>Closed Loop mode1 Support Indicator    | <u>O</u>  |   |  |  |
| >>Closed Loop mode2 Support Indicator    | <u>O</u>  |   |  |  |
| <b>Neighbouring TDD Cell Information</b> |           | <i>0..&lt;maxnoofTDD Neighbours&gt;</i> |  |  |
| UC-Id                                    | M         |   |  |  |
| CN PS Domain Identifier                  | O         |   |  |  |
| CN CS Domain Identifier                  | O         |   |  |  |
| UARFCN                                   | M         |   |  |  |
| Frame Offset                             | O         |   |  |  |
| Cell Parameter ID                        | M         |   |  |  |
| Sync Case                                | M         |   |  |  |
| Time Slot                                | C-Case1   |   |  |  |
| PSCH Time Slot                           | C-Case2&3 |   |  |  |
| Criticality Diagnostics                  | O         |   |  |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1           |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range Bound          | Explanation   |
|----------------------|---|
| MaxnoofDCHs          | Maximum number of dedicated channels on one RL        |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one cell |
| MaxnoofDLCodes       | Maximum number of DL code information                 |
| MaxnoOfDPCHs         | Maximum number of DPCH in one CCTrCH                  |
| MaxnoofCCTrCHs       | no. of CCTrCH for one UE.                             |

## 9.1.8 RADIO LINK ADDITION FAILURE

## 9.1.8.1 FDD Message

| IE/Group Name                               | Presence | Range                      | IE type and reference | Semantics description  |
|---|----------|----------------------------|-----------------------|--|
| Message Type                                | M        |                            |                       |  |
| Transaction ID                              | M        |                            |                       |  |
| <b>Unsuccessful RL Information Response</b> |          | 1..<maxnoofRLs-1>          |                       |  |
| RL ID                                       | M        |                            |                       |  |
| Cause                                       | M        |                            |                       |  |
| <b>Successful RL Information Response</b>   |          | 1..<maxnoofRLs-2>          |                       |  |
| RL ID                                       | M        |                            |                       |  |
| SAI   | M        |                            |                       |  |
| UL Interference Level                       | M        |                            |                       |  |
| <b>DL Code Information</b>                  |          | 1..<maxnoofDLCodes>        |                       |  |
| DL scrambling code                          | M        |                            |                       |  |
| DL channelisation code                      | M        |                            |                       |  |
| Diversity Indication                        | M        |                            |                       |  |
| <b>CHOICE diversity indication</b>          |          |                            |                       |  |
| <i>Combining</i>                            |          |                            |                       |  |
| RL ID                                       | M        |                            |                       | Reference RL-Id  |
| <i>Non combining</i>                        |          |                            |                       |  |
| <b>DCH Information Response</b>             |          | 1..<maxnoofDCHs>           |                       | Only one DCH per set of co-ordinated DCHs shall be included. |
| DCH ID                                      | M        |                            |                       |  |
| Binding ID                                  | M        |                            |                       |  |
| Transport Layer Address                     | M        |                            |                       |  |
| SSDT Support Indicator                      | M        |                            |                       |  |
| Minimum Uplink Eb/No                        | M        |                            | Uplink Eb/No          |  |
| Maximum Uplink Eb/No                        | M        |                            | Uplink Eb/No          |  |
| <b>Neighbouring FDD Cell Information</b>    |          | 0..<maxnoofFDD Neighbours> |                       |  |
| UC-Id                                       | M        |                            |                       |  |
| CN PS Domain Identifier                     | O        |                            |                       |  |
| CN CS Domain Identifier                     | O        |                            |                       |  |
| UARFCN                                      | M        |                            |                       |  |
| Frame Offset                                | O        |                            |                       |  |
| Primary Scrambling Code                     | M        |                            |                       |  |
| Primary CPICH Power                         | O        |                            |                       |  |
| >>Tx diversity Indicator                    | O        |                            |                       |  |
| >>STTD Support Indicator                    | O        |                            |                       |  |
| >>Closed Loop mode1 Support Indicator       | O        |                            |                       |  |
| >>Closed Loop mode2 Support Indicator       | O        |                            |                       |  |
| <b>Neighbouring TDD Cell Information</b>    |          | 0..<maxnoofTDD Neighbours> |                       |  |
| UC-Id                                       | M        |                            |                       |  |
| CN PS Domain Identifier                     | O        |                            |                       |  |
| CN CS Domain Identifier                     | O        |                            |                       |  |
| UARFCN                                      | M        |                            |                       |  |
| Frame Offset                                | O        |                            |                       |  |
| Cell Parameter ID                           | M        |                            |                       |  |
| Sync Case                                   | M        |                            |                       |  |

|                         |           |  |  |  |
|-------------------------|-----------|--|--|--|
| Time Slot               | C-Case1   |  |  |  |
| PSCH Time Slot          | C-Case2&3 |  |  |  |
| Criticality Diagnostics | O         |  |  |  |

| Condition | Explanation  |
|-----------|--|
| Case1     | This IE is present only if Sync Case = Case1.          |
| Case2&3   | This IE is present only if Sync Case = Case2 or Case3. |

| Range bound          | Explanation   |
|----------------------|---|
| MaxnoofDCHs          | Maximum number of dedicated channels on one RL        |
| MaxnoofRLs           | Maximum number of radio links for one UE              |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one cell |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one cell |
| MaxnoofDLCodes       | Maximum number of DL code information                 |

### 9.1.8.2 TDD Message

| IE/Group Name                               | Presence | Range | IE type and reference | Semantics description |
|---|----------|-------|-----------------------|-----------------------|
| Message Type                                | M        |       |                       |                       |
| Transaction ID                              | M        |       |                       |                       |
| <b>Unsuccessful RL Information Response</b> |          | 1     |                       |                       |
| RL ID                                       | M        |       |                       |                       |
| Cause                                       | M        |       |                       |                       |
| Criticality Diagnostics                     | O        |       |                       |                       |

## 9.2.2 FDD Specific Parameters

### 9.2.2.X Tx diversity indicator

The Tx diversity support indicator indicates if the following conditions are satisfied:

- P-CPICH is broadcast from two antennas
- STTD is applied to P-CCPCH
- TSTD is applied to P-SCH and S-SCH

| <u>IE/Group Name</u>          | <u>Presence</u> | <u>Range</u> | <u>IE type and reference</u>     | <u>Semantics description</u> |
|-------------------------------|-----------------|--------------|----------------------------------|------------------------------|
| <u>Tx diversity indicator</u> |                 |              | <u>ENUMERATED (true, false).</u> |                              |

### 9.2.2.X+1 STTD Support Indicator

The STTD Support Indicator indicates whether the STTD can be applied to DL DPCH in the cell or not.

| <u>IE/Group Name</u>          | <u>Presence</u> | <u>Range</u> | <u>IE type and reference</u>                            | <u>Semantics description</u> |
|-------------------------------|-----------------|--------------|---|------------------------------|
| <u>STTD Support Indicator</u> |                 |              | <u>ENUMERATED (STTD Supported, STTD not Supported).</u> |                              |

### 9.2.2.X+2 Closed loop mode1 Support indicator

The Closed loop mode1 Support Indicator indicates whether the particular cell is capable to support Closed loop mode1 or not

| <u>IE/Group Name</u>                       | <u>Presence</u> | <u>Range</u> | <u>IE type and reference</u>  | <u>Semantics description</u> |
|--|-----------------|--------------|---|------------------------------|
| <u>Closed loop mode1 Support Indicator</u> |                 |              | <u>ENUMERATED (Closed loop mode1 Supported, Closed loop mode1 not supported).</u> |                              |

### 9.2.2.X+3 Closed loop mode2 Support indicator

The Closed loop mode2 Support Indicator indicates whether the particular cell is capable to support Closed loop mode2 or not

| <u>IE/Group Name</u>                       | <u>Presence</u> | <u>Range</u> | <u>IE type and reference</u>  | <u>Semantics description</u> |
|--|-----------------|--------------|---|------------------------------|
| <u>Closed loop mode2 Support Indicator</u> |                 |              | <u>ENUMERATED (Closed loop mode2 Supported, Closed loop mode2 not supported).</u> |                              |

### 9.3.3 PDU Definitions

```

-- *****
--
-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    Closedloopmode1-SupportIndicator,
    Closedloopmode2-SupportIndicator,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,
    DL-ScramblingCode,
    DPCH-ID,
    DRX-Parameter,
    DedicatedMeasurementValue,
    DiversityControlField,
    DiversityMode,
    FACH-DataFrameSize,
    FACH-InitialWindowSize,
    FACH-PriorityIndicator,
    FDD-DL-ChannelisationCodeNumber,
    FDD-S-CCPCH-Offset,
    FrameHandlingPriority,
    FrameOffset,
    GapPeriod,
    GapPositionMode,
    L3-Information,
    MAC-c-SDU-Length,
    MaxNrOFUL-DPCHs,
    MeanBitRate,
    MeasurementCharacteristics,
    MeasurementID,
    MidambleShift,
    MinUL-ChannelisationCodeLength,
    MultipleURAsIndicator,
    MultiplexingPosition,
    Offset,
    PD,
    PSCH-PCCPCH-TimeSlot,
    PSCH-TimeSlot,
    PayloadCRC-PresenceIndicator,

```



```

PilotBitsUsedIndicator,
PowerControlMode,
PowerOffset,
PowerResumeMode,
PrimaryCCPCH-RSCP,
PrimaryCPICH-EcNo,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
PunctureLimit,
RANAP-RelocationInformation,
RL-ID,
RLC-Mode,
RNC-ID,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
S-FieldLength,
S-RNTI,
SAI,
SN,
SRNC-ID,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
STTD-Support-Indicator,
TxDiversityIndicator,
ScaledUL-InterferenceLevel,
ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-PhysicalChannelOffset,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSet,

```

## ..... Omitted .....

```

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

RadioLinkSetupResponseFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container          {{RadioLinkSetupResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer    {{RadioLinkSetupResponseFDD-
Extensions}}
    OPTIONAL,
    ...
}

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    optional { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE
    { ID id-CN-PS-DomainIdentifier   CRITICALITY ignore TYPE CN-PS-DomainIdentifier
    PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier   CRITICALITY ignore TYPE CN-CS-DomainIdentifier
    PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-SetupRspFDD
    CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD
    PRESENCE mandatory } |
    optional { ID id-UL-EbNoTarget   CRITICALITY ignore TYPE UL-EbNoTarget   PRESENCE
    { ID id-DL-EbNoTarget           CRITICALITY ignore TYPE DL-EbNoTarget   PRESENCE
    optional } |

```

```

    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics
      PRESENCE optional },
    ...
  }

RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList { {RL-
InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-SetupRspFDD
    CRITICALITY ignore TYPE RL-InformationResponseItem-RL-SetupRspFDD
    PRESENCE mandatory },
  ...
}

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
  rL-ID          RL-ID,
  sAI            SAI,
  ul-InterferenceLevel      ScaledUL-InterferenceLevel,
  dl-CodeInformation      DL-CodeInformationList-RL-SetupRspFDD,
  sSDT-SupportIndicator    SSDT-SupportIndicator,
  maxUL-EbNo            UL-EbNo,
  minUL-EbNo            UL-EbNo,
  neighbouringFDD-CellInformation      NeighbouringFDD-CellInformationList-RL-SetupRsp
OPTIONAL,
  neighbouringTDD-CellInformation      NeighbouringTDD-CellInformationList-RL-SetupRsp
OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-SetupRspFDD

DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE {
  dl-ScramblingCode      DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber      FDD-DL-ChannelisationCodeNumber,
  -- ** NOTE: How many alternatives are there, 2 or 3? **
  diversityIndication    CHOICE {
    combining              SEQUENCE {
      rL-ID                RL-ID
    },
    nonCombiningOrIENotPresent      SEQUENCE {
      dCH-InformationResponse-RL-SetupRspFDD      DCH-InformationResponseList-RL-SetupRspFDD
OPTIONAL
    }
  } OPTIONAL
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions          ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupRspFDD

DCH-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
  dCH-ID          DCH-ID,
  bindingID      BindingID,
  transportLayerAddress      TransportLayerAddress,
  iE-Extensions          ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-
SetupRspFDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-SetupRsp

```

```

NeighbouringFDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    uC-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
    txdiversityindicator Txdiversityindicator OPTIONAL,
    sTTD-Support-Indicator STTD-Support-Indicator OPTIONAL,
    closedloopmodel-SupportIndicator Closedloopmodel-SupportIndicator OPTIONAL,
    closedloopmode2-SupportIndicator Closedloopmode2-SupportIndicator OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-SetupRsp

NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    c-ID C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN UARFCN,
    frameOffset FrameOffset OPTIONAL,
    cellParameterID CellParameterID,
    syncCase SyncCase,
    timeSlot TimeSlot OPTIONAL
    -- This IE is present only if SyncCase is Case1 -- ,
    pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    ul-EbNo UL-EbNo OPTIONAL,
    dl-EbNo DL-EbNo OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

RadioLinkSetupResponseTDD ::= SEQUENCE {
    protocolIEs ProtocolIE-Container {{RadioLinkSetupResponseTDD-IEs}},
    protocolExtensions ProtocolExtensionContainer {{RadioLinkSetupResponseTDD-
Extensions}}
    OPTIONAL,
    ...
}

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE
optional } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier
PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier
PRESENCE optional } |
    { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-
RL-SetupRspTDD PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID RL-ID,
    sAI SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,

```

```

maxUL-EbNo          UL-EbNo,
minUL-EbNo          UL-EbNo,
ul-EbNoTarget       UL-EbNo          OPTIONAL,
dl-EbNoTarget       DL-EbNo          OPTIONAL,
ul-CCTrCHInformation    UL-CCTrCHInformationList-RL-SetupRspTDD,
dl-CCTrCHInformation    DL-CCTrCHInformationList-RL-SetupRspTDD,
dCH-InformationResponse    DCH-InformationResponseList-RL-SetupRspTDD,
neighbouringFDD-CellInformation    NeighbouringFDD-CellInformationList-RL-SetupRsp
OPTIONAL,
neighbouringTDD-CellInformation    NeighbouringTDD-CellInformationList-RL-SetupRsp
OPTIONAL,
iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponse-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-SetupRspTDD

UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
cCTrCH-ID          CCTrCH-ID,
ul-DPCH-Information    UL-DPCH-InformationList-RL-SetupRspTDD,
iE-Extensions        ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationItem-RL-SetupRspTDD

-- **NOTE: UL-DPCH-InformationItem-RL-SetupRspTDD and DL-DPCH-InformationItem-RL-SetupRspTDD
-- are currently similar. Combine them? **
UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
dPCH-ID          DPCH-ID,
tDD-ChannelisationCode    TDD-ChannelisationCode,
burstType        BurstType,
midambleShift    MidambleShift,
timeSlot         TimeSlot,
tDD-PhysicalChannelOffset    TDD-PhysicalChannelOffset,
repetitionPeriod    RepetitionPeriod,
repetitionLength    RepetitionLength,
tFCI-Presence       TFCI-Presence,
iE-Extensions        ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCHInformationItem-RL-SetupRspTDD

DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
cCTrCH-ID          CCTrCH-ID,
dl-DPCH-Information    DL-DPCH-InformationList-RL-SetupRspTDD,
iE-Extensions        ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-
InformationItem-RL-SetupRspTDD

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
dPCH-ID          DPCH-ID,

```

```

tDD-ChannelisationCode          TDD-ChannelisationCode,
burstType                       BurstType,
midambleShift                   MidambleShift,
timeSlot                        TimeSlot,
tDD-PhysicalChannelOffset      TDD-PhysicalChannelOffset,
repetitionPeriod               RepetitionPeriod,
repetitionLength               RepetitionLength,
tFCI-Presence                  TFCI-Presence,
iE-Extensions                   ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupRspTDD

DCH-InformationResponseItem-RL-SetupRspTDD ::= SEQUENCE {
dCH-ID                          DCH-ID,
bindingID                       BindingID,
transportLayerAddress           TransportLayerAddress,
iE-Extensions                   ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-
SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

DCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

RadioLinkSetupFailureFDD ::= SEQUENCE {
protocolIEs                     ProtocolIE-Container    {{RadioLinkSetupFailureFDD-IEs}},
protocolExtensions              ProtocolExtensionContainer {{RadioLinkSetupFailureFDD-
Extensions}}
OPTIONAL,
...
}

RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-D-RNTI                   CRITICALITY ignore TYPE D-RNTI PRESENCE
mandatory } |
{ ID id-CN-PS-DomainIdentifier   CRITICALITY ignore TYPE CN-PS-DomainIdentifier
PRESENCE mandatory } |
{ ID id-CN-CS-DomainIdentifier   CRITICALITY ignore TYPE CN-CS-DomainIdentifier
PRESENCE mandatory } |
{ ID id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-
SetupFailureFDD
PRESENCE mandatory } |
{ ID id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-
SetupFailureFDD
PRESENCE mandatory } |
{ ID id-CriticalityDiagnostics   CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
...
}

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureFDD
PRESENCE mandatory },
...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
rL-ID                           RL-ID,

```

```

    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-
InformationResponse-RL-SetupFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-
SetupFailureFDD
    PRESENCE mandatory },
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-SetupFailureFDD,
    sSDT-SupportIndicator SSDT-SupportIndicator,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupFailureFDD
OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupFailureFDD
OPTIONAL,
    ul-EbNoTarget        UL-EbNo,
    maxUL-EbNo           UL-EbNo,
    minUL-EbNo           UL-EbNo,
    dl-EbNoTarget        DL-EbNo,
    iE-Extensions        ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-
RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}
-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-SetupFailureFDD

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    dl-ScramblingCode    DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication CHOICE {
        combining        SEQUENCE {
            rL-ID        RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-SetupFailureFDD DCH-InformationResponseList-RL-
SetupFailureFDD OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions        ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-SetupFailureFDD

DCH-InformationResponseItem-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions        ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-
SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

DCH-InformationResponseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringFDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-
Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID                               C-ID,
    cN-PS-DomainIdentifier               CN-PS-DomainIdentifier   OPTIONAL,
    cN-CS-DomainIdentifier               CN-CS-DomainIdentifier   OPTIONAL,
    uARFCN                               UARFCN,
    frameOffset                          FrameOffset             OPTIONAL,
    primaryScramblingCode                PrimaryScramblingCode,
    primaryCPICH-Power                   PrimaryCPICH-Power      OPTIONAL,
    txdiversityindicator                 Txdiversityindicator   OPTIONAL,
    sTTD-Support-Indicator                STTD-Support-Indicator OPTIONAL,
    closedloopmodel-SupportIndicator      Closedloopmodel-SupportIndicator OPTIONAL,
    closedloopmode2-SupportIndicator      Closedloopmode2-SupportIndicator OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-
Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID                               C-ID,
    cN-PS-DomainIdentifier               CN-PS-DomainIdentifier   OPTIONAL,
    cN-CS-DomainIdentifier               CN-CS-DomainIdentifier   OPTIONAL,
    uARFCN                               UARFCN,
    frameOffset                          FrameOffset             OPTIONAL,
    cellParameterID                     CellParameterID,
    syncCase                             SyncCase,
    timeSlot                             TimeSlot,
    pSCH-TimeSlot                        PSCH-TimeSlot          OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    iE-Extensions                        ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

RadioLinkSetupFailureTDD ::= SEQUENCE {
    protocolIEs                          ProtocolIE-Container     {{RadioLinkSetupFailureTDD-IEs}},
    protocolExtensions                    ProtocolExtensionContainer {{RadioLinkSetupFailureTDD-
Extensions}}
    ...
}

RadioLinkSetupFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
SetupFailureTDD
      PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics        CRITICALITY ignore TYPE CriticalityDiagnostics
      PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD ::= SEQUENCE {
    rL-ID                               RL-ID,
    cause                                Cause,

```

```

        iE-Extensions          ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
        ...
    }

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

## ..... Omitted .....

```

-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

RadioLinkAdditionResponseFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container          {{RadioLinkAdditionResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer    {{RadioLinkAdditionResponseFDD-
Extensions}}
    OPTIONAL,
    ...
}

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE
optional } |
    { ID id-RL-InformationResponseList-RL-AdditionRspFDD
          CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
          PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= RL-IE-ContainerList { {RL-
InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-AdditionRspFDD
          CRITICALITY ignore TYPE RL-InformationResponseItem-RL-AdditionRspFDD
PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    sAI          SAI,
    ul-InterferenceLevel          ScaledUL-InterferenceLevel,
    dl-CodeInformation          DL-CodeInformationList-RL-AdditionRspFDD,
    sSDT-SupportIndicator          SSDT-SupportIndicator,
    maxUL-EbNo          UL-EbNo,
    minUL-EbNo          UL-EbNo,
    neighbouringFDD-CellInformation          NeighbouringFDD-CellInformationList-RL-SetupRsp
OPTIONAL,
    neighbouringTDD-CellInformation          NeighbouringTDD-CellInformationList-RL-SetupRsp
OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponseItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-AdditionRspFDD

DL-CodeInformationItem-RL-AdditionRspFDD ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber          FDD-DL-ChannelisationCodeNumber,
}

```



```

-- ** NOTE: How many alternatives are there, 2 or 3? **
diversityIndication CHOICE {
  combining SEQUENCE {
    rL-ID RL-ID
  },
  nonCombiningOrIENotPresent SEQUENCE {
    dCH-InformationResponse-RL-AdditionRspFDD DCH-InformationResponseList-RL-
AdditionRspFDD OPTIONAL
  }
} OPTIONAL
-- This IE is present only if the RL is not the first on in the RL Information -- ,
iE-Extensions ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
...
}

DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionRspFDD

DCH-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  bindingID BindingID,
  transportLayerAddress TransportLayerAddress,
  iE-Extensions ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-
AdditionRspFDD-ExtIEs} } OPTIONAL,
...
}

DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
  NeighbouringFDD-CellInformationItem-RL-AdditionRsp

NeighbouringFDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
  uC-ID C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  primaryScramblingCode PrimaryScramblingCode,
  primaryCPICH-Power PrimaryCPICH-Power OPTIONAL,
  txdiversityindicator Txdiversityindicator OPTIONAL,
  sTTD-Support-Indicator STTD-Support-Indicator OPTIONAL,
  closedloopmodel-SupportIndicator Closedloopmodel-SupportIndicator OPTIONAL,
  closedloopmode2-SupportIndicator Closedloopmode2-SupportIndicator OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
  NeighbouringTDD-CellInformationItem-RL-AdditionRsp

NeighbouringTDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
  uC-ID C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN UARFCN,
  frameOffset FrameOffset OPTIONAL,
  cellParameterID CellParameterID,
  syncCase SyncCase,
  timeSlot TimeSlot,
  pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
  -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
  iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

}

RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

RadioLinkAdditionResponseTDD ::= SEQUENCE {
  protocolIEs                ProtocolIE-Container        {{RadioLinkAdditionResponseTDD-IEs}},
  protocolExtensions         ProtocolExtensionContainer  {{RadioLinkAdditionResponseTDD-
Extensions}}
  ...
}

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  optional { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE
  { ID id-RL-InformationResponse-RL-AdditionRspTDD
                CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD
  PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics         CRITICALITY ignore TYPE CriticalityDiagnostics
  PRESENCE optional },
  ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  sAI                  SAI,
  ul-InterferenceLevel                ScaledUL-InterferenceLevel,
  ul-CCTrCHInformation                UL-CCTrCHInformationList-RL-AdditionRspTDD,
  dl-CCTrCHInformation                DL-CCTrCHInformationList-RL-AdditionRspTDD,
  diversityIndication                CHOICE {
    combining                SEQUENCE {
      rL-ID                RL-ID
    },
    nonCombiningOrIENotPresent                SEQUENCE {
      dCH-InformationResponse-RL-AdditionRspFDD                DCH-InformationResponseList-RL-
AdditionRspFDD OPTIONAL
    }
  } OPTIONAL,
  maxUL-EbNo                UL-EbNo,
  minUL-EbNo                UL-EbNo,
  neighbouringFDD-CellInformation                NeighbouringFDD-CellInformationList-RL-AdditionRspTDD
OPTIONAL,
  neighbouringTDD-CellInformation                NeighbouringTDD-CellInformationList-RL-AdditionRspTDD
OPTIONAL,
  iE-Extensions                ProtocolExtensionContainer { {RL-InformationResponse-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-
CCTrCHInformationItem-RL-AdditionRspTDD

UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  cCtRCH-ID                CCTrCH-ID,
  ul-DPCH-Information                UL-DPCH-InformationList-RL-AdditionRspTDD,
  iE-Extensions                ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-
InformationItem-RL-AdditionRspTDD

UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
  dPCH-ID                DPCH-ID,
  tDD-ChannelisationCode                TDD-ChannelisationCode,

```

```

burstType                BurstType,
midambleShift            MidambleShift,
timeSlot                 TimeSlot,
offset                   Offset,
tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
repetitionPeriod         RepetitionPeriod,
repetitionLength         RepetitionLength,
tFCI-Presence            TFCI-Presence,
iE-Extensions            ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-
CCTrCHInformationItem-RL-AdditionRspTDD

DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
cCTrCH-ID                CCTrCH-ID,
dl-DPCH-Information      DL-DPCH-InformationList-RL-AdditionRspTDD,
iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-
InformationItem-RL-AdditionRspTDD

DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
dPCH-ID                  DPCH-ID,
tDD-ChannelisationCode  TDD-ChannelisationCode,
burstType                BurstType,
midambleShift            MidambleShift,
timeSlot                 TimeSlot,
tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
repetitionPeriod         RepetitionPeriod,
repetitionLength         RepetitionLength,
tFCI-Presence            TFCI-Presence,
iE-Extensions            ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-
AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringFDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours))
OF
NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
uC-ID                    C-ID,
cN-PS-DomainIdentifier   CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier   CN-CS-DomainIdentifier OPTIONAL,
uARFCN                   UARFCN,
frameOffset              FrameOffset OPTIONAL,
primaryScramblingCode    PrimaryScramblingCode,
primaryCPICH-Power       PrimaryCPICH-Power OPTIONAL,
txdiversityindicator     Txdiversityindicator OPTIONAL,
sTTD-Support-Indicator   sTTD-Support-Indicator OPTIONAL,
closedloopmode1-SupportIndicator Closedloopmode1-SupportIndicator OPTIONAL,
closedloopmode2-SupportIndicator Closedloopmode2-SupportIndicator OPTIONAL,
iE-Extensions            ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours))
OF

```

```

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier    CN-PS-DomainIdentifier    OPTIONAL,
    cN-CS-DomainIdentifier    CN-CS-DomainIdentifier    OPTIONAL,
    uARFCN                UARFCN,
    frameOffset            FrameOffset    OPTIONAL,
    cellParameterID        CellParameterID,
    syncCase                SyncCase,
    timeSlot                TimeSlot,
    pSCH-TimeSlot            PSCH-TimeSlot    OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    iE-Extensions            ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

RadioLinkAdditionFailureFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{RadioLinkAdditionFailureFDD-IEs}},
    protocolExtensions            ProtocolExtensionContainer {{RadioLinkAdditionFailureFDD-
Extensions}}
    OPTIONAL,
    ...
}

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-
AdditionFailureFDD
    PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-
AdditionFailureFDD
    PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics
    CRITICALITY ignore TYPE CriticalityDiagnostics
    PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList {
{UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-
AdditionFailureFDD
    PRESENCE mandatory },
    ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions            ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-
InformationResponse-RL-AdditionFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-
AdditionFailureFDD
}

```

```

    PRESENCE mandatory },
}
...
}
SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-AdditionFailureFDD,
    sSDT-SupportIndicator SSDT-SupportIndicator,
    maxUL-EbNo          UL-EbNo,
    minUL-EbNo          UL-EbNo,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-
AdditionFailureFDD OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-
AdditionFailureFDD OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-
RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-
CodeInformationItem-RL-AdditionFailureFDD

DL-CodeInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
    dl-ScramblingCode      DL-ScramblingCode,
    dl-ChannelisationCode  DL-ChannelisationCode,
    diversityIndication    CHOICE {
        combining          SEQUENCE {
            rL-ID          RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-AdditionFailureFDD DCH-InformationResponseList-RL-
AdditionFailureFDD OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions         ProtocolExtensionContainer { {DL-CodeInformationItem-RL-
AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-
InformationResponseItem-RL-AdditionFailureFDD

DCH-InformationResponseItem-RL-AdditionFailureFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions         ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-
AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-
Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN               UARFCN,
    frameOffset          FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    cPICH-Power          CPICH-Power OPTIONAL,
    txdiversityindicator Txdiversityindicator OPTIONAL,
    sTTD-Support-Indicator STTD-Support-Indicator OPTIONAL,
    closedloopmodel-SupportIndicator Closedloopmodel-SupportIndicator OPTIONAL,

```

```

closedloopmode2-SupportIndicator Closedloopmode2-SupportIndicator OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {NeighbouringFDD-
CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-
Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
uC-ID C-ID,
cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
uARFCN UARFCN,
frameOffset FrameOffset OPTIONAL,
cellParameterID CellParameterID,
syncCase SyncCase,
timeSlot TimeSlot,
pSCH-TimeSlot PSCH-TimeSlot OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
iE-Extensions ProtocolExtensionContainer { {NeighbouringTDD-
CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *****

RadioLinkAdditionFailureTDD ::= SEQUENCE {
protocolIEs ProtocolIE-Container {{RadioLinkAdditionFailureTDD-IEs}},
protocolExtensions ProtocolExtensionContainer {{RadioLinkAdditionFailureTDD-
Extensions}}
OPTIONAL,
...
}

RadioLinkAdditionFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-UnsuccessfulRL-InformationResponse CRITICALITY ignore TYPE UnsuccessfulRL-
InformationResponse PRESENCE mandatory } |
{ ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics
PRESENCE optional } ,
...
}

UnsuccessfulRL-InformationResponse ::= SEQUENCE {
rL-ID RL-ID,
cause Cause,
iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-
InformationResponse-ExtIEs} } OPTIONAL,
...
}

UnsuccessfulRL-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkAdditionFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

..... Omitted .....

### 9.3.4 Information Element Definitions

```

-- *****
--
-- Information Element Definitions
--
-- *****

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxTTI-Count
FROM RNSAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM RNSAP-CommonDataTypes

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

AllocationRetentionPriority ::= FrameHandlingPriority

AllowedQueuingTime ::= INTEGER (0..60)
-- seconds

-- B

-- ** NOTE: Size in tabular 1..4,... **
BindingID ::= OCTET STRING (SIZE (1..MAX))

BLER ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

BurstType ::= ENUMERATED {
    type1 (1),
    type2 (2)
}

-- C

Cause ::= CHOICE {
    radioNetwork          CauseRadioNetwork,
    transmissionNetwork   CauseTransmissionNetwork,
    protocol              CauseProtocol,
    misc                  CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    transaction-not-allowed,
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    unspecified,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,

```

```

cell-not-available,
power-level-not-supported,
ul-scrambling-code-already-in-use,
dl-radio-resources-not-available,
ul-radio-resources-not-available,
measurement-not-supported-for-the-object,
macrodiversity-combining-not-possible,
reconfiguration-not-allowed,
Synchronisation-failure,
unspecified,
...
}

CauseTransmissionNetwork ::= ENUMERATED {
    transmission-link-failure,
    transmission-port-not-available,
    unspecified,
    ...
}

C-ID ::= INTEGER (0..65535)

CCTrCH-ID ::= INTEGER (0..15)

CellParameterID ::= INTEGER (0..127)

CFN ::= INTEGER (0..255)

ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding--,
    -- ...
}

-- ** TODO **
ChipOffset ::= INTEGER

Closedloopmodel-SupportIndicator ::= ENUMERATED {
    Closedloop-model-Supported,
    Closedloop-model-not-supported
}

Closedloopmode2-SupportIndicator ::= ENUMERATED {
    Closedloop-mode2-Supported,
    Closedloop-mode2-not-supported
}

CodingRate ::= ENUMERATED {
    half,
    third--,
    -- ...
}

CompressedModeMethod ::= ENUMERATED {
    none,
    puncturing,
    sF2,
    gating
}

CPICH-EcIo ::= INTEGER

```

## ..... Omitted .....

```

-- S

-- Changed BIT STRING -> OCTET STRING
SAC ::= OCTET STRING (SIZE (2))

SAI ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
    lAC              LAC,
    sAC              SAC,
    iE-Extensions   ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}

SAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...

```



```

}

-- ** TODO **
ScramblingCode ::= INTEGER

ScramblingCodeChange ::= ENUMERATED {
    no-code-change,
    code-change
}

ScaledSIR-ErrorValue ::= INTEGER (-100..100)
-- ScaledSIR-ErrorValue = SIR-ErrorValue * 10
-- If SIR-ErrorValue <= -10 ScaledSIR-ErrorValue shall be set to -100
-- If SIR-ErrorValue >= 10 ScaledSIR-ErrorValue shall be set to 100
-- SIR-ErrorValue step 0.1 dB

ScaledSIR-Value ::= INTEGER (-100..200)
-- ScaledSIR-Value = SIR-Value * 10
-- SIR-Value step 0.1 dB

ScaledTransmittedCodePowerValue ::= INTEGER (-350..150)
-- ScaledTransmittedCodePowerValue = TransmittedCodePowerValue * 10
-- TransmittedCodePowerValue step 0.1 dB

-- ** TODO **
SharedChannelType ::= INTEGER

-- ** TODO **
SecondaryCCPCH-SlotFormat ::= INTEGER

SN ::= TimeSlot

SpreadingFactorOfChannelisationCode ::= ENUMERATED {
    v256,
    v128,
    v64,
    v32,
    v16,
    v8,
    v4,
    v2,
    v1
}

-- Changed
S-FieldLength ::= INTEGER (1..2)

S-RNTI ::= INTEGER (0..1048575)
-- From 0 to 2^20-1

-- ** TODO **
SRNC-ID ::= INTEGER

SSDT-CellID ::= ENUMERATED {
    a,
    b,
    c,
    d,
    e,
    f,
    g,
    h
}

SSDT-CellID-Length ::= ENUMERATED {
    short,
    medium,
    long
}

SSDT-Indication ::= ENUMERATED {
    sSDT-active-in-the-UE,
    sSDT-not-active-in-the-UE
}

SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-not-supported,
    sSDT-supported
}

STTD-Support-Indicator ::= ENUMERATE {
    sTTD-supported,
    sTTD-not-supported
}

```

```

}
-- T

-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32
}

TFCI-Presence ::= ENUMERATED {
    not-present,
    present
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
-- ...
}

TransportBearerID ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize ::= INTEGER (1..5000)
-- Unit is bits

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC CTFC,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatCombinationSet-ExtIEs}
    } OPTIONAL,
    ...
}

TransportFormatCombinationSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts TransportFormatSet-DynamicPartList,
    semi-staticPart TransportFormatSet-Semi-staticPart,
    iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

```

```

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
  SEQUENCE {
    nrOfTransportBlocks      NrOfTransportBlocks,
    transportBlockSize      TransportBlockSize      OPTIONAL
    -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
    mode                    TransportFormatSet-ModeDP,
    iE-Extensions          ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-
ExtIEs} } OPTIONAL,
    ...
  }

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-ModeDP ::= CHOICE {
  tdd      TransmissionTimeIntervalList,
  -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
  ...
}

TransmissionTimeIntervalList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
  SEQUENCE {
    transmissionTimeInterval      TransmissionTimeInterval,
    iE-Extensions                ProtocolExtensionContainer { {TransmissionTimeIntervalList-ExtIEs} }
OPTIONAL,
    ...
  }

TransmissionTimeIntervalList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
  transmissionTime      TransmissionTimeInterval,
  channelCoding         ChannelCodingType,
  codingRate            CodingRate      OPTIONAL
  -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
  rateMatchingAttribute RateMatchingAttribute,
  cRC-Size              CRC-Size,
  mode                  TransportFormatSet-ModeSSP      OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs}
} OPTIONAL,
  ...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
  tdd      SecondInterleavingMode,
  ...
}

SecondInterleavingMode ::= ENUMERATED {
  frame-related,
  timeslot-related,
  ...
}

-- TransportLayerAddress      ::= BIT STRING (1..160, ...)
TransportLayerAddress        ::= OCTET STRING (SIZE (1..20, ...))

Txdiversityindicator ::= ENUMERATED {
  true,
  false
}

-- U

UARFCN                      ::= INTEGER (0..698, ...)

UL-DL-CompressedModeSelection ::= ENUMERATED {
  ul-only,
  dl-only,
  both
}

```

```
UL-DeltaEbNo                ::= INTEGER (-60..100)
UL-DeltaEbNoAfter           ::= INTEGER (-60..100)
-- ** TODO **
UL-EbNo                      ::= INTEGER
-- ** TODO **
UL-EbNoTarget                ::= INTEGER
```

**..... Omitted .....**

**TSG-RAN Working Group 3 Meeting #11**  
**Sophia Antipolis, France, 28<sup>th</sup> February– 3<sup>rd</sup>**  
**March 2000**

**Document R3-000949**

e.g. for 3GPP use the format TP-99xxx  
or for SMG, use the format P-99-xxx

|  |  |   |                                   |
|--|--|---|-----------------------------------|
| <b>CHANGE REQUEST</b>  |  | <small>Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.</small> |                                   |
| <b>25.423</b>  | <b>CR</b>  | <b>047r1</b>  | Current Version: <b>3.0.0</b>     |
| <small>GSM (AA.BB) or 3G (AA.BBB) specification number ↑</small> |  | <small>↑ CR number as allocated by MCC support team</small>   |                                   |
| For submission to: <b>TSG RAN #7</b>                             | for approval <input checked="" type="checkbox"/> | strategic <input type="checkbox"/>  | <small>(for SMG use only)</small> |
| <small>list expected approval meeting # here ↑</small>           | for information <input type="checkbox"/>         | non-strategic <input type="checkbox"/>  |                                   |

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <http://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:** (U)SIM  ME  UTRAN / Radio  Core Network   
(at least one should be marked with an X)

**Source:** RAN-WG3 **Date:** 28 February 2000

**Subject:** A new IE for "RL information" regarding Transmit Diversity

**Work item:**

|  |  |                                     |  |
|--|--|-------------------------------------|--|
| <b>Category:</b>   | F Correction <input type="checkbox"/>  | <b>Release:</b>                     | Phase 2 <input type="checkbox"/>               |
| <small>(only one category shall be marked with an X)</small> | A Corresponds to a correction in an earlier release <input type="checkbox"/> |                                     | Release 96 <input type="checkbox"/>            |
|  | B Addition of feature <input checked="" type="checkbox"/>                    |                                     | Release 97 <input type="checkbox"/>            |
|  | C Functional modification of feature <input type="checkbox"/>                |                                     | Release 98 <input type="checkbox"/>            |
|  | D Editorial modification <input type="checkbox"/>                            |                                     | Release 99 <input checked="" type="checkbox"/> |
|  |  | Release 00 <input type="checkbox"/> |  |

**Reason for change:** Although the applied Transmit Diversity mode shall be identical among the Radio Links in one Active Set for one UE, it is assumed that, in R1, the Transmit Diversity status (whether the Transmit Diversity is active or inactive) is allowed to be different among those Radio Links.

This CR proposes to introduce an IE "Transmit Diversity Indicator (active or inactive)" to "RL information" group in both RADIO LINK SETUP REQUEST and RADIO LINK ADDITION REQUEST messages. As a result, each RL in one Active Set may have unique Transmit Diversity status, either "active" or "inactive".

**Clauses affected:** 8.3.1 Radio Link Setup  
8.3.2 Radio Link Addition  
9.1.3 RADIO LINK SETUP REQUEST  
9.1.6 RADIO LINK ADDITION REQUEST  
9.2.2 FDD Specific Parameters  
9.3.3 PDU Definitions  
9.3.4 Information Element Definitions

**Other specs affected:**

|                               |                          |                |  |
|-------------------------------|--------------------------|----------------|--|
| Other 3G core specifications  | <input type="checkbox"/> | → List of CRs: |  |
| Other GSM core specifications | <input type="checkbox"/> | → List of CRs: |  |
| MS test specifications        | <input type="checkbox"/> | → List of CRs: |  |
| BSS test specifications       | <input type="checkbox"/> | → List of CRs: |  |
| O&M specifications            | <input type="checkbox"/> | → List of CRs: |  |

**Other comments:**



help.doc

<----- double-click here for help and instructions on how to create a CR.

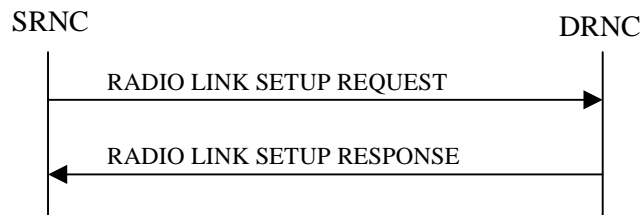
## 8.3.1 Radio Link Setup

### 8.3.1.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more radio links.

This procedure shall use the connection-oriented service of the signalling bearer.

### 8.3.1.2 Successful Operation



**Figure 1: Radio Link Setup procedure: Successful Operation**

When the SRNC makes an algorithmic decision to add the first cell or set of cells from a DRNS to the active set of a specific RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message is also used to establish the connection-oriented service of the signalling bearer in the DRNC. The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The Diversity Control Field indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When an RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

If the *Initial DL TX Power* IE and *UL Eb/No Target* IE [FDD] are present in the message, the DRNS shall use the indicated DL TX Power and UL Eb/No Target [FDD] as initial value.

If the *Primary CPICH Eb/No* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] is present, the DRNC should use them when deciding the Initial DL TX Power.

If the RADIO LINK SETUP REQUEST message includes the *DCH Combination Indicator* IE for a DCH, the DRNS shall treat all DCHs with the same value of this IE as a set of co-ordinated DCHs. The included *RLC Mode* IE of the DCH may be used by the DRNS to optimise the power control.

The *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH as the new DCH FP Mode in the Uplink of the user plane for this DCH.

The DRNS shall use the included *ToAWS* IE for a DCH as the new Time of Arrival Window Start Point in the user plane for this DCH.

The DRNS shall use the included *ToAWE* IE for a DCH as the new Time of Arrival Window End Point in the user plane for this DCH.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity* IE, the DRNS may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE.]

At the reception of the RADIO LINK SETUP REQUEST message, DRNS allocates requested type of channelisation codes and other physical channel resources for each RL and assigns a binding identifier and a transport layer address for each DCH or set of co-ordinated DCHs. This information shall be sent to the SRNS in the message RADIO LINK SETUP RESPONSE when all the RLs have been successfully setup.

If the *Initial DL TX Power* and the *UL Eb/No Target* IEs are not present in the RADIO LINK SETUP REQUEST message, then DRNC shall include the suggested initial UL Eb/No Target and the DL Eb/No Target in the RADIO LINK SETUP RESPONSE message.

In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference RL ID shall be included to indicate with which RL the combination is performed. The Reference RL ID shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.

In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK SETUP RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

[FDD - Irrespective of SSDT activation, the DRNS shall include in the RADIO LINK SETUP RESPONSE message an indication concerning the capability to support SSSDT on this RL. Only if the RADIO LINK SETUP REQUEST message requested SSSDT activation and the RADIO LINK SETUP RESPONSE message indicates that the SSSDT capability is supported for this RL, SSSDT is activated in the DRNS.]

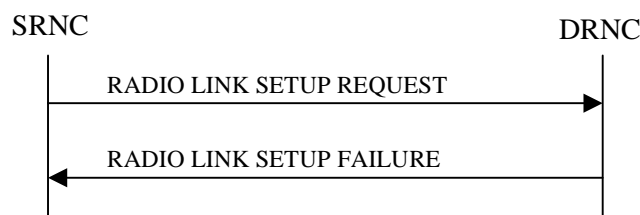
The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id) and information of the neighbouring cells to the cell(s) where the radio link(s) are added.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC, CN domain nodes) of the RNC controlling the neighbouring cell.

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received the DRNC shall include the node identifications of the CN Domain nodes that the RNC is connected to (using LAC and RAC of the current cell), and the D-RNTI in the RADIO LINK SETUP RESPONSE message.

[FDD – When Diversity Mode IE is “STTD”, “Closedloop mode1”, or “Closedloop mode2”, the DRNC shall activate/deactivate the Transmit Diversity to each Radio Link in accordance with Transmit Diversity Indication IE]

### 8.3.1.3 Unsuccessful Operation



**Figure 2: Radio Link Setup procedure: Unsuccessful Operation**

In unsuccessful case (i.e. one or more RLs can not be setup) the RADIO LINK SETUP FAILURE message shall be sent to the SRNC, indicating the reason for failure. If some radio links were established successfully, the DRNC shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.

Typical cause values are:

#### **Radio Network Layer Causes:**

- UL Scrambling Code Already in Use



- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Requested Configuration not Supported
- Cell not Available
- Power Level not Supported

**Transport Layer Causes:**

- Transport Link Failure

**Protocol Causes:**

- Transaction not Allowed

**Miscellaneous Causes:**

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

#### 8.3.1.4 Abnormal Conditions

If the DRNC receives either an S-RNTI or a D-RNTI which already has RL(s) established the DRNC shall send the RADIO LINK SETUP FAILURE message to the SRNC, indicating the reason for failure.

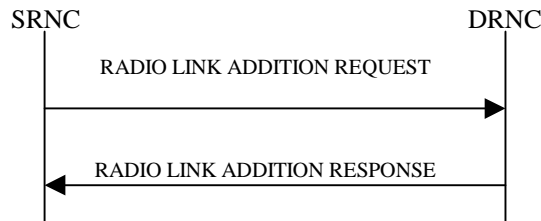
## 8.3.2 Radio Link Addition

### 8.3.2.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more additional RLs towards a UE when there is already at least one RL established to the concerning UE via this DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

### 8.3.2.2 Successful Operation



**Figure 3: Radio Link Addition procedure: Successful Operation**

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the SRNC to the DRNC.

Upon reception, the DRNS shall reserve the necessary resources and configure the new RL(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

[FDD - The Diversity Control Field indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the *Primary CCPCH Ec/Io* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] measured by the UE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power. If the *Primary CCPCH Ec/Io* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.

[FDD - The DRNS shall use the provided UL Eb/No Target value as the current target for the inner-loop power control.]

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, SSDT may be activated for the concerned new RL, with the indicated SSDT Cell Identity used for that RL.]

The DRNS shall activate any feedback mode diversity according to the received settings.

If all requested RLs are successfully added, the DRNC shall respond with a RADIO LINK ADDITION RESPONSE message.

In the case of combining an RL with existing RL(s) the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that the RL is combined. In this case the Reference RL ID shall be included to indicate one of the existing RLs that the new RL is combined with.

In the case of not combining an RL with existing RL(s), the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the Transport Layer Address and the binding ID for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message.

In case of co-ordinated DCH, the binding ID and the transport address shall be included for only one of the co-ordinated DCHs.

[FDD - Irrespective of SSDT activation, the DRNS shall include in the RADIO LINK ADDITION RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK ADDITION

REQUEST message requested SSdT activation and the RADIO LINK ADDITION RESPONSE message indicates that the SSdT capability is supported for this RL, SSdT is activated in the DRNS.]

For any cell neighbouring of a cell in which a RL was added, the DRNC shall provide in the RADIO LINK ADDITION RESPONSE message the UTRAN Cell Identifier (UC-Id), the Frequency Number, the Primary Scrambling Code and the node identification of CN nodes connected to the RNC controlling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the CPICH Power level and Frame Offset of the neighbouring cell.

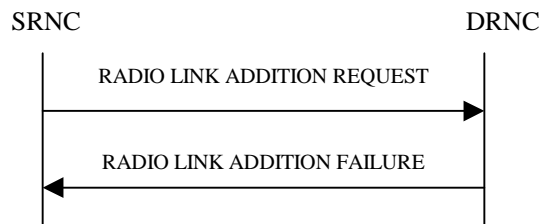
The DRNC shall also provide the configured uplink Maximum Eb/No and UL Minimum Eb/No for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

The DRNC shall 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.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the Iur user plane as specified in ref. **[Error! Reference source not found.]**.

[FDD – When Diversity Mode IE is “STTD”, “Closedloop mode1”, or “Closedloop mode2”, the DRNC shall activate/deactivate the Transmit Diversity to each Radio Link in accordance with Transmit Diversity Indication IE]

### 8.3.2.3 Unsuccessful Operation



**Figure 4: Radio Link Addition procedure: Unsuccessful Operation**

If the establishment of at least one RL is unsuccessful, the DRNC shall send a RADIO LINK ADDITION FAILURE as response.

If some RL(s) were established successfully, the DRNC shall indicate this in the RADIO LINK ADDITION FAILURE message in the same way as in the RADIO LINK ADDITION RESPONSE message.

Typical cause values are:

#### Radio Network Layer Causes:

- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Cell not Available
- Power Level not Supported

#### Transport Layer Causes:

- Transport Link Failure

#### Miscellaneous Causes:

- Control Processing Overload

- HW Failure
- Not enough User Plane Processing Resources

#### 8.3.2.4 Abnormal Conditions

-

## 9.3.1 RADIO LINK SETUP REQUEST

### 9.1.3.1 FDD Message

| IE/Group Name                       | Presence      | Range             | IE type and reference | Semantics description            |
|-------------------------------------|---------------|-------------------|-----------------------|----------------------------------|
| Message Type                        | M             |                   |                       |                                  |
| Transaction ID                      | M             |                   |                       |                                  |
| S-RNTI                              | M             |                   |                       |                                  |
| D-RNTI                              | O             |                   |                       |                                  |
| Allowed Queuing time                | O             |                   |                       |                                  |
| <b>UL DPCH Information</b>          |               | 1                 |                       |                                  |
| UL Scrambling Code                  | M             |                   |                       |                                  |
| Min UL Channelisation Code Length   | M             |                   |                       |                                  |
| Max Number of UL DPDCHs             | C – CodeLen   |                   |                       |                                  |
| Puncture Limit                      | M             |                   |                       | For the UL.                      |
| UL Transport Format Combination Set | M             |                   |                       |                                  |
| UL DPCH Slot Format                 | M             |                   |                       |                                  |
| UL Eb/No Target                     | O             |                   |                       |                                  |
| Diversity mode                      | M             |                   |                       |                                  |
| D Field Length                      | C-FB          |                   |                       |                                  |
| SSDT Cell ID Length                 | O             |                   |                       |                                  |
| S Field Length                      | O             |                   |                       |                                  |
| Mean Bit Rate                       | O             |                   |                       | For the UL.                      |
| <b>DL DPCH Information</b>          |               | 1                 |                       |                                  |
| Transport Format Combination Set    | M             |                   |                       |                                  |
| DL DPCH Slot Format                 | M             |                   |                       |                                  |
| TFCI Signalling Mode                | M             |                   |                       |                                  |
| TFCI Presence                       | C- SlotFormat |                   |                       |                                  |
| Multiplexing Position               | M             |                   |                       |                                  |
| <b>Power Offset Information</b>     |               | 1                 |                       |                                  |
| PO1                                 | M             |                   | Power Offset          | Power offset for the TFCI bits.  |
| PO2                                 | M             |                   | Power Offset          | Power offset for the TPC bits.   |
| PO3                                 | M             |                   | Power Offset          | Power offset for the pilot bits. |
| TPC Downlink Step Size              | M             |                   |                       |                                  |
| Mean Bit Rate                       | O             |                   |                       | For the DL.                      |
| <b>DCH Information</b>              |               | 1..<maxnoofDCHs > |                       |                                  |
| DCH ID                              | M             |                   |                       |                                  |
| DCH Combination Ind                 | O             |                   |                       |                                  |
| RLC Mode                            | M             |                   |                       |                                  |
| Transport Format Set                | M             |                   |                       | For the UL.                      |
| Transport Format Set                | M             |                   |                       | For the DL.                      |
| BLER                                | M             |                   |                       | For the UL.                      |
| BLER                                | M             |                   |                       | For the DL.                      |
| Allocation/Retention Priority       | M             |                   |                       |                                  |
| Frame Handling Priority             | M             |                   |                       |                                  |
| Payload CRC Presence Indicator      | M             |                   |                       |                                  |
| UL FP Mode                          | M             |                   |                       |                                  |
| ToAWS                               | M             |                   |                       |                                  |
| ToAWE                               | M             |                   |                       |                                  |
| <b>RL Information</b>               |               | 1..<maxnoofRLs    |                       |                                  |

|                               |                       |   |          |  |
|-------------------------------|-----------------------|---|----------|--|
|                               |                       | > |          |  |
| RL ID                         | M                     |   |          |  |
| C-ID                          | M                     |   |          |  |
| Frame Offset                  | M                     |   |          |  |
| Chip Offset                   | M                     |   |          |  |
| Propagation Delay             | O                     |   |          |  |
| Diversity Control Field       | C –<br>NotFirstRL     |   |          |  |
| Initial DL TX Power           | O                     |   | DL Power |  |
| Primary CPICH Ec/Io           | O                     |   |          |  |
| SSDT Cell ID                  | O                     |   |          |  |
| >Transmit Diversity Indicator | C –<br>Diversity mode |   |          |  |

| Condition             | Explanation  |
|-----------------------|--|
| CodeLen               | This IE is present only "f "Min UL Channelisation Code len"th" equals to 4                 |
| FB                    | This IE is present only if Feed Back mode diversity is activated.                          |
| SlotFormat            | This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16. |
| NotFirstRL            | This IE is present only if the RL is not the first one in the <b>RL Information</b> .      |
| <u>Diversity mode</u> | <u>This IE is present unless Diversity Mode IE in UL DPCH Information group is "none"</u>  |

| Range bound | Explanation                     |
|-------------|---------------------------------|
| MaxnoofDCHs | Maximum no. of DCHs for one UE. |
| MaxnoofRLs  | Maximum no. of RLs for one UE.  |

## 9.1.6 RADIO LINK ADDITION REQUEST

### 9.1.6.1 FDD Message

| IE/Group Name                 | Presence           | Range             | IE type and reference | Semantics description |
|-------------------------------|--------------------|-------------------|-----------------------|-----------------------|
| Message Type                  | M                  |                   |                       |                       |
| Transaction ID                | M                  |                   |                       |                       |
| Uplink Eb/No Target           | M                  |                   | Uplink Eb/No          |                       |
| <b>RL Information</b>         |                    | 1..<maxnoofRLs-1> |                       |                       |
| RL ID                         | M                  |                   |                       |                       |
| C-Id                          | M                  |                   |                       |                       |
| Frame Offset                  | M                  |                   |                       |                       |
| Chip Offset                   | M                  |                   |                       |                       |
| Diversity Control Field       | M                  |                   |                       |                       |
| Primary CPICH Ec/Io           | O                  |                   |                       |                       |
| SSDT Cell Identity            | O                  |                   |                       |                       |
| >Transmit Diversity Indicator | C = Diversity mode |                   |                       |                       |

| Range bound    | Explanation   |
|----------------|---|
| MaxnoofRLs     | Maximum number of radio links for one UE  |
| Diversity mode | This IE is present unless Diversity Mode IE in UL DPCCH Information group is "none" |

9.2.2.X Transmit Diversity Indicator

| <u>IE/Group Name</u>                | <u>Presence</u> | <u>Range</u> | <u>IE type and reference</u>         | <u>Semantics description</u> |
|-------------------------------------|-----------------|--------------|--------------------------------------|------------------------------|
| <u>Transmit Diversity Indicator</u> |                 |              | <u>ENUMERATED (active, inactive)</u> |                              |

The Transmit Diversity Indicator indicates whether Transmit Diversity shall be active or not.



### 9.3.3 NBAP PDU Content Definitions

```

-- *****
--
-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,
    DL-ScramblingCode,
    DPCH-ID,
    DRX-Parameter,
    DedicatedMeasurementValue,
    DiversityControlField,
    DiversityMode,
    FACH-DataFrameSize,
    FACH-InitialWindowSize,
    FACH-PriorityIndicator,
    FDD-DL-ChannelisationCodeNumber,
    FDD-S-CCPCH-Offset,
    FrameHandlingPriority,
    FrameOffset,
    GapPeriod,
    GapPositionMode,
    L3-Information,
    MAC-c-SDU-Length,
    MaxNrOfUL-DPCHs,
    MeanBitRate,
    MeasurementCharacteristics,
    MeasurementID,
    MidambleShift,
    MinUL-ChannelisationCodeLength,
    MultipleURAsIndicator,
    MultiplexingPosition,
    Offset,
    PD,
    PSCH-PCCPCH-TimeSlot,
    PSCH-TimeSlot,
    PayloadCRC-PresenceIndicator,
    PilotBitsUsedIndicator,
    PowerControlMode,

```

```

PowerOffset,
PowerResumeMode,
PrimaryCCPCH-RSCP,
PrimaryCPICH-EcNo,
PrimaryCPICH-Power,
PrimaryScramblingCode,
PropagationDelay,
PunctureLimit,
RANAP-RelocationInformation,
RL-ID,
RLC-Mode,
RNC-ID,
RepetitionLength,
RepetitionPeriod,
ReportCharacteristics,
S-FieldLength,
S-RNTI,
SAI,
SN,
SRNC-ID,
SSDT-CellID,
SSDT-CellID-Length,
SSDT-Indication,
SSDT-SupportIndicator,
ScaledUL-InterferenceLevel,
ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-PhysicalChannelOffset,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransmitDiversityIndicator,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSet,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
UC-ID,
UL-DL-CompressedModeSelection,
UL-DPCCH-SlotFormat,
UL-EbNo,
UL-EbNoTarget,
UL-FP-Mode,
UL-ScramblingCode,
URA-ID
FROM RNSAP-IES

PrivateExtensionContainer{},
ProtocolExtensionContainer{},
ProtocolIE-ContainerList{},
ProtocolIE-ContainerPair{}

```

### --- Partly omitted ---

```

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container        {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions         ProtocolExtensionContainer  {{RadioLinkSetupRequestFDD-
Extensions}}
    ...
    OPTIONAL,
}

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE
mandatory   } |
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE
optional    } |
    { ID id-AllowedQueuingTime CRITICALITY ignore TYPE AllowedQueuingTime
PRESENCE optional } |
    { ID id-UL-DPCH-Information-RL-SetupReqFDD CRITICALITY ignore TYPE UL-DPCH-Information-RL-
SetupReqFDD PRESENCE mandatory } |
    { ID id-DL-DPCH-Information-RL-SetupReqFDD CRITICALITY ignore TYPE DL-DPCH-Information-RL-
SetupReqFDD PRESENCE mandatory } |
    { ID id-DCH-Information-RL-SetupReqFDD      CRITICALITY ignore TYPE DCH-InformationList-RL-
SetupReqFDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqFDD      CRITICALITY ignore TYPE RL-InformationList-RL-
SetupReqFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs           MaxNrOfUL-DPCHs          OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit          PunctureLimit,
    ul-TransportFormatCombinationSet TransportFormatCombinationSet,
    ul-DPCCH-SlotFormat       UL-DPCCH-SlotFormat,
    ul-EbNoTarget              UL-EbNoTarget             OPTIONAL,
    diversityMode              DiversityMode,
    d-FieldLength              D-FieldLength            OPTIONAL
    -- This IE is present only if Feed Back mode diversity is activated -- ,
    sSDT-CellIdLength          SSdT-CellID-Length      OPTIONAL,
    s-FieldLength              S-FieldLength            OPTIONAL,
    ul-meanBitRate             MeanBitRate              OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {UL-DPCH-Information-RL-
SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    transportFormatCombinationSet TransportFormatCombinationSet,
    dl-DPCH-SlotNumber           DL-DPCH-SlotNumber,
    tFCI-SignallingMode           TFCI-SignallingMode,
    tFCI-Presence                 TFCI-Presence          OPTIONAL
    -- This IE is present if Slot Format is from 12 to 16 -- ,
    multiplexingPosition          MultiplexingPosition,
    powerOffsetInformation        SEQUENCE {
        po1-ForTFCI-Bits          PowerOffset,
        po2-ForTPC-Bits          PowerOffset,
        po3-ForPilotBits         PowerOffset,
        ...
    },
    dl-TPC-StepSize              TPC-StepSize,
    meanBitRate                  MeanBitRate            OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { {DL-DPCH-Information-RL-
SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationList-RL-SetupReqFDD ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-
SetupReqFDD} }

DCH-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqFDD CRITICALITY ignore TYPE DCH-InformationItem-RL-
SetupReqFDD PRESENCE mandatory },
    ...
}

DCH-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    dCH-ID                       DCH-ID,
    dCH-CombinationInd           DCH-CombinationInd      OPTIONAL,
    rLC-Mode                     RLC-Mode,
    ul-transportFormatSet        TransportFormatSet,
    dl-transportFormatSet        TransportFormatSet,
    ul-BLER                      BLER,
    dl-BLER                      BLER,
    allocationRetentionPriority   AllocationRetentionPriority,
}

```

```

    frameHandlingPriority          FrameHandlingPriority,
    payloadCRC-PresenceIndicator  PayloadCRC-PresenceIndicator,
    ul-FP-Mode                    UL-FP-Mode,
    toAWS                         ToAWS,
    toAWE                         ToAWE,
    iE-Extensions                 ProtocolExtensionContainer { {DCH-InformationItem-RL-
SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupReqFDD ::= RL-IE-ContainerList { {RL-InformationItemIEs-RL-
SetupReqFDD} }

RL-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-SetupReqFDD CRITICALITY ignore TYPE RL-InformationItem-RL-
SetupReqFDD PRESENCE mandatory },
    ...
}

RL-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    uC-ID          C-ID,
    frameOffset   FrameOffset,
    chipOffset    ChipOffset,
    propagationDelay PropagationDelay OPTIONAL,
    diversityControlField DiversityControlField OPTIONAL
    -- This IE is present only if the RL is not the first one in the RL-InformationList-RL-
SetupReqFDD --,
    dl-InitialTX-Power DL-Power OPTIONAL
    -- Initial DL transmission power -- ,
    cPICH-EcIo CPICH-EcIo OPTIONAL,
    sSDT-CellID SSdT-CellID OPTIONAL,
    transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {RL-InformationItem-RL-SetupReqFDD-
ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

### --- Partly Omitted ---

```

-- *****
--
-- RADIO LINK ADDITION REQUEST FDD
--
-- *****

RadioLinkAdditionRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionRequestFDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{RadioLinkAdditionRequestFDD-
Extensions}}
    OPTIONAL,
    ...
}

RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-EbNoTarget CRITICALITY ignore TYPE UL-EbNo PRESENCE
mandatory } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD CRITICALITY ignore TYPE RL-InformationList-RL-
AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-InformationList-RL-AdditionRqstFDD ::= RL-IE-ContainerList { {RL-Information-RL-
AdditionRqstFDD-IEs} }

RL-Information-RL-AdditionRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {

```

```

    { ID id-RL-Information-RL-AdditionRqstFDD CRITICALITY ignore TYPE RL-Information-RL-
AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-Information-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID RL-ID,
    c-ID C-ID,
    frameOffset FrameOffset,
    chipOffset ChipOffset,
    diversityControlField DiversityControlField,
    primaryCPICH-EcNo PrimaryCPICH-EcNo OPTIONAL,
    sSDT-CellID SSDT-CellID OPTIONAL,
    transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstFDD-
ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-AdditionRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

## 9.3.4 Information Element Definitions

### --- Partly Omitted ---

```

-- T
-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)
TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32
}

TFCI-Presence ::= ENUMERATED {
    not-present,
    present
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)
ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
    -- ...
}

TransportBearerID ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize ::= INTEGER (1..5000)
-- Unit is bits

TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive
}

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {

```

```

        cTFC          CTFC,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatCombinationSet-ExtIEs}
} OPTIONAL,
    ...
}

TransportFormatCombinationSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts          TransportFormatSet-DynamicPartList,
    semi-staticPart      TransportFormatSet-Semi-staticPart,
    iE-Extensions        ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
SEQUENCE {
    nrOfTransportBlocks      NrOfTransportBlocks,
    transportBlockSize      TransportBlockSize OPTIONAL
    -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
    mode                    TransportFormatSet-ModeDP,
    iE-Extensions          ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-
ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeDP ::= CHOICE {
    tdd                    TransmissionTimeIntervallList,
    -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
    ...
}

TransmissionTimeIntervallList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
SEQUENCE {
    transmissionTimeInterval TransmissionTimeInterval,
    iE-Extensions          ProtocolExtensionContainer { {TransmissionTimeIntervallList-ExtIEs} }
OPTIONAL,
    ...
}

TransmissionTimeIntervallList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
    transmissionTime      TransmissionTimeInterval,
    channelCoding         ChannelCodingType,
    codingRate            CodingRate OPTIONAL
    -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
    rateMatchingAttribute RateMatchingAttribute,
    cRC-Size             CRC-Size,
    mode                 TransportFormatSet-ModeSSP OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs}
} OPTIONAL,
    ...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
    tdd                    SecondInterleavingMode,
    ...
}

SecondInterleavingMode ::= ENUMERATED {
    frame-related,
    timeslot-related,
    ...
}

-- TransportLayerAddress ::= BIT STRING (1..160, ...)

```

```
TransportLayerAddress      ::= OCTET STRING (SIZE (1..20, ...))  
-- U  
UARFCN                     ::= INTEGER (0..698, ...)
```





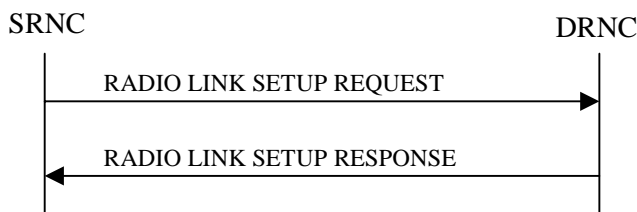
## 8.3.1 Radio Link Setup

### 8.3.1.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more radio links.

This procedure shall use the connection-oriented service of the signalling bearer.

### 8.3.1.2 Successful Operation



**Figure 1: Radio Link Setup procedure: Successful Operation**

When the SRNC makes an algorithmic decision to add the first cell or set of cells from a DRNS to the active set of a specific RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message is also used to establish the connection-oriented service of the signalling bearer in the DRNC. The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The Diversity Control Field indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When an RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

If the *Initial DL TX Power* IE and *UL Eb/No Target* IE [FDD] are present in the message, the DRNS shall use the indicated DL TX Power and UL Eb/No Target [FDD] as initial value.

If the *Primary CPICH Eb/No* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] is present, the DRNC should use them when deciding the Initial DL TX Power.

If the RADIO LINK SETUP REQUEST message includes the *DCH Combination Indicator* IE for a DCH, the DRNS shall treat all DCHs with the same value of this IE as a set of co-ordinated DCHs. The included *RLC Mode* IE of the DCH may be used by the DRNS to optimise the power control.

The *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH as the new DCH FP Mode in the Uplink of the user plane for this DCH.

The DRNS shall use the included *ToAWS* IE for a DCH as the new Time of Arrival Window Start Point in the user plane for this DCH.

The DRNS shall use the included *ToAWE* IE for a DCH as the new Time of Arrival Window End Point in the user plane for this DCH.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity* IE, the DRNS may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE.]

At the reception of the RADIO LINK SETUP REQUEST message, DRNS allocates requested type of channelisation codes and other physical channel resources for each RL and assigns a binding identifier and a transport layer address for each DCH or set of co-ordinated DCHs. This information shall be sent to the SRNS in the message RADIO LINK SETUP RESPONSE when all the RLs have been successfully setup.

If the *Initial DL TX Power* and the *UL Eb/No Target* IEs are not present in the RADIO LINK SETUP REQUEST message, then DRNC shall include the suggested initial UL Eb/No Target and the DL Eb/No Target in the RADIO LINK SETUP RESPONSE message.

In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference RL ID shall be included to indicate with which RL the combination is performed. The Reference RL ID shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.

In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK SETUP RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

[FDD - Irrespective of SSdT activation, the DRNS shall include in the RADIO LINK SETUP RESPONSE message an indication concerning the capability to support SSdT on this RL. Only if the RADIO LINK SETUP REQUEST message requested SSdT activation and the RADIO LINK SETUP RESPONSE message indicates that the SSdT capability is supported for this RL, SSdT is activated in the DRNS.]

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id) and information of the neighbouring cells to the cell(s) where the radio link(s) are added.

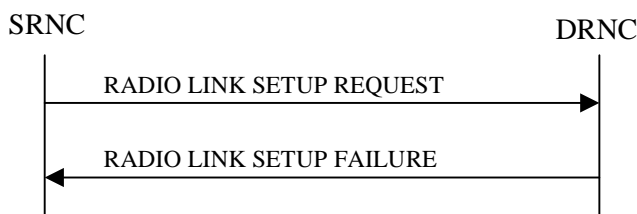
If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC, CN domain nodes) of the RNC controlling the neighbouring cell.

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received the DRNC shall include the node identifications of the CN Domain nodes that the RNC is connected to (using LAC and RAC of the current cell), and the D-RNTI in the RADIO LINK SETUP RESPONSE message.

[FDD - If the *DRAC Control* IE is present set to "requested" in the RADIO LINK SETUP REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message the *Secondary CCPCH Info* IE and the to be received on FACH, for each added Radio Link.

If the DRNC does not support DRAC, it shall not provide these IEs in the RADIO LINK SETUP RESPONSE message.

### 8.3.1.3 Unsuccessful Operation



**Figure 2: Radio Link Setup procedure: Unsuccessful Operation**

In unsuccessful case (i.e. one or more RLs can not be setup) the RADIO LINK SETUP FAILURE message shall be sent to the SRNC, indicating the reason for failure. If some radio links were established successfully, the DRNC shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.

Typical cause values are:

**Radio Network Layer Causes:**

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Requested Configuration not Supported
- Cell not Available
- Power Level not Supported

**Transport Layer Causes:**

- Transport Link Failure

**Protocol Causes:**

- Transaction not Allowed

**Miscellaneous Causes:**

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

**8.3.1.4 Abnormal Conditions**

If the DRNC receives either an S-RNTI or a D-RNTI which already has RL(s) established the DRNC shall send the RADIO LINK SETUP FAILURE message to the SRNC, indicating the reason for failure.

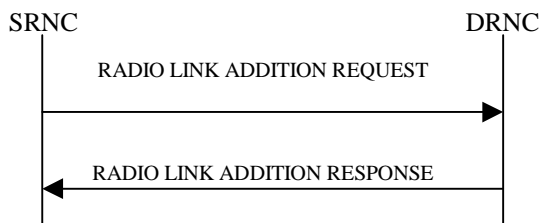
**8.3.2 Radio Link Addition**

**8.3.2.1 General**

This procedure is used for establishing the necessary resources in the DRNS for one or more additional RLs towards a UE when there is already at least one RL established to the concerning UE via this DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

**8.3.2.2 Successful Operation**



**Figure 3: Radio Link Addition procedure: Successful Operation**

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the SRNC to the DRNC.

Upon reception, the DRNS shall reserve the necessary resources and configure the new RL(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

[FDD - The Diversity Control Field indicates for each RL whether the DRNS shall combine the new RL with existing RL(s) or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When a new RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the *Primary CCPCH Ec/Io* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] measured by the UE is included in the RADIO LINK ADDITION REQUEST message, the DRNS shall use this in the calculation of the Initial DL TX Power. If the *Primary CCPCH Ec/Io* IE is not present, the DRNS sets the Initial DL TX Power accordingly to the power used by the existing RLs.

[FDD - The DRNS shall use the provided UL Eb/No Target value as the current target for the inner-loop power control.]

[FDD - If the RADIO LINK ADDITION REQUEST message contains an *SSDT Cell Identity* IE, SSDT may be activated for the concerned new RL, with the indicated SSDT Cell Identity used for that RL.]

The DRNS shall activate any feedback mode diversity according to the received settings.

If all requested RLs are successfully added, the DRNC shall respond with a RADIO LINK ADDITION RESPONSE message.

In the case of combining an RL with existing RL(s) the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that the RL is combined. In this case the Reference RL ID shall be included to indicate one of the existing RLs that the new RL is combined with.

In the case of not combining an RL with existing RL(s), the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the Transport Layer Address and the binding ID for the transport bearer to be established for each DCH of the RL in the RADIO LINK ADDITION RESPONSE message.

In case of co-ordinated DCH, the binding ID and the transport address shall be included for only one of the co-ordinated DCHs.

[FDD - Irrespective of SSDT activation, the DRNS shall include in the RADIO LINK ADDITION RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK ADDITION REQUEST message requested SSDT activation and the RADIO LINK ADDITION RESPONSE message indicates that the SSDT capability is supported for this RL, SSDT is activated in the DRNS.]

For any cell neighbouring of a cell in which a RL was added, the DRNC shall provide in the RADIO LINK ADDITION RESPONSE message the UTRAN Cell Identifier (UC-Id), the Frequency Number, the Primary Scrambling Code and the node identification of CN nodes connected to the RNC controlling the neighbouring cell if the neighbouring cell is not controlled by the DRNC. In addition, if the information is available, the DRNC shall also provide the CPICH Power level and Frame Offset of the neighbouring cell.

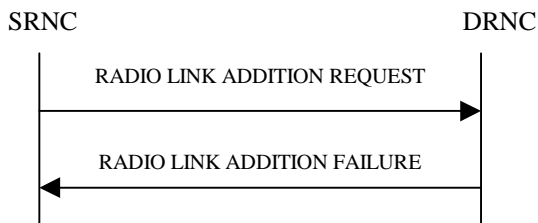
The DRNC shall also provide the configured uplink Maximum Eb/No and UL Minimum Eb/No for every new RL to the SRNC in the RADIO LINK ADDITION RESPONSE message. These values are taken into consideration by DRNS admission control and shall be used by the SRNC as limits for the UL inner-loop power control target.

The DRNC shall 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.

After sending of the RADIO LINK ADDITION RESPONSE message the DRNS shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The DRNS shall start transmission on the new RL after synchronisation is achieved in the Iur user plane as specified in ref. [**Error! Reference source not found.**]

[FDD - If the UE has been allocated one or several DCH controlled by DRAC (*DRAC Control* IE was present set to "requested" - in the RADIO LINK ADDITION SETUP REQUEST message for at least one DCH) and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK ADDITION RESPONSE message the *Secondary CCPCH Info* IE and the - to be received on FACH, for each added Radio Link. If the DRNC does not support DRAC, and it shall not provide these IEs in the RADIO LINK ADDITION RESPONSE message.]

### 8.3.2.3 Unsuccessful Operation



**Figure 4: Radio Link Addition procedure: Unsuccessful Operation**

If the establishment of at least one RL is unsuccessful, the DRNC shall send a RADIO LINK ADDITION FAILURE as response.

If some RL(s) were established successfully, the DRNC shall indicate this in the RADIO LINK ADDITION FAILURE message in the same way as in the RADIO LINK ADDITION RESPONSE message.

Typical cause values are:

#### Radio Network Layer Causes:

- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Cell not Available
- Power Level not Supported

#### Transport Layer Causes:

- Transport Link Failure

#### Miscellaneous Causes:

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

### 8.3.2.4 Abnormal Conditions

-

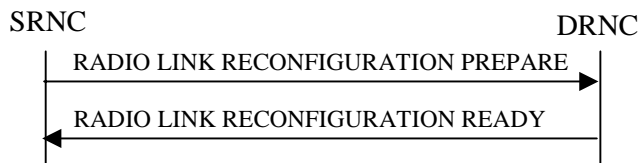
## 8.3.4 Synchronised Radio Link Reconfiguration Preparation

### 8.3.4.1 General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of all Radio Links related to one UE-UTRAN connection within a DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

### 8.3.4.2 Successful Operation



**Figure 5: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation**

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the DRNC.

Upon reception, the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

#### **DCH Modification :**

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new ToAWE in the user plane for this DCH in the new configuration.

[FDD - If the *DRAC Control* IE is present and set to "requested" in the RADIO LINK RECONFIGURATION PREPARE message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE and the to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, and it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

#### **DCH Addition:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

The DRNS may use the included *RLC Mode* IE to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for this DCH in the new configuration.

[FDD - If the *DRAC Control* IE is present set to "requested" in the RADIO LINK RECONFIGURATION PREPARE message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION READY message the *Secondary CCPCH Info* IE and the to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, and it shall not provide these IEs in the RADIO LINK RECONFIGURATION READY message.]

#### **DCH Deletion:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be deleted from the Radio Link(s), the DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

#### **Physical Channel Modification:**

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Uplink Channelisation Code* IEs, the DRNS shall apply the new Uplink Channelisation Code(s) in the new configuration.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Spreading Factor of Channelisation Code (DL)* IE, for each *Spreading Factor of Channelisation Code (DL)* IE the DRNS shall allocate one new Downlink Channelisation Code per Radio Link and apply the new Downlink Channelisation Code(s) to the new configuration. Each Downlink Channelisation Code allocated for the new configuration shall be included as a *Channelisation Code (DL)* IE in the RADIO LINK RECONFIGURATION READY message when sent to the SRNC.]

The DRNS shall use the *TFCS (UL)* IE when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

The DRNS shall use the *TFCS (DL)* IE when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.



If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes on the *UL DPCCH Structure* IE, group the DRNS shall apply the new Uplink DPCCH Structure to the new configuration.]

#### SSDT Activation/Deactivation:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT Active in the UE", the DRNS may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

If the requested modifications are allowed by the DRNS, and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s) it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the *Maximum Uplink Eb/No* IE and *Minimum Uplink Eb/No* IE for each Radio Link in the RADIO LINK RECONFIGURATION READY message.

[TDD – The DRNC shall include all the IEs corresponding to the new physical channel parameters for the DL DPCH and/or the UL DPCH to be reconfigured in the RADIO LINK RECONFIGURATION READY message.]

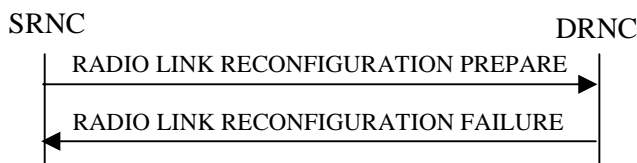
[Editor's note: Which information in the RL RECONFIGURATION PREPARE message triggers the DRNC to include any of the following *Optional TDD* information?:

- a) DL DPCH Group
- b) UL DPCH Group
- c) TDD Physical Channel Offset, *Repetition Length*, and TFCI Presence IEs as part of the DL DPCH Group
- d) TDD Physical Channel Offset, *Repetition Length*, and TFCI Presence IEs as part of the UL DPCH Group.]

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCHs in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

### 8.3.4.3 Unsuccessful Operation



**Figure 6: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation**

If the DRNS cannot reserve the necessary resources for all the new DCHs of one set of co-ordinated DCHs requested to be added, it shall regard the Synchronised Radio Link Reconfiguration procedure as having failed.

- If the requested Synchronised Radio Link Reconfiguration procedure fails for one or more RLs the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

In which cases to include only the *Cause* IE on message level and in which cases the *Cause* IE also shall be included for a specific RL is FFS.

Typical cause values are:

**Radio Network Layer Causes:**

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Requested Configuration not Supported

**Protocol Causes:**

- Transaction not Allowed

**Miscellaneous Causes:**

- Control Processing Overload
- Not enough User Plane Processing Resources

### 8.3.4.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the DRNS shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

## 8.3.7 Unsynchronised Radio Link Reconfiguration

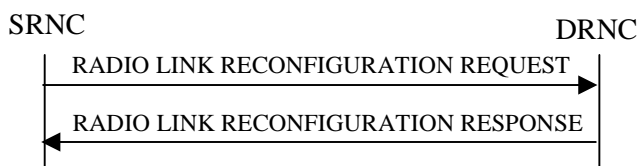
### 8.3.7.1 General

The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a DRNS.

The procedure is used when there is no need to synchronise the time of the switching from the old to the new radio link configuration in the cells used by the UE-UTRAN connection within the DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

### 8.3.7.2 Successful Operation



**Figure 7: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation**

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION REQUEST message to the DRNC.

Upon reception, the DRNS shall modify the configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

**DCH Modification:**

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new ToAWE in the user plane for this DCH in the new configuration.

[FDD - If the *DRAC Control* IE is ~~present~~present and set to "requested" in the RADIO LINK RECONFIGURATION REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION RESPONSE message the *Secondary CCPCH Info* IE ~~and the~~ to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, ~~and~~ it shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.]

#### **DCH Addition:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall.

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
  2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration
- The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when allocating resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RLC Mode* IE, the DRNS may use this information to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for this DCH in the new configuration.

[FDD - If the *DRAC Control* IE is present set to "requested" in the RADIO LINK RECONFIGURATION REQUEST message for at least one DCH and if the DRNC supports the DRAC, the DRNC shall indicate in the RADIO LINK RECONFIGURATION RESPONSE message the *Secondary CCPCH Info* IE and the *Reference to System Information blocks IE* to be received on FACH, for each Radio Link. If the DRNC does not support DRAC, and it shall not provide these IEs in the RADIO LINK RECONFIGURATION RESPONSE message.

#### DCH Deletion:

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be deleted from the Radio Link(s), the DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

#### Physical Channel Modification:

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (UL)* IE, the DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (DL)* IE, the DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

If the requested modifications are allowed by the DRNS, the DRNS has successfully allocated the required resources, and changed to the new configuration it shall respond to the SRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the IEs *Maximum Uplink Eb/No* and *Minimum Uplink Eb/No* for each Radio Link in the RADIO LINK RECONFIGURATION RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCH in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

### 8.3.7.3 Unsuccessful Operation

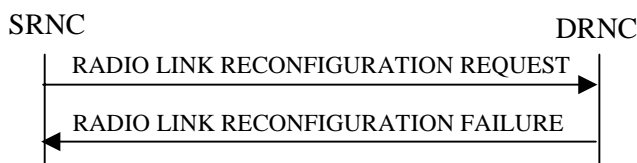


Figure 8: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation

If the DRNS cannot allocate the necessary resources for all the new DCHs of a set of co-ordinated DCHs requested to be added it shall regard the Synchronised Radio Link Reconfiguration procedure as having failed.

If the requested Unsynchronised Radio Link Reconfiguration procedure fails for one or more Radio Link(s) the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

Typical cause values are:

**Radio Network Layer Causes:**

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Requested Configuration not Supported

**Protocol Causes:**

- Transaction not Allowed

**Miscellaneous Causes:**

- Control Processing Overload
- Not enough User Plane Processing Resources

#### **8.3.7.4 Abnormal Conditions**

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the the DRNS shall regard the Synchronised Radio Link Reconfiguration procedure as having failed and the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

### 9.1.3 RADIO LINK SETUP REQUEST

#### 9.1.3.1 FDD Message

| IE/Group Name                       | Presence      | Range             | IE type and reference | Semantics description            |
|-------------------------------------|---------------|-------------------|-----------------------|----------------------------------|
| Message Type                        | M             |                   |                       |                                  |
| Transaction ID                      | M             |                   |                       |                                  |
| S-RNTI                              | M             |                   |                       |                                  |
| D-RNTI                              | O             |                   |                       |                                  |
| Allowed Queuing time                | O             |                   |                       |                                  |
| <b>UL DPCH Information</b>          |               | 1                 |                       |                                  |
| UL Scrambling Code                  | M             |                   |                       |                                  |
| Min UL Channelisation Code Length   | M             |                   |                       |                                  |
| Max Number of UL DPDCHs             | C – CodeLen   |                   |                       |                                  |
| Puncture Limit                      | M             |                   |                       | For the UL.                      |
| UL Transport Format Combination Set | M             |                   |                       |                                  |
| UL DPCCH Slot Format                | M             |                   |                       |                                  |
| UL Eb/No Target                     | O             |                   |                       |                                  |
| Diversity mode                      | M             |                   |                       |                                  |
| D Field Length                      | C-FB          |                   |                       |                                  |
| SSDT Cell ID Length                 | O             |                   |                       |                                  |
| S Field Length                      | O             |                   |                       |                                  |
| Mean Bit Rate                       | O             |                   |                       | For the UL.                      |
| <b>DL DPCH Information</b>          |               | 1                 |                       |                                  |
| Transport Format Combination Set    | M             |                   |                       |                                  |
| DL DPCH Slot Format                 | M             |                   |                       |                                  |
| TFCI Signalling Mode                | M             |                   |                       |                                  |
| TFCI Presence                       | C- SlotFormat |                   |                       |                                  |
| Multiplexing Position               | M             |                   |                       |                                  |
| <b>Power Offset Information</b>     |               | 1                 |                       |                                  |
| PO1                                 | M             |                   | Power Offset          | Power offset for the TFCI bits.  |
| PO2                                 | M             |                   | Power Offset          | Power offset for the TPC bits.   |
| PO3                                 | M             |                   | Power Offset          | Power offset for the pilot bits. |
| TPC Downlink Step Size              | M             |                   |                       |                                  |
| Mean Bit Rate                       | O             |                   |                       | For the DL.                      |
| <b>DCH Information</b>              |               | 1..<maxnoofDCHs > |                       |                                  |
| DCH ID                              | M             |                   |                       |                                  |
| DCH Combination Ind                 | O             |                   |                       |                                  |
| RLC Mode                            | M             |                   |                       |                                  |
| Transport Format Set                | M             |                   |                       | For the UL.                      |
| Transport Format Set                | M             |                   |                       | For the DL.                      |
| BLER                                | M             |                   |                       | For the UL.                      |
| BLER                                | M             |                   |                       | For the DL.                      |
| Allocation/Retention Priority       | M             |                   |                       |                                  |
| Frame Handling Priority             | M             |                   |                       |                                  |
| Payload CRC Presence Indicator      | M             |                   |                       |                                  |
| UL FP Mode                          | M             |                   |                       |                                  |
| ToAWS                               | M             |                   |                       |                                  |
| ToAWE                               | M             |                   |                       |                                  |
| <b>DRAC control</b>                 | <b>M</b>      |                   |                       |                                  |

| <b>RL Information</b>   |                | <i>1...&lt;maxnoofRLs &gt;</i> |          |  |
|-------------------------|----------------|--------------------------------|----------|--|
| RL ID                   | M              |                                |          |  |
| C-ID                    | M              |                                |          |  |
| Frame Offset            | M              |                                |          |  |
| Chip Offset             | M              |                                |          |  |
| Propagation Delay       | O              |                                |          |  |
| Diversity Control Field | C – NotFirstRL |                                |          |  |
| Initial DL TX Power     | O              |                                | DL Power |  |
| Primary CPICH Ec/Io     | O              |                                |          |  |
| SSDT Cell ID            | O              |                                |          |  |

| <b>Condition</b> | <b>Explanation</b>   |
|------------------|--|
| CodeLen          | This IE is present only "f "Min UL Channelisation Code len"th" equals to 4                 |
| FB               | This IE is present only if Feed Back mode diversity is activated.                          |
| SlotFormat       | This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16. |
| NotFirstRL       | This IE is present only if the RL is not the first one in the <b>RL Information</b> .      |

| <b>Range bound</b> | <b>Explanation</b>              |
|--------------------|---------------------------------|
| MaxnoofDCHs        | Maximum no. of DCHs for one UE. |
| MaxnoofRLs         | Maximum no. of RLs for one UE.  |

## 9.1.4 RADIO LINK SETUP RESPONSE

### 9.1.4.1 FDD Message

| IE/Group Name                                | Presence       | Range               | IE type and reference | Semantics description  |
|--|----------------|---------------------|-----------------------|--|
| Message Type                                 | M              |                     |                       |  |
| Transaction ID                               | M              |                     |                       |  |
| D-RNTI                                       | O              |                     |                       |  |
| CN PS Domain Identifier                      | O              |                     |                       |  |
| CN CS Domain Identifier                      | O              |                     |                       |  |
| <b>RL Information Response</b>               |                | 1..<maxnoofRLs>     |                       |  |
| RL ID  | M              |                     |                       |  |
| SAI  | M              |                     |                       |  |
| UL Interference Level                        | M              |                     |                       |  |
| <b>Secondary CCPCH Info</b>                  |                | 0..1                |                       |  |
| FDD S-CCPCH Offset                           | M              |                     |                       | Corresponds to: $T_{S-CCPCH,k}$ , see ref. <a href="#">[Error! Reference source not found.6]</a> |
| DL Scrambling Code                           | M              |                     |                       |  |
| FDD DL Channelisation Code Number            | M              |                     |                       |  |
| TFCS   | M              |                     |                       | For the DL,  |
| Secondary CCPCH Slot Format                  | M              |                     |                       |  |
| TFCI presence                                | C - SlotFormat |                     |                       |  |
| MultiplexingPosition                         | M              |                     |                       |  |
| STTD Indicator                               | M              |                     |                       |  |
| <b>FACH/PCH Information</b>                  |                | 1..<maxFACHcount+1> |                       |  |
| TFS  |                |                     |                       | For each FACH, and the PCH when multiplexed on the same Secondary CCPCH                          |
| <b>Scheduling Information</b>                |                | 1                   |                       |  |
| IB SG REP                                    | M              |                     |                       |  |
| <b>Segment Information</b>                   |                | 1..<maxIBSEG>       |                       |  |
| IB SG POS                                    | M              |                     |                       |  |
| <b>DL Code Information</b>                   |                | 1..<maxnoofDLCode s |                       |  |
| DL Scrambling Code                           | M              |                     |                       |  |
| FDD DL Channelisation Code Number            | M              |                     |                       |  |
| Diversity Indication                         | C-NotFirstRL   |                     |                       |  |
| CHOICE <i>diversity Indication Combining</i> |                |                     |                       |  |
| RL ID  | M              |                     |                       | Reference RL ID for the combining  |
| <i>Non Combining or IE not present</i>       |                |                     |                       | "IE not present" is equivalent to "First RL".  |
| <b>DCH Information Response</b>              |                | 0..<maxnoofDCHs >   |                       | Only one DCH per set of co-ordinated DCHs shall be included                                      |
| DCH ID                                       | M              |                     |                       |  |
| Binding ID                                   | M              |                     |                       |  |
| Transport Layer Address                      | M              |                     |                       |  |



|  |           |  |              |  |
|--|-----------|--|--------------|--|
| SSDT Support Indicator                   | M         |  |              |  |
| Maximum Uplink Eb/No                     | M         |  | Uplink Eb/No |  |
| Minimum Uplink Eb/No                     | M         |  | Uplink Eb/No |  |
| <b>Neighbouring FDD Cell Information</b> |           | <i>0..&lt;maxnoofFDDn neighbours&gt;</i> |              |  |
| UC-Id                                    | M         |  |              |  |
| CN PS Domain Identifier                  | O         |  |              |  |
| CN CS Domain Identifier                  | O         |  |              |  |
| UARFCN                                   | M         |  |              |  |
| Frame Offset                             | O         |  |              |  |
| Primary Scrambling Code                  | M         |  |              |  |
| Primary CPICH Power                      | O         |  |              |  |
| <b>Neighbouring TDD Cell Information</b> | O         | <i>0..&lt;maxnoofTDDn neighbours&gt;</i> |              |  |
| UC-Id                                    | M         |  |              |  |
| CN PS Domain Identifier                  | O         |  |              |  |
| CN CS Domain Identifier                  | O         |  |              |  |
| UARFCN                                   | M         |  |              |  |
| Frame Offset                             | O         |  |              |  |
| Cell Parameter ID                        | M         |  |              |  |
| Sync Case                                | M         |  |              |  |
| Time Slot                                | C-Case1   |  |              |  |
| PSCH Time Slot                           | C-Case2&3 |  |              |  |
| Uplink Eb/No Target                      | O         |  | Uplink Eb/No |  |
| Downlink Eb/No Target                    | O         |  |              |  |
| Criticality Diagnostics                  | O         |  |              |  |

| Condition         | Explanation   |
|-------------------|---|
| IfComb            | This IE is present if the 'Diversity Indication' IE indicates 'combining' in the Node B.                |
| IfNotComb         | This IE is present if the 'Diversity Indication' IE indicates 'non combining' in the Node B.            |
| NotFirstRL        | The IE is present only if the RL is not the first RL in the RL Information                              |
| Case1             | This IE is present only if Sync Case = Case1.   |
| Case2&3           | This IE is present only if Sync Case = Case2 or Case3.  |
| <u>SlotFormat</u> | <u>This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17.</u> |

| Range bound          | Explanation   |
|----------------------|---|
| MaxnoofRLs           | Maximum no. of RLs for one UE.                                |
| MaxnoofDCHs          | Maximum no. of DCHs for one UE.                               |
| MaxnoofFDDneighbours | Maximum number of neighbouring FDD cell for one cell.         |
| MaxnoofTDDneighbours | Maximum number of neighbouring TDD cell for one cell.         |
| <u>MaxFACHCount</u>  | <u>Maximum number of FACH's mapped onto secondary CCPCH's</u> |
| <u>MaxIBSEG</u>      | <u>Maximum number of segments for one Information Block</u>   |

## 9.1.7 RADIO LINK ADDITION RESPONSE

### 9.1.7.1 FDD Message

| IE/Group Name                            | Presence              | Range                          | IE type and reference | Semantics description   |
|--|-----------------------|--------------------------------|-----------------------|---|
| Message Type                             | M                     |                                |                       |   |
| Transaction ID                           | M                     |                                |                       |   |
| <b>RL Information Response</b>           |                       | 1..<maxnoofRLs-1>              |                       |   |
| RL ID                                    | M                     |                                |                       |   |
| SAI                                      | M                     |                                |                       |   |
| UL Interference Level                    | M                     |                                |                       |   |
| <b>Secondary CCPCH Info</b>              |                       | 0..1                           |                       |   |
| <u>FDD S-CCPCH Offset</u>                | <u>M</u>              |                                |                       | <u>Corresponds to: <math>T_{S-CCPCH,k}</math>, see ref. [Error! Reference source not found.6]</u> |
| <u>DL Scrambling Code</u>                | <u>M</u>              |                                |                       |   |
| <u>FDD DL Channelisation Code Number</u> | <u>M</u>              |                                |                       |   |
| <u>TFCS</u>                              | <u>M</u>              |                                |                       | <u>For the DL,</u>  |
| <u>Secondary CCPCH Slot Format</u>       | <u>M</u>              |                                |                       |   |
| <u>TFCI presence</u>                     | <u>C - SlotFormat</u> |                                |                       |   |
| <u>MultiplexingPosition</u>              | <u>M</u>              |                                |                       |   |
| <u>STTD Indicator</u>                    | <u>M</u>              |                                |                       |   |
| <b><u>FACH/PCH Information</u></b>       |                       | 1..<br><maxFACHcount+1>        |                       |   |
| <u>TFS</u>                               |                       |                                |                       | <u>For each FACH, and the PCH when multiplexed on the same Secondary CCPCH</u>                    |
| <b><u>Scheduling Information</u></b>     |                       | 1                              |                       |   |
| <u>IB_SG REP</u>                         | <u>M</u>              |                                |                       |   |
| <b><u>Segment Information</u></b>        |                       | 1..<br><maxIBSEG>              |                       |   |
| <u>IB_SG POS</u>                         | <u>M</u>              |                                |                       |   |
| <b>DL Code Information</b>               |                       | 1..<br><maxnoofDLCodes>        |                       |   |
| DL Scrambling Code                       | M                     |                                |                       |   |
| DL Channelisation Code                   | M                     |                                |                       |   |
| Diversity Indication                     | M                     |                                |                       |   |
| CHOICE <i>diversity indication</i>       |                       |                                |                       |   |
| <i>Combining</i>                         |                       |                                |                       |   |
| RL ID                                    | M                     |                                |                       | Reference RL-Id   |
| <i>Non combining</i>                     |                       |                                |                       |   |
| <b>DCH Information Response</b>          |                       | 1..<br><maxnoofDCHs>           |                       | Only one DCH per set of co-ordinated DCHs shall be included.                                      |
| DCH ID                                   | M                     |                                |                       |   |
| Binding ID                               | M                     |                                |                       |   |
| Transport Layer Address                  | M                     |                                |                       |   |
| SSDT Support Indicator                   | M                     |                                |                       |   |
| Minimum Uplink Eb/No                     | M                     |                                | Uplink Eb/No          |   |
| Maximum Uplink Eb/No                     | M                     |                                | Uplink Eb/No          |   |
| <b>Neighbouring FDD Cell Information</b> |                       | 0..<br><maxnoofFDD Neighbours> |                       |   |

|  |           |   |  |  |
|--|-----------|---|--|--|
| UC-Id                                    | M         |   |  |  |
| CN PS Domain Identifier                  | O         |   |  |  |
| CN CS Domain Identifier                  | O         |   |  |  |
| UARFCN                                   | M         |   |  |  |
| Frame Offset                             | O         |   |  |  |
| Primary Scrambling Code                  | M         |   |  |  |
| Primary CPICH Power                      | O         |   |  |  |
| <b>Neighbouring TDD Cell Information</b> |           | <i>0..&lt;maxnoofTDD Neighbours&gt;</i> |  |  |
| UC-Id                                    | M         |   |  |  |
| CN PS Domain Identifier                  | O         |   |  |  |
| CN CS Domain Identifier                  | O         |   |  |  |
| UARFCN                                   | M         |   |  |  |
| Frame Offset                             | O         |   |  |  |
| Cell Parameter ID                        | M         |   |  |  |
| Sync Case                                | M         |   |  |  |
| Time Slot                                | C-Case1   |   |  |  |
| PSCH Time Slot                           | C-Case2&3 |   |  |  |
| Criticality Diagnostics                  | O         |   |  |  |

| Condition         | Explanation  |
|-------------------|--|
| Case1             | This IE is present only if Sync Case = Case1.  |
| Case2&3           | This IE is present only if Sync Case = Case2 or Case3.   |
| <u>SlotFormat</u> | <u>This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17</u> |

| Range bound          | Explanation   |
|----------------------|---|
| MaxnoofDCHs          | Maximum number of dedicated channels on one RL                |
| MaxnoofRLs           | Maximum number of radio links for one UE                      |
| MaxnoofFDDNeighbours | Maximum number of neighbouring FDD cells for one cell         |
| MaxnoofTDDNeighbours | Maximum number of neighbouring TDD cells for one cell         |
| MaxnoofDLCodes       | Maximum number of DL code information                         |
| <u>MaxFACHCount</u>  | <u>Maximum number of FACH's mapped onto secondary CCPCH's</u> |
| <u>MaxIBSEG</u>      | <u>Maximum number of segments for one Information Block</u>   |

## 9.1.11 RADIO LINK RECONFIGURATION PREPARE

### 9.1.11.1 FDD Message

| IE/Group Name                     | Presence      | Range             | IE Type and Reference | Semantics Description |
|-----------------------------------|---------------|-------------------|-----------------------|-----------------------|
| Message Type                      | M             |                   |                       |                       |
| Transaction ID                    | M             |                   |                       |                       |
| Allowed Queuing Time              | O             |                   |                       |                       |
| <b>UL DPCH Information</b>        |               | 0..1              |                       |                       |
| UL Scrambling code                | O             |                   |                       |                       |
| Min UL Channelisation Code Length | O             |                   |                       |                       |
| Max Number of UL DPDCHs           | C – CodeLen   |                   |                       |                       |
| Puncture Limit                    | O             |                   |                       | For the UL.           |
| TFCS                              | O             |                   |                       | TFCS for the UL.      |
| UL DPCCH Slot Format              | O             |                   |                       |                       |
| SSDT Cell Identity Length         | O             |                   |                       |                       |
| S-Field Length                    | O             |                   |                       |                       |
| Mean Bit Rate                     | O             |                   |                       | For the UL.           |
| <b>DL DPCH Information</b>        |               | 0..1              |                       |                       |
| TFCS                              | O             |                   |                       | TFCS for the DL.      |
| DL DPCH Slot Format               | O             |                   |                       |                       |
| TFCI Signalling Mode              | O             |                   |                       |                       |
| TFCI Presence                     | C- SlotFormat |                   |                       |                       |
| MultiplexingPosition              | O             |                   |                       |                       |
| Mean Bit Rate                     | O             |                   |                       | For the DL.           |
| <b>DCHs to Modify</b>             |               | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                            | M             |                   |                       |                       |
| Transport Format Set              | O             |                   |                       | For the UL.           |
| Transport Format Set              | O             |                   |                       | For the DL.           |
| Allocation/Retention Priority     | O             |                   |                       |                       |
| Frame Handling Priority           | O             |                   |                       |                       |
| UL FP Mode                        | O             |                   |                       |                       |
| ToAWS                             | O             |                   |                       |                       |
| ToAWE                             | O             |                   |                       |                       |
| <u>DRAC Control</u>               | O             |                   |                       |                       |
| <b>DCHs to Add</b>                |               | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                            | M             |                   |                       |                       |
| DCH Combination Indicator         | O             |                   |                       |                       |
| RLC Mode                          | M             |                   |                       |                       |
| Transport Format Set              | M             |                   |                       | For the UL.           |
| Transport Format Set              | M             |                   |                       | For the DL.           |
| BLER                              | M             |                   |                       | For the UL.           |
| BLER                              | M             |                   |                       | For the DL.           |
| Allocation/Retention Priority     | M             |                   |                       |                       |
| Frame Handling Priority           | M             |                   |                       |                       |
| Payload CRC Presence Indicator    | M             |                   |                       |                       |
| UL FP Mode                        | M             |                   |                       |                       |
| ToAWS                             | M             |                   |                       |                       |
| ToAWE                             | M             |                   |                       |                       |
| <u>DRAC Control</u>               | M             |                   |                       |                       |
| <b>DCHs to Delete</b>             |               | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                            | M             |                   |                       |                       |

| <b>RL Information</b> |                  | <i>0..&lt;maxnoofRLs&gt;</i> |  |  |
|-----------------------|------------------|------------------------------|--|--|
| RL ID                 | M                |                              |  |  |
| SSDT Indication       | O                |                              |  |  |
| SSDT Cell Identity    | C -<br>SSDTIndON |                              |  |  |

| <b>Condition</b> | <b>Explanation</b>   |
|------------------|--|
| SSDTIndON        | The IE may be present if the SSDT Indication is set to 'SSDT Active in the UE'.            |
| CodeLen          | This IE is present only if "Min UL Channelisation Code length" equals to 4.                |
| SlotFormat       | This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16. |

| <b>Range bound</b> | <b>Explanation</b>               |
|--------------------|----------------------------------|
| MaxnoofDCHs        | Maximum number of DCHs for a UE. |
| MaxnoofRLs         | Maximum number of RLs for a UE.  |

## 9.1.12 RADIO LINK RECONFIGURATION READY

### 9.1.12.1 FDD Message

| IE/Group Name                            | Presence              | Range                            | IE Type and Reference | Semantics Description  |
|--|-----------------------|----------------------------------|-----------------------|--|
| Message Type                             | M                     |                                  |                       |  |
| Transaction ID                           | M                     |                                  |                       |  |
| <b>RL Information Response</b>           |                       | 0..<maxnoofRLs>                  |                       |  |
| RL ID                                    | M                     |                                  |                       |  |
| Maximum Uplink Eb/No                     | O                     |                                  | Uplink Eb/No          |  |
| Minimum Uplink Eb/No                     | O                     |                                  | Uplink Eb/No          |  |
| <b>Secondary CCPCH Info</b>              |                       | 0..1                             |                       |  |
| <u>FDD S-CCPCH Offset</u>                | <u>M</u>              |                                  |                       | <u>Corresponds to: <math>T_{S-CCPCH,k}</math>, see ref. [Error! Reference source not found.6]</u>  |
| <u>DL Scrambling Code</u>                | <u>M</u>              |                                  |                       |  |
| <u>FDD DL Channelisation Code Number</u> | <u>M</u>              |                                  |                       |  |
| <u>TFCS</u>                              | <u>M</u>              |                                  |                       | <u>For the DL.</u>   |
| <u>Secondary CCPCH Slot Format</u>       | <u>M</u>              |                                  |                       |  |
| <u>TFCI presence</u>                     | <u>C - SlotFormat</u> |                                  |                       |  |
| <u>MultiplexingPosition</u>              | <u>M</u>              |                                  |                       |  |
| <u>STTD Indicator</u>                    | <u>M</u>              |                                  |                       |  |
| <b><u>FACH/PCH Information</u></b>       |                       | <u>1..&lt;maxFACHcount+1&gt;</u> |                       |  |
| <u>TFS</u>                               |                       |                                  |                       | <u>For each FACH, and the PCH when multiplexed on the same Secondary CCPCH</u>   |
| <b><u>Scheduling Information</u></b>     |                       | <u>1</u>                         |                       |  |
| <u>IB_SG REP</u>                         | <u>M</u>              |                                  |                       |  |
| <b><u>Segment Information</u></b>        |                       | <u>1..&lt;maxIBSEG&gt;</u>       |                       |  |
| <u>IB_SG POS</u>                         | <u>M</u>              |                                  |                       |  |
| <b>Downlink Code Information</b>         |                       | 0..<maxnoofDLCodes>              |                       |  |
| DL Scrambling Code                       | M                     |                                  |                       |  |
| DL Channelisation Code                   | M                     |                                  |                       |  |
| <b>DCH to be Added</b>                   |                       | 0..<maxnoofDCHs>                 |                       | Only one DCH per set of coordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLs. |
| DCH ID                                   | M                     |                                  |                       |  |
| Binding ID                               | M                     |                                  |                       |  |
| Transport Layer Address                  | M                     |                                  |                       |  |
| <b>DCH to be Modified</b>                |                       | 0..<maxnoofDCHs>                 |                       | Only one DCH per set of coordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLs. |

|                         |   |  |  |  |
|-------------------------|---|--|--|--|
| DCH ID                  | M |  |  |  |
| Binding ID              | M |  |  |  |
| Transport Layer Address | M |  |  |  |
| Criticality Diagnostics | O |  |  |  |

| <u>Condition</u>  | <u>Explanation</u>   |
|-------------------|--|
| <u>SlotFormat</u> | <u>This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17</u> |

| <b>Range bound</b>  | <b>Explanation</b>  |
|---------------------|---|
| MaxnoofDCHs         | Maximum number of DCHs.                                       |
| MaxnoofRLs          | Maximum number of RLs for a UE.                               |
| MaxnoofDLCodes      | Maximum number of Downlink Channelisation Codes.              |
| <u>MaxFACHCount</u> | <u>Maximum number of FACH's mapped onto secondary CCPCH's</u> |
| <u>MaxIBSEG</u>     | <u>Maximum number of segments for one Information Block</u>   |

## 9.1.16 RADIO LINK RECONFIGURATION REQUEST

### 9.1.16.1 FDD Message

| IE/Group Name                  | Presence | Range             | IE Type and Reference | Semantics Description |
|--------------------------------|----------|-------------------|-----------------------|-----------------------|
| Message Type                   | M        |                   |                       |                       |
| Transaction ID                 | M        |                   |                       |                       |
| Allowed Queuing Time           | O        |                   |                       |                       |
| <b>UL DPCH Information</b>     |          | 0..1              |                       |                       |
| TFCS                           | O        |                   |                       | TFCS for the UL.      |
| Mean Bit Rate                  | O        |                   |                       |                       |
| <b>DL DPCH Information</b>     |          | 0..1              |                       |                       |
| TFCS                           | O        |                   |                       | TFCS for the DL.      |
| TFCI Signalling Mode           | O        |                   |                       |                       |
| Mean Bit Rate                  | O        |                   |                       |                       |
| <b>DCHs to Modify</b>          |          | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                         | M        |                   |                       |                       |
| Transport Format Set           | O        |                   |                       | For the UL.           |
| Transport Format Set           | O        |                   |                       | For the DL.           |
| Allocation/Retention Priority  | O        |                   |                       |                       |
| Frame Handling Priority        | O        |                   |                       |                       |
| UL FP Mode                     | O        |                   |                       |                       |
| ToAWS                          | O        |                   |                       |                       |
| ToAWE                          | O        |                   |                       |                       |
| <u>DRAC Control</u>            | <u>O</u> |                   |                       |                       |
| <b>DCHs to add</b>             |          | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                         | M        |                   |                       |                       |
| DCH Combination Ind            | O        |                   |                       |                       |
| RLC Mode                       | M        |                   |                       |                       |
| Transport Format Set           | M        |                   |                       | For the UL.           |
| Transport Format Set           | M        |                   |                       | For the DL.           |
| Allocation/Retention Priority  | M        |                   |                       |                       |
| Frame Handling Priority        | M        |                   |                       |                       |
| Payload CRC Presence Indicator | M        |                   |                       |                       |
| UL FP mode                     | M        |                   |                       |                       |
| ToAWS                          | M        |                   |                       |                       |
| ToAWE                          | M        |                   |                       |                       |
| <u>DRAC Control</u>            | <u>M</u> |                   |                       |                       |
| <b>DCHs to Delete</b>          |          | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                         | M        |                   |                       |                       |

| Range Bound | Explanation                      |
|-------------|----------------------------------|
| MaxnoofDCHs | Maximum number of DCHs for a UE. |



### 9.1.17 RADIO LINK RECONFIGURATION RESPONSE

| IE/Group Name                            | Presence              | Range                   | IE Type and Reference | Semantics Description  |
|--|-----------------------|-------------------------|-----------------------|--|
| Message Type                             | M                     |                         |                       |  |
| Transaction ID                           | M                     |                         |                       |  |
| <b>RL Information Response</b>           |                       | 0..<maxnoofRLs>         |                       |  |
| RL ID                                    | M                     |                         |                       |  |
| Maximum Uplink Eb/No                     | O                     |                         | Uplink Eb/No          |  |
| Minimum Uplink Eb/No                     | O                     |                         | Uplink Eb/No          |  |
| <b>Secondary CCPCH Info</b>              |                       | 0..1                    |                       |  |
| <u>FDD S-CCPCH Offset</u>                | <u>M</u>              |                         |                       | <u>Corresponds to: <math>T_{S-CCPCH,k}</math>, see ref. [Error! Reference source not found.6]</u>  |
| <u>DL Scrambling Code</u>                | <u>M</u>              |                         |                       |  |
| <u>FDD DL Channelisation Code Number</u> | <u>M</u>              |                         |                       |  |
| <u>TFCS</u>                              | <u>M</u>              |                         |                       | <u>For the DL.</u>   |
| <u>Secondary CCPCH Slot Format</u>       | <u>M</u>              |                         |                       |  |
| <u>TFCI presence</u>                     | <u>C - SlotFormat</u> |                         |                       |  |
| <u>MultiplexingPosition</u>              | <u>M</u>              |                         |                       |  |
| <u>STTD Indicator</u>                    | <u>M</u>              |                         |                       |  |
| <b>FACH/PCH Information</b>              |                       | 1..<br><maxFACHcount+1> |                       |  |
| <u>TFS</u>                               |                       |                         |                       | <u>For each FACH, and the PCH when multiplexed on the same Secondary CCPCH</u>   |
| <b>Scheduling Information</b>            |                       | 1                       |                       |  |
| <u>IB SG REP</u>                         | <u>M</u>              |                         |                       |  |
| <b>Segment Information</b>               |                       | 1..<br><maxIBSEG>       |                       |  |
| <u>IB SG POS</u>                         | <u>M</u>              |                         |                       |  |
| <b>DCH to be Added</b>                   |                       | 0..<maxnoofDCHs>        |                       | Only one DCH per set of coordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLs. |
| DCH ID                                   | M                     |                         |                       |  |
| Binding ID                               | M                     |                         |                       |  |
| Transport Layer Address                  | M                     |                         |                       |  |
| <b>DCH to be Modified</b>                |                       | 0..<maxnoofDCHs>        |                       | Only one DCH per set of coordinated DCHs shall be included.<br><br>The IE group shall be included only once per DCH per set of combined RLs. |
| DCH ID                                   | M                     |                         |                       |  |
| Binding ID                               | M                     |                         |                       |  |
| Transport Layer Address                  | M                     |                         |                       |  |
| Criticality Diagnostics                  | O                     |                         |                       |  |

| <u>Condition</u>  | <u>Explanation</u>   |
|-------------------|--|
| <u>SlotFormat</u> | <u>This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17</u> |

| <u>Range Bound</u>         | <u>Explanation</u>   |
|----------------------------|--|
| <u>MaxnoofDCHs</u>         | <u>Maximum number of DCHs for a UE.</u>                                      |
| <u>MaxnoofRLs</u>          | <u>Maximum number of RLs for a UE.</u>                                       |
| <u>MaxSysinfoFACHCount</u> | <u>Maximum number of references to system information blocks on the FACH</u> |
| <u>MaxIBSEG</u>            | <u>Maximum number of segments for one Information Block</u>                  |

### 9.2.2.a DRAC Control

This IE indicates whether the DCH is control by DRAC or not.

| <u>IE/Group Name</u> | <u>Presence</u> | <u>Range</u> | <u>IE type and reference</u>                 | <u>Semantics description</u>                          |
|----------------------|-----------------|--------------|--|---|
| <u>DRAC Control</u>  |                 |              | <u>Enumerated (Requested, Not-Requested)</u> | <u>Requested means that DCH is controlled by DRAC</u> |

### 9.2.2.b IB SG POS

First position of an Information Block segment in the SFN cycle (IB\_SG\_POS < IB\_SG\_REP).

| <u>IE/Group Name</u> | <u>Presence</u> | <u>Range</u> | <u>IE type and reference</u>         | <u>Semantics description</u> |
|----------------------|-----------------|--------------|--------------------------------------|------------------------------|
| <u>IB SG POS</u>     |                 |              | <u>INTEGER (0..2<sup>12</sup>-1)</u> |                              |

### 9.2.2.c IB SG REP

Repetition distance for an Information Block segment. The segment shall be transmitted when SFN mod IB\_SG\_REP = IB\_SG\_POS.

| <u>IE/Group Name</u> | <u>Presence</u> | <u>Range</u> | <u>IE type and reference</u>                           | <u>Semantics description</u>                          |
|----------------------|-----------------|--------------|--|---|
| <u>IB SG REP</u>     |                 |              | <u>INTEGER (16, 32, 64, 128, 256, 512, 1024, 2048)</u> | <u>Repetition period for the IB segment in frames</u> |

## 9.3 Message and Information element abstract syntax (with ASN.1)

This chapter is for the time being only **INFORMATIVE**.

In case of misalignment with the tabular format of the messages in chapter 9.1 the ASN.1 needs to be aligned with the tabular format.

The setting of the criticality field and the level on which criticality is set for the IEs and sequences of IEs is still to be decided upon.

### 9.3.1 Usage of Protocol Extension Mechanism for non-standard use

The protocol extension mechanism for non-standard use may be used:

- for special operator (and/or vendor) specific features considered not to be part of the basic functionality, i.e. the functionality required for a complete and high-quality specification in order to guarantee multivendor inter-operability.
- by vendors for research purposes, e.g. to implement and evaluate new algorithms/features before such features are proposed for standardisation.

The extension mechanism shall not be used for basic functionality. Such functionality shall be standardised.

### 9.3.2 Elementary Procedure Definitions

```
-- *****
--
-- Elementary Procedure definitions
--
-- *****

RNSAP-PDU-Descriptions -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    Criticality,
    ProcedureID,
    TransactionID
FROM RNSAP-CommonDataTypes

    CommonTransportChannelResourcesFailure,
    CommonTransportChannelResourcesRequest,
```

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CommonTransportChannelResourcesReleaseRequest,  
CommonTransportChannelResourcesResponseFDD,  
CommonTransportChannelResourcesResponseTDD,  
CompressedModeCancel,  
CompressedModeCommit,  
CompressedModeFailure,  
CompressedModePrepare,  
CompressedModeReady,  
DedicatedMeasurementFailureIndication,  
DedicatedMeasurementInitiationFailure,  
DedicatedMeasurementInitiationRequest,  
DedicatedMeasurementInitiationResponse,  
DedicatedMeasurementReport,  
DedicatedMeasurementTerminationRequest,  
DL-PowerControlRequest,  
DownlinkSignallingTransferRequest,  
ErrorIndication,  
PagingRequest,  
PhysicalChannelReconfigurationCommand,  
PhysicalChannelReconfigurationFailure,  
PhysicalChannelReconfigurationRequestFDD,  
PhysicalChannelReconfigurationRequestTDD,  
PrivateMessage,  
RadioLinkAdditionFailureFDD,  
RadioLinkAdditionFailureTDD,  
RadioLinkAdditionRequestFDD,  
RadioLinkAdditionRequestTDD,  
RadioLinkAdditionResponseFDD,  
RadioLinkAdditionResponseTDD,  
RadioLinkDeletionRequest,  
RadioLinkDeletionResponse,  
RadioLinkFailureIndication,  
RadioLinkReconfigurationCancel,  
RadioLinkReconfigurationCommit,  
RadioLinkReconfigurationFailure,  
RadioLinkReconfigurationPrepareFDD,  
RadioLinkReconfigurationPrepareTDD,  
RadioLinkReconfigurationReadyFDD,  
RadioLinkReconfigurationReadyTDD,  
RadioLinkReconfigurationRequestFDD,  
RadioLinkReconfigurationRequestTDD,  
RadioLinkReconfigurationResponseFDD,  
RadioLinkReconfigurationResponseTDD,  
RadioLinkRestoreIndication,  
RadioLinkSetupFailureFDD,  
RadioLinkSetupFailureTDD,  
RadioLinkSetupRequestFDD,  
RadioLinkSetupRequestTDD,  
RadioLinkSetupResponseFDD,  
RadioLinkSetupResponseTDD,  
RelocationCommit,  
UplinkSignallingTransferIndication

FROM RNSAP-PDU-Contents

```

id-commonTransportChannelResourcesInitiationFDD,
id-commonTransportChannelResourcesInitiationTDD,
id-commonTransportChannelResourcesRelease,
id-compressedModeCancellationFDD,
id-compressedModeCommitFDD,
id-compressedModePrepareFDD,
id-downlinkPowerControl,
id-downlinkSignallingTransfer,
id-errorIndication,
id-measurementFailure,
id-measurementInitiation,
id-measurementReporting,
id-measurementTermination,
id-pagingRequest,
id-physicalChannelReconfiguration,
id-privateMessage,
id-radioLinkAddition,
id-radioLinkDeletion,
id-radioLinkFailure,
id-radioLinkRestoration,
id-radioLinkSetup,
id-srnsRelocationCommit,
id-synchronisedRadioLinkReconfigurationCancellation,
id-synchronisedRadioLinkReconfigurationCommit,
id-synchronisedRadioLinkReconfigurationPrepare,
id-unsynchronisedRadioLinkReconfiguration,
id-uplinkSignallingTransfer
FROM RNSAP-Constants;

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

RNSAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage          ,
    &SuccessfulOutcome          OPTIONAL,
    &UnsuccessfulOutcome       OPTIONAL,
    &Outcome                    OPTIONAL,
    &procedureID               ProcedureID  UNIQUE,
    &criticality               Criticality  DEFAULT ignore
}
WITH SYNTAX {
    INITIATING MESSAGE      &InitiatingMessage
    [SUCCESSFUL OUTCOME    &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME  &UnsuccessfulOutcome]
    [OUTCOME                &Outcome]
    PROCEDURE ID           &procedureID
    [CRITICALITY           &criticality]
}

```

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```
-- *****
--
-- Interface PDU Definition
--
-- *****

RNSAP-PDU ::= CHOICE {
    initiatingMessage    InitiatingMessage,
    succesfulOutcome     SuccessfulOutcome,
    unsuccessfulOutcome  UnsuccessfulOutcome,
    outcome              Outcome,
    ...
}

InitiatingMessage ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID    ( {RNSAP-ELEMENTARY-PROCEDURES} ),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&InitiatingMessage ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

SuccessfulOutcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID    ( {RNSAP-ELEMENTARY-PROCEDURES} ),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

UnsuccessfulOutcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID    ( {RNSAP-ELEMENTARY-PROCEDURES} ),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

Outcome ::= SEQUENCE {
    procedureID RNSAP-ELEMENTARY-PROCEDURE.&procedureID    ( {RNSAP-ELEMENTARY-PROCEDURES} ),
    criticality RNSAP-ELEMENTARY-PROCEDURE.&criticality      ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} ),
    transactionID TransactionID,
    value       RNSAP-ELEMENTARY-PROCEDURE.&Outcome        ( {RNSAP-ELEMENTARY-PROCEDURES} {@procedureID} )
}

-- *****
--
-- Interface Elementary Procedure List
--
-- *****

RNSAP-ELEMENTARY-PROCEDURES RNSAP-ELEMENTARY-PROCEDURE ::= {
    RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 |
    RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 |
    RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 ,
    ...
}
```

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```

}

RNSAP-ELEMENTARY-PROCEDURES-CLASS-1 RNSAP-ELEMENTARY-PROCEDURE ::= {
    radioLinkSetupFDD          |
    radioLinkSetupTDD         |
    radioLinkAdditionFDD      |
    radioLinkAdditionTDD      |
    radioLinkDeletion         |
    synchronisedRadioLinkReconfigurationPreparationFDD |
    synchronisedRadioLinkReconfigurationPreparationTDD |
    unSynchronisedRadioLinkReconfigurationFDD          |
    unSynchronisedRadioLinkReconfigurationTDD          |
    physicalChannelReconfigurationFDD                  |
    physicalChannelReconfigurationTDD                  |
    measurementInitiation                             |
    compressedModePreparationFDD                       |
    commonTransportChannelResourcesInitiationFDD      |
    commonTransportChannelResourcesInitiationTDD      |
    ...
}

```

```

RNSAP-ELEMENTARY-PROCEDURES-CLASS-2 RNSAP-ELEMENTARY-PROCEDURE ::= {
    uplinkSignallingTransfer      |
    downlinkSignallingTransfer    |
    srnsRelocationCommit         |
    paging                        |
    synchronisedRadioLinkReconfigurationCommit |
    synchronisedRadioLinkReconfigurationCancellation |
    radioLinkFailure             |
    radioLinkRestoration         |
    measurementReporting          |
    measurementTermination       |
    measurementFailure           |
    downlinkPowerControlFDD      |
    compressedModeCommitFDD      |
    compressedModeCancellationFDD |
    commonTransportChannelResourcesRelease |
    errorIndication              |
    privateMessage                |
    ...
}

```

```

RNSAP-ELEMENTARY-PROCEDURES-CLASS-3 RNSAP-ELEMENTARY-PROCEDURE ::= {
    ...
}

```

```

-- *****
--
-- Interface Elementary Procedures
--
-- *****

```

```

radioLinkSetupFDD RNSAP-ELEMENTARY-PROCEDURE ::= {

```

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```
INITIATING MESSAGE RadioLinkSetupRequestFDD
SUCCESSFUL OUTCOME RadioLinkSetupResponseFDD
UNSUCCESSFUL OUTCOME RadioLinkSetupFailureFDD
PROCEDURE ID { procedureCode id-radioLinkSetup, ddMode fdd }
CRITICALITY ignore
}

radioLinkSetupTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
INITIATING MESSAGE RadioLinkSetupRequestTDD
SUCCESSFUL OUTCOME RadioLinkSetupResponseTDD
UNSUCCESSFUL OUTCOME RadioLinkSetupFailureTDD
PROCEDURE ID { procedureCode id-radioLinkSetup, ddMode tdd }
CRITICALITY ignore
}

radioLinkAdditionFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
INITIATING MESSAGE RadioLinkAdditionRequestFDD
SUCCESSFUL OUTCOME RadioLinkAdditionResponseFDD
UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureFDD
PROCEDURE ID { procedureCode id-radioLinkAddition , ddMode fdd }
CRITICALITY ignore
}

radioLinkAdditionTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
INITIATING MESSAGE RadioLinkAdditionRequestTDD
SUCCESSFUL OUTCOME RadioLinkAdditionResponseTDD
UNSUCCESSFUL OUTCOME RadioLinkAdditionFailureTDD
PROCEDURE ID { procedureCode id-radioLinkAddition , ddMode tdd }
CRITICALITY ignore
}

radioLinkDeletion RNSAP-ELEMENTARY-PROCEDURE ::= {
INITIATING MESSAGE RadioLinkDeletionRequest
SUCCESSFUL OUTCOME RadioLinkDeletionResponse
PROCEDURE ID { procedureCode id-radioLinkDeletion, ddMode common }
CRITICALITY ignore
}

synchronisedRadioLinkReconfigurationPreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
INITIATING MESSAGE RadioLinkReconfigurationPrepareFDD
SUCCESSFUL OUTCOME RadioLinkReconfigurationReadyFDD
UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationPrepare, ddMode fdd }
CRITICALITY ignore
}

synchronisedRadioLinkReconfigurationPreparationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
INITIATING MESSAGE RadioLinkReconfigurationPrepareTDD
SUCCESSFUL OUTCOME RadioLinkReconfigurationReadyTDD
UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
PROCEDURE ID { procedureCode id-synchronisedRadioLinkReconfigurationPrepare, ddMode tdd }
CRITICALITY ignore
}
```



```
unSynchronisedRadioLinkReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationRequestFDD
  SUCCESSFUL OUTCOME  RadioLinkReconfigurationResponseFDD
  UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
  PROCEDURE ID        { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
  CRITICALITY         ignore
}
```

```
unSynchronisedRadioLinkReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationRequestTDD
  SUCCESSFUL OUTCOME  RadioLinkReconfigurationResponseTDD
  UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
  PROCEDURE ID        { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
  CRITICALITY         ignore
}
```

```
physicalChannelReconfigurationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  PhysicalChannelReconfigurationRequestFDD
  SUCCESSFUL OUTCOME  PhysicalChannelReconfigurationCommand
  UNSUCCESSFUL OUTCOME PhysicalChannelReconfigurationFailure
  PROCEDURE ID        { procedureCode id-physicalChannelReconfiguration, ddMode fdd }
  CRITICALITY         ignore
}
```

```
physicalChannelReconfigurationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  PhysicalChannelReconfigurationRequestTDD
  SUCCESSFUL OUTCOME  PhysicalChannelReconfigurationCommand
  UNSUCCESSFUL OUTCOME PhysicalChannelReconfigurationFailure
  PROCEDURE ID        { procedureCode id-physicalChannelReconfiguration, ddMode tdd }
  CRITICALITY         ignore
}
```

```
measurementInitiation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DedicatedMeasurementInitiationRequest
  SUCCESSFUL OUTCOME  DedicatedMeasurementInitiationResponse
  UNSUCCESSFUL OUTCOME DedicatedMeasurementInitiationFailure
  PROCEDURE ID        { procedureCode id-measurementInitiation, ddMode common }
  CRITICALITY         ignore
}
```

```
compressedModePreparationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CompressedModePrepare
  SUCCESSFUL OUTCOME  CompressedModeReady
  UNSUCCESSFUL OUTCOME CompressedModeFailure
  PROCEDURE ID        { procedureCode id-compressedModePrepareFDD, ddMode fdd }
  CRITICALITY         ignore
}
```

```
commonTransportChannelResourcesInitiationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME  CommonTransportChannelResourcesResponseFDD
  UNSUCCESSFUL OUTCOME CommonTransportChannelResourcesFailure
}
```

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```
PROCEDURE ID      { procedureCode id-commonTransportChannelResourcesInitiationFDD, ddMode common }
CRITICALITY      ignore
}

commonTransportChannelResourcesInitiationTDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CommonTransportChannelResourcesRequest
  SUCCESSFUL OUTCOME  CommonTransportChannelResourcesResponseTDD
  UNSUCCESSFUL OUTCOME  CommonTransportChannelResourcesFailure
  PROCEDURE ID        { procedureCode id-commonTransportChannelResourcesInitiationTDD, ddMode common }
  CRITICALITY         ignore
}

uplinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  UplinkSignallingTransferIndication
  PROCEDURE ID        { procedureCode id-uplinkSignallingTransfer, ddMode common }
  CRITICALITY         ignore
}

downlinkSignallingTransfer RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DownlinkSignallingTransferRequest
  PROCEDURE ID        { procedureCode id-downlinkSignallingTransfer, ddMode common }
  CRITICALITY         ignore
}

srnsRelocationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RelocationCommit
  PROCEDURE ID        { procedureCode id-srnsRelocationCommit, ddMode common }
  CRITICALITY         ignore
}

paging RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  PagingRequest
  PROCEDURE ID        { procedureCode id-pagingRequest, ddMode common }
  CRITICALITY         ignore
}

synchronisedRadioLinkReconfigurationCommit RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationCommit
  PROCEDURE ID        { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
  CRITICALITY         ignore
}

synchronisedRadioLinkReconfigurationCancellation RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkReconfigurationCancel
  PROCEDURE ID        { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
  CRITICALITY         ignore
}

radioLinkFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkFailureIndication
  PROCEDURE ID        { procedureCode id-radioLinkFailure, ddMode common }
  CRITICALITY         ignore
}
```

```
radioLinkRestoration RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  RadioLinkRestoreIndication
  PROCEDURE ID        { procedureCode id-radioLinkRestoration, ddMode common }
  CRITICALITY         ignore
}

measurementReporting RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DedicatedMeasurementReport
  PROCEDURE ID        { procedureCode id-measurementReporting, ddMode common }
  CRITICALITY         ignore
}

measurementTermination RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DedicatedMeasurementTerminationRequest
  PROCEDURE ID        { procedureCode id-measurementTermination, ddMode common }
  CRITICALITY         ignore
}

measurementFailure RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DedicatedMeasurementFailureIndication
  PROCEDURE ID        { procedureCode id-measurementFailure, ddMode common }
  CRITICALITY         ignore
}

downlinkPowerControlFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  DL-PowerControlRequest
  PROCEDURE ID        { procedureCode id-downlinkPowerControl, ddMode fdd }
  CRITICALITY         ignore
}

compressedModeCommitFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CompressedModeCommit
  PROCEDURE ID        { procedureCode id-compressedModeCommitFDD, ddMode fdd }
  CRITICALITY         ignore
}

compressedModeCancellationFDD RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CompressedModeCancel
  PROCEDURE ID        { procedureCode id-compressedModeCancellationFDD, ddMode fdd }
  CRITICALITY         ignore
}

commonTransportChannelResourcesRelease RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  CommonTransportChannelResourcesReleaseRequest
  PROCEDURE ID        { procedureCode id-commonTransportChannelResourcesRelease, ddMode common }
  CRITICALITY         ignore
}

errorIndication RNSAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE  ErrorIndication
  PROCEDURE ID        { procedureCode id-errorIndication, ddMode common }
  CRITICALITY         ignore
}
```

```

}

privateMessage RNSAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE PrivateMessage
    PROCEDURE ID         { procedureCode id-privateMessage, ddMode common }
    CRITICALITY          ignore
}

END

```

### 9.3.3PDU Definitions

```

-- *****
--
-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,

```

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DCH-ID,  
DL-ChannelisationCode,  
DL-DPCCH-SlotFormat,  
DL-DPCH-SlotNumber,  
DL-EbNo,  
DL-EbNoTarget,  
DL-FrameType,  
DL-Power,  
DL-ScramblingCode,  
DPCH-ID,  
DRACControl,  
DRX-Parameter,  
DedicatedMeasurementValue,  
DiversityControlField,  
DiversityMode,  
FACH-DataFrameSize,  
FACH-InitialWindowSize,  
FACH-PriorityIndicator,  
FDD-DL-ChannelisationCodeNumber,  
FDD-S-CCPCH-Offset,  
FrameHandlingPriority,  
FrameOffset,  
GapPeriod,  
GapPositionMode,  
L3-Information,  
MAC-c-SDU-Length,  
MaxNrOfUL-DPCHs,  
MeanBitRate,  
MeasurementCharacteristics,  
MeasurementID,  
MidambleShift,  
MinUL-ChannelisationCodeLength,  
MultipleURAsIndicator,  
MultiplexingPosition,  
Offset,  
PD,  
PSCH-PCCPCH-TimeSlot,  
PSCH-TimeSlot,  
PayloadCRC-PresenceIndicator,  
PilotBitsUsedIndicator,  
PowerControlMode,  
PowerOffset,  
PowerResumeMode,  
PrimaryCCPCH-RSCP,  
PrimaryCPICH-EcNo,  
PrimaryCPICH-Power,  
PrimaryScramblingCode,  
PropagationDelay,  
PunctureLimit,  
RANAP-RelocationInformation,  
RL-ID,  
RLC-Mode,  
RNC-ID,

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```
RepetitionLength,  
RepetitionPeriod,  
ReportCharacteristics,  
S-FieldLength,  
S-RNTI,  
SAI,  
IB-SG-Pos,  
IB-SG-Rep,  
SN,  
SRNC-ID,  
SSDT-CellID,  
SSDT-CellID-Length,  
SSDT-Indication,  
SSDT-SupportIndicator,  
ScaledUL-InterferenceLevel,  
ScramblingCode,  
ScramblingCodeChange,  
SecondaryCCPCH-SlotFormat,  
SyncCase,  
TDD-ChannelisationCode,  
TDD-PhysicalChannelOffset,  
TFCI-Coding,  
TFCI-Presence,  
TFCI-SignallingMode,  
TGD,  
TGL,  
TPC-StepSize,  
TimeSlot,  
ToAWE,  
ToAWS,  
TransportBearerID,  
TransportBearerRequestIndicator,  
TransportFormatCombinationSet,  
TransportFormatSet,  
TransportLayerAddress,  
UARFCN,  
UC-ID,  
UL-DL-CompressedModeSelection,  
UL-DPCCH-SlotFormat,  
UL-EbNo,  
UL-EbNoTarget,  
UL-FP-Mode,  
UL-ScramblingCode,  
URA-IDz  
FROM RNSAP-IEs  
  
PrivateExtensionContainer{},  
ProtocolExtensionContainer{},  
ProtocolIE-ContainerList{},  
ProtocolIE-ContainerPair{},  
ProtocolIE-ContainerPairList{},  
ProtocolIE-Container{},  
RNSAP-PRIVATE-EXTENSION,
```

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```
RNSAP-PROTOCOL-EXTENSION,  
RNSAP-PROTOCOL-IES,  
RNSAP-PROTOCOL-IES-PAIR  
FROM RNSAP-Containers
```

```
maxNoOfDL-Codes,  
maxNrOfCCTrCHs,  
maxNrOfDCHs,  
maxNrOfDL-Codes,  
maxNrOfDPCHs,  
maxNrOfFACH-FD-Size,  
maxNrOfFDD-Neighbours,  
maxNrOfMACcSDU-Length,  
maxNrOfTDD-Neighbours,  
maxNrOfRLs,  
maxNrOfSCCPCHs,  
maxRNCinURA,  
maxFACHCount,  
maxIBSEG,
```

```
id-AllowedQueuingTime,  
id-BindingID,  
id-C-ID,  
id-C-RNTI,  
id-CCTrCH-ID,  
id-CFN,  
id-CN-CS-DomainIdentifier,  
id-CN-PS-DomainIdentifier,  
id-Cause,  
id-CompressedModeMethod,  
id-CriticalityDiagnostics,  
id-D-RNTI,  
id-D-RNTI-ReleaseIndication,  
id-DCH-AddItem,  
id-DCH-AddItem-RL-ReconfPrepFDD,  
id-DCH-AddItem-RL-ReconfPrepTDD,  
id-DCH-AddItem-RL-ReconfReadyFDD,  
id-DCH-AddItem-RL-ReconfRqstFDD,  
id-DCH-AddItem-RL-ReconfRqstTDD,  
id-DCH-AddItem-RL-ReconfRspFDD,  
id-DCH-AddList-RL-ReconfPrepFDD,  
id-DCH-AddList-RL-ReconfPrepTDD,  
id-DCH-AddList-RL-ReconfRqstFDD,  
id-DCH-AddList-RL-ReconfRqstTDD,  
id-DCH-DeleteItem-RL-ReconfPrepFDD,  
id-DCH-DeleteItem-RL-ReconfPrepTDD,  
id-DCH-DeleteItem-RL-ReconfRqstFDD,  
id-DCH-DeleteItem-RL-ReconfRqstTDD,  
id-DCH-DeleteList-RL-ReconfPrepFDD,  
id-DCH-DeleteList-RL-ReconfPrepTDD,  
id-DCH-DeleteList-RL-ReconfRqstFDD,  
id-DCH-DeleteList-RL-ReconfRqstTDD,  
id-DCH-Information-RL-SetupReqFDD,
```

id-DCH-InformationItem-RL-SetupReqFDD,  
id-DCH-InformationItem-RL-SetupReqTDD,  
id-DCH-InformationList-RL-SetupReqTDD,  
id-DCH-ModifyItem,  
id-DCH-ModifyItem-RL-ReconfPrepFDD,  
id-DCH-ModifyItem-RL-ReconfPrepTDD,  
id-DCH-ModifyItem-RL-ReconfReadyFDD,  
id-DCH-ModifyItem-RL-ReconfRqstFDD,  
id-DCH-ModifyItem-RL-ReconfRqstTDD,  
id-DCH-ModifyItem-RL-ReconfRspFDD,  
id-DCH-ModifyList-RL-ReconfPrepFDD,  
id-DCH-ModifyList-RL-ReconfPrepTDD,  
id-DCH-ModifyList-RL-ReconfRqstFDD,  
id-DCH-ModifyList-RL-ReconfRqstTDD,  
id-DL-CCTrCH-Information-RL-ReconfPrepTDD,  
id-DL-CCTrCH-Information-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD,  
id-DL-CCTrChInformationItem-RL-SetupReqTDD,  
id-DL-CCTrChInformationList-RL-SetupReqTDD,  
id-DL-CodeInformation-PhyChReconfRqstFDD,  
id-DL-DPCH-Information,  
id-DL-DPCH-Information-RL-SetupReqFDD,  
id-DL-DPCH-InformationList-PhyChReconfRqstTDD,  
id-DL-DPCH-InformationList-RL-ReconfReadyTDD,  
id-DL-EbNoTarget,  
id-DL-FrameType,  
id-DL-MeanBitRate,  
id-DL-ReferencePowerInformation-DL-PC-Rqst,  
id-DRX-Parameter,  
id-DedicatedMeasurementObjectType-DM-Rprt,  
id-DedicatedMeasurementObjectType-DM-Rqst,  
id-DedicatedMeasurementObjectType-DM-Rspns,  
id-FACH-InfoForOptionalGroupS-CCPCH,  
id-FACH-InfoForOptionals-CCPCH,  
id-FACH-InfoForS-CCPCH-CoupledToPRACH,  
id-GapPositionMode,  
id-L3-Information,  
id-MeasurementCharacteristics,  
id-MeasurementID,  
id-MultipleURAsIndicator,  
id-PD,  
id-PagingArea-PagingRqst,  
id-PowerControlMode,  
id-PowerResumeMode,  
id-ProcedureScope-DL-PC-Rqst,  
id-RANAP-RelocationInformation,  
id-RL-Information-PhyChReconfRqstFDD,  
id-RL-Information-PhyChReconfRqstTDD,  
id-RL-Information-RL-AdditionRqstFDD,  
id-RL-Information-RL-AdditionRqstTDD,  
id-RL-Information-RL-DeletionRqst,  
id-RL-Information-RL-FailureInd,



id-RL-Information-RL-ReconfPrepFDD,  
id-RL-Information-RL-RestoreInd,  
id-RL-Information-RL-SetupReqFDD,  
id-RL-Information-RL-SetupReqTDD,  
id-RL-InformationItem-DM-Rprt,  
id-RL-InformationItem-DM-Rqst,  
id-RL-InformationItem-DM-Rspns,  
id-RL-InformationItem-RL-SetupReqFDD,  
id-RL-InformationList-RL-AdditionRqstFDD,  
id-RL-InformationList-RL-DeletionRqst,  
id-RL-InformationList-RL-FailureInd,  
id-RL-InformationList-RL-ReconfPrepFDD,  
id-RL-InformationList-RL-RestoreInd,  
id-RL-InformationResponse-RL-AdditionRspTDD,  
id-RL-InformationResponse-RL-ReconfReadyTDD,  
id-RL-InformationResponse-RL-SetupRspTDD,  
id-RL-InformationResponseItem-RL-AdditionRspFDD,  
id-RL-InformationResponseItem-RL-ReconfReadyFDD,  
id-RL-InformationResponseItem-RL-SetupRspFDD,  
id-RL-InformationResponseItem-RL-ReconfRspFDD,  
id-RL-InformationResponseList-RL-AdditionRspFDD,  
id-RL-InformationResponseList-RL-ReconfReadyFDD,  
id-RL-InformationResponseList-RL-SetupRspFDD,  
id-RL-InformationResponseList-RL-ReconfRspFDD,  
id-RL-ReconfigurationFailure-RL-ReconfFail,  
id-RL-ReconfigurationFailureList-RL-ReconfFail,  
id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind,  
id-ReportCharacteristics,  
id-S-RNTI,  
id-SAI,  
id-SN,  
id-SRNC-ID,  
id-ScramblingCodeChange,  
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,  
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,  
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,  
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,  
id-TGD,  
id-TGL,  
id-TGP1,  
id-TGP2,  
id-TransportBearerID,  
id-TransportBearerRequestIndicator,  
id-TransportLayerAddress,  
id-UC-ID,  
id-UL-CCTrCH-Information-RL-ReconfPrepTDD,  
id-UL-CCTrCH-Information-RL-ReconfRqstTDD,  
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,  
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,  
id-UL-CCTrChInformationItem-RL-SetupReqTDD,  
id-UL-CCTrChInformationList-RL-SetupReqTDD,  
id-UL-DL-CompressedModeSelection,  
id-UL-DPCH-Information,

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```
id-UL-DPCH-Information-RL-SetupReqFDD,
id-UL-DPCH-InformationList-PhyChReconfRqstTDD,
id-UL-DPCH-InformationList-RL-ReconfReadyTDD,
id-UL-DeltaEbNo,
id-UL-DeltaEbNoAfter,
id-UL-EbNoTarget,
id-UL-MeanBitRate,
id-URA-ID,
id-UnsuccessfulRL-InformationResponse,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
FROM RNSAP-Constants;

-- *****
--
-- Common Container List
--
-- *****

DCH-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfDCHs,      { IEsSetParam } }
RL-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfRLs,      { IEsSetParam } }
CCTrCH-IE-ContainerList  { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfCCTrCHs, { IEsSetParam } }
DL-Code-IE-ContainerList { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfDL-Codes, { IEsSetParam } }

-- *****
--
-- RADIO LINK SETUP REQUEST FDD
--
-- *****

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIES          ProtocolIE-Container      {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}
    ...
}

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional   } |
    { ID id-AllowedQueuingTime CRITICALITY ignore TYPE AllowedQueuingTime PRESENCE optional   } |
    { ID id-UL-DPCH-Information-RL-SetupReqFDD CRITICALITY ignore TYPE UL-DPCH-Information-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-DL-DPCH-Information-RL-SetupReqFDD CRITICALITY ignore TYPE DL-DPCH-Information-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-DCH-Information-RL-SetupReqFDD     CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqFDD     CRITICALITY ignore TYPE RL-InformationList-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
```

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```
maxNrOfUL-DPCHs                MaxNrOfUL-DPCHs                OPTIONAL
-- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
ul-PunctureLimit                PunctureLimit,
ul-TransportFormatCombinationSet TransportFormatCombinationSet,
ul-DPCCCH-SlotFormat            UL-DPCCCH-SlotFormat,
ul-EbNoTarget                   UL-EbNoTarget                OPTIONAL,
diversityMode                   DiversityMode,
d-FieldLength                   D-FieldLength                OPTIONAL
-- This IE is present only if Feed Back mode diversity is activated -- ,
sSDT-CellIdLength              SSDT-CellID-Length          OPTIONAL,
s-FieldLength                   S-FieldLength                OPTIONAL,
ul-meanBitRate                  MeanBitRate                  OPTIONAL,
iE-Extensions                    ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    transportFormatCombinationSet TransportFormatCombinationSet,
    dl-DPCH-SlotNumber            DL-DPCH-SlotNumber,
    tFCI-SignallingMode           TFCI-SignallingMode,
    tFCI-Presence                 TFCI-Presence                OPTIONAL
    -- This IE is present if Slot Format is from 12 to 16 -- ,
    multiplexingPosition          MultiplexingPosition,
    powerOffsetInformation        SEQUENCE {
        po1-ForTFCI-Bits          PowerOffset,
        po2-ForTPC-Bits           PowerOffset,
        po3-ForPilotBits          PowerOffset,
        ...
    },
    dl-TPC-StepSize               TPC-StepSize,
    meanBitRate                   MeanBitRate                  OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationList-RL-SetupReqFDD ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-SetupReqFDD} }

DCH-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqFDD CRITICALITY ignore TYPE DCH-InformationItem-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

DCH-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    dCH-ID                        DCH-ID,
    dCH-CombinationInd            DCH-CombinationInd            OPTIONAL,
```

```

rLC-Mode                RLC-Mode,
ul-transportFormatSet    TransportFormatSet,
dl-transportFormatSet    TransportFormatSet,
ul-BLER                  BLER,
dl-BLER                  BLER,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority     FrameHandlingPriority,
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode              UL-FP-Mode,
toAWS                   ToAWS,
toAWE                    ToAWE,
DRACControl              DRACControl,
iE-Extensions            ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
...
}

DCH-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RL-InformationList-RL-SetupReqFDD          ::= RL-IE-ContainerList { {RL-InformationItemIEs-RL-SetupReqFDD} }

RL-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-RL-SetupReqFDD  CRITICALITY ignore  TYPE RL-InformationItem-RL-SetupReqFDD  PRESENCE mandatory  },
  ...
}

RL-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  uC-ID                C-ID,
  frameOffset          FrameOffset,
  chipOffset           ChipOffset,
  propagationDelay     PropagationDelay          OPTIONAL,
  diversityControlField DiversityControlField    OPTIONAL
  -- This IE is present only if the RL is not the first one in the RL-InformationList-RL-SetupReqFDD --,
  dl-InitialTX-Power   DL-Power                  OPTIONAL
  -- Initial DL transmission power -- ,
  cPICH-EcIo          CPICH-EcIo                OPTIONAL,
  sSDT-CellID         SSDT-CellID                OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {RL-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--

```

```

-- RADIO LINK SETUP REQUEST TDD
--
-- *****

RadioLinkSetupRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container          {{RadioLinkSetupRequestTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer    {{RadioLinkSetupRequestTDD-Extensions}}          OPTIONAL,
    ...
}

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional   } |
    { ID id-AllowedQueuingTime CRITICALITY ignore TYPE AllowedQueuingTime PRESENCE optional   } |
    { ID id-UL-MeanBitRate   CRITICALITY ignore TYPE MeanBitRate   PRESENCE optional   } |
    { ID id-DL-MeanBitRate   CRITICALITY ignore TYPE MeanBitRate   PRESENCE optional   } |
    { ID id-UL-CCTrChInformationList-RL-SetupReqTDD CRITICALITY ignore TYPE UL-CCTrChInformationList-RL-SetupReqTDD PRESENCE mandatory } |
    { ID id-DL-CCTrChInformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DL-CCTrChInformationList-RL-SetupReqTDD PRESENCE mandatory } |
    { ID id-DCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReqTDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqTDD CRITICALITY ignore TYPE RL-Information-RL-SetupReqTDD PRESENCE mandatory },
    ...
}

UL-CCTrChInformationList-RL-SetupReqTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrChInformationItemIEs-RL-SetupReqTDD} }

UL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrChInformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE UL-CCTrChInformationItem-RL-SetupReqTDD PRESENCE mandatory },
    ...
}

UL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    ul-TFCS            TransportFormatCombinationSet,
    tFCI-Coding        TFCI-Coding,
    ul-PunctureLimit   PunctureLimit,
    iE-Extensions      ProtocolExtensionContainer { {UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrChInformationList-RL-SetupReqTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrChInformationItemIEs-RL-SetupReqTDD} }

DL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrChInformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE DL-CCTrChInformationItem-RL-SetupReqTDD PRESENCE mandatory },
    ...
}

DL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    dl-TFCS            TransportFormatCombinationSet,

```

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```
tFCI-Coding          TFCI-Coding,
dl-PunctureLimit    PunctureLimit,
iE-Extensions       ProtocolExtensionContainer { {DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
...
}

DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-InformationList-RL-SetupReqTDD ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-SetupReqTDD} }

DCH-InformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-InformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE DCH-InformationItem-RL-SetupReqTDD PRESENCE mandatory },
...
}

DCH-InformationItem-RL-SetupReqTDD ::= SEQUENCE {
dCH-ID                DCH-ID,
ul-cCTrCH-ID          CCTrCH-ID, -- UL CCTrCH in which the DCH is mapped
dl-cCTrCH-ID          CCTrCH-ID, -- DL CCTrCH in which the DCH is mapped
dCH-CombinationInd    DCH-CombinationInd OPTIONAL,
rLC-Mode              RLC-Mode,
ul-transportFormatSet TransportFormatSet,
dl-transportFormatSet TransportFormatSet,
ul-BLER               BLER,
dl-BLER               BLER,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority FrameHandlingPriority,
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode            UL-FP-Mode,
toAWS                 ToAWS,
toAWE                 ToAWE,
iE-Extensions         ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
...
}

DCH-InformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RL-Information-RL-SetupReqTDD ::= SEQUENCE {
rL-ID                 RL-ID,
c-ID                  C-ID,
frameOffset           FrameOffset,
primaryCCPCH-RSCP     PrimaryCCPCH-RSCP OPTIONAL,
iE-Extensions         ProtocolExtensionContainer { {RL-Information-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
...
}

RL-Information-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
```

```

RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK SETUP RESPONSE FDD
--
-- *****

RadioLinkSetupResponseFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupResponseFDD-Extensions}} OPTIONAL,
    ...
}

RadioLinkSetupResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-SetupRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseList-RL-SetupRspFDD
      PRESENCE mandatory } |
    { ID id-UL-EbNoTarget   CRITICALITY ignore TYPE UL-EbNoTarget   PRESENCE optional } |
    { ID id-DL-EbNoTarget   CRITICALITY ignore TYPE DL-EbNoTarget   PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= RL-IE-ContainerList { {RL-InformationResponseItemIEs-RL-SetupRspFDD} }

RL-InformationResponseItemIEs-RL-SetupRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-SetupRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseItem-RL-SetupRspFDD PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    sAI            SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    ssecondary--CCPCH--Info Secondary--CCPCH--Info-RL-SetupRspFDD,
    dl-CodeInformation DL-CodeInformationList-RL-SetupRspFDD,
    sSDT-SupportIndicator SSdT-SupportIndicator,
    maxUL-EbNo          UL-EbNo,
    minUL-EbNo          UL-EbNo,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```
RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
Secondary--CCPCH--Info-RL-SetupRspFDD ::= SEQUENCE {
  fdd-S-CCPCH-Offset          FDD-S-CCPCH-Offset,
  dl-ScramblingCode          DL-ScramblingCode,
  fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
  dl-TFCS                    TransportFormatCombinationSet,
  secondaryCCPCHs            SecondaryCCPCH-List,
  tFCI-Presence              TFCI-Presence OPTIONAL,
  multiplexingPosition       MultiplexingPosition,
  sSDT-Indication            SSDT-Indication,
  fach-PCH-InformationList    FACH-PCH-InformationList-RL-SetupRspFDD,
  schedulingInformation       SchedulingInformation-RL-SetupRspFDD,
  iE-Extensions              ProtocolExtensionContainer { { FACH-PCH-InformationList-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
  ...
},
  ...
}
```

```
FACH-PCH-InformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE(1..maxFACHCount)) OF
  SEQUENCE {
    transportFormatSet        TransportFormatSet,
    iE-Extensions             ProtocolExtensionContainer { { FACH-PCH-InformationList-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    ...
  }
}
```

```
FACH-PCH-InformationList-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
SchedulingInformation-RL-SetupRspFDD ::= SEQUENCE {
  iB-SG-Rep                  IB-SG-Rep,
  segmentInformationList      SegmentInformationList-RL-SetupRspFDD OPTIONAL,
  iE-Extensions              ProtocolExtensionContainer { { SchedulingInformation-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
  ...
}
```

```
SchedulingInformation-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
SegmentInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE(1..maxIBSEG-1)) OF
  SEQUENCE {
    iB-SG-Pos                 IB-SG-Pos,
    iE-Extensions             ProtocolExtensionContainer { { SIB-PosOffsetInformationList-RL-SetupRspFDD SegmentInformationList-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
    ...
  }
}
```



```

SegmentInformationList-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupRspFDD

DL-CodeInformationItem-RL-SetupRspFDD ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication        CHOICE {
        combining                SEQUENCE {
            rL-ID                  RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dch-InformationResponse-RL-SetupRspFDD  DCH-InformationResponseList-RL-SetupRspFDD  OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions                ProtocolExtensionContainer { {DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CodeInformationItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspFDD

DCH-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
    dch-ID                      DCH-ID,
    bindingID                    BindingID,
    transportLayerAddress        TransportLayerAddress,
    iE-Extensions                ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationResponseItem-RL-SetupRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-SetupRsp

NeighbouringFDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
    uC-ID                        C-ID,
    cN-PS-DomainIdentifier        CN-PS-DomainIdentifier  OPTIONAL,
    cN-CS-DomainIdentifier        CN-CS-DomainIdentifier  OPTIONAL,
    uARFCN                        UARFCN,
}

```

```

frameOffset           FrameOffset           OPTIONAL,
primaryScramblingCode PrimaryScramblingCode,
primaryCPICH-Power    PrimaryCPICH-Power    OPTIONAL,
iE-Extensions         ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
...
}

```

```

NeighbouringFDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

NeighbouringTDD-CellInformationList-RL-SetupRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
  NeighbouringTDD-CellInformationItem-RL-SetupRsp

```

```

NeighbouringTDD-CellInformationItem-RL-SetupRsp ::= SEQUENCE {
  c-ID                C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN              UARFCN,
  frameOffset         FrameOffset           OPTIONAL,
  cellParameterID     CellParameterID,
  syncCase            SyncCase,
  timeSlot            TimeSlot             OPTIONAL
  -- This IE is present only if SyncCase is Case1 -- ,
  pSCH-TimeSlot       PSCH-TimeSlot        OPTIONAL
  -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
  ul-EbNo             UL-EbNo             OPTIONAL,
  dl-EbNo             DL-EbNo             OPTIONAL,
  iE-Extensions       ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs} } OPTIONAL,
  ...
}

```

```

NeighbouringTDD-CellInformationItem-RL-SetupRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

RadioLinkSetupResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

-- *****
--
-- RADIO LINK SETUP RESPONSE TDD
--
-- *****

```

```

RadioLinkSetupResponseTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{RadioLinkSetupResponseTDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupResponseTDD-Extensions}}
  ...
}

```

```

RadioLinkSetupResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {

```

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```
{ ID id-D-RNTI CRITICALITY ignore TYPE D-RNTI PRESENCE optional } |
{ ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
{ ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
{ ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore TYPE RL-InformationResponse-RL-SetupRspTDD PRESENCE mandatory } |
{ ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
...
}
```

```
RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID RL-ID,
    sAI SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    maxUL-EbNo UL-EbNo,
    minUL-EbNo UL-EbNo,
    ul-EbNoTarget UL-EbNo OPTIONAL,
    dl-EbNoTarget DL-EbNo OPTIONAL,
    ul-CCTrCHInformation UL-CCTrCHInformationList-RL-SetupRspTDD,
    dl-CCTrCHInformation DL-CCTrCHInformationList-RL-SetupRspTDD,
    dCH-InformationResponse DCH-InformationResponseList-RL-SetupRspTDD,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {RL-InformationResponse-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
RL-InformationResponse-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

-- \*\* NOTE: Shall this be made as an IE container? \*\*

```
UL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-SetupRspTDD
```

```
UL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    ul-DPCH-Information UL-DPCH-InformationList-RL-SetupRspTDD,
    iE-Extensions ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
UL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

-- \*\* NOTE: Shall this be made as an IE container? \*\*

```
UL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationItem-RL-SetupRspTDD
```

-- \*\*NOTE: UL-DPCH-InformationItem-RL-SetupRspTDD and DL-DPCH-InformationItem-RL-SetupRspTDD  
-- are currently similar. Combine them? \*\*

```
UL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
    dPCH-ID DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode,
    burstType BurstType,
    midambleShift MidambleShift,
}
```

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```
timeSlot          TimeSlot,
tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset,
repetitionPeriod      RepetitionPeriod,
repetitionLength      RepetitionLength,
tFCI-Presence         TFCI-Presence,
iE-Extensions         ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-SetupRspTDD

DL-CCTrCHInformationItem-RL-SetupRspTDD ::= SEQUENCE {
cCTrCH-ID          CCTrCH-ID,
dl-DPCH-Information      DL-DPCH-InformationList-RL-SetupRspTDD,
iE-Extensions         ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-CCTrCHInformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationItem-RL-SetupRspTDD

DL-DPCH-InformationItem-RL-SetupRspTDD ::= SEQUENCE {
dPCH-ID          DPCH-ID,
tDD-ChannelisationCode      TDD-ChannelisationCode,
burstType          BurstType,
midambleShift      MidambleShift,
timeSlot          TimeSlot,
tDD-PhysicalChannelOffset  TDD-PhysicalChannelOffset,
repetitionPeriod      RepetitionPeriod,
repetitionLength      RepetitionLength,
tFCI-Presence         TFCI-Presence,
iE-Extensions         ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupRspTDD

DCH-InformationResponseItem-RL-SetupRspTDD ::= SEQUENCE {
dCH-ID          DCH-ID,
bindingID      BindingID,
```

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```
transportLayerAddress      TransportLayerAddress,
iE-Extensions              ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs} } OPTIONAL,
...
}

DCH-InformationResponseItem-RL-SetupRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK SETUP FAILURE FDD
--
-- *****

RadioLinkSetupFailureFDD ::= SEQUENCE {
  protocolIEs              ProtocolIE-Container      {{RadioLinkSetupFailureFDD-IEs}},
  protocolExtensions       ProtocolExtensionContainer {{RadioLinkSetupFailureFDD-Extensions}}
  ...
}

RadioLinkSetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI              CRITICALITY ignore TYPE D-RNTI              PRESENCE mandatory } |
  { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE mandatory } |
  { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE mandatory } |
  { ID id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
    PRESENCE mandatory } |
  { ID id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-SetupFailureFDD
    PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD
    PRESENCE mandatory },
  ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
  rL-ID                    RL-ID,
  cause                    Cause,
  iE-Extensions            ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  ...
}
```

```

}

UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-SetupFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs} }

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-SetupFailureFDD
      PRESENCE mandatory },
    ...
}

SuccessfulRL-InformationResponse-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    dl-CodeInformation   DL-CodeInformationList-RL-SetupFailureFDD,
    sSDT-SupportIndicator SSDT-SupportIndicator,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-SetupFailureFDD OPTIONAL,
    ul-EbNoTarget        UL-EbNo,
    maxUL-EbNo           UL-EbNo,
    minUL-EbNo           UL-EbNo,
    dl-EbNoTarget        DL-EbNo,
    iE-Extensions        ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}
-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-SetupFailureFDD

SuccessfulRL-InformationResponse-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CodeInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    dl-ScramblingCode    DL-ScramblingCode,
    FDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication  CHOICE {
        combining        SEQUENCE {
            rL-ID        RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-SetupFailureFDD DCH-InformationResponseList-RL-SetupFailureFDD OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions        ProtocolExtensionContainer { {DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

DL-CodeInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-SetupFailureFDD

DCH-InformationResponseItem-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID              BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions          ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationResponseItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringFDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN                UARFCN,
    frameOffset           FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power    PrimaryCPICH-Power OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN                UARFCN,
    frameOffset           FrameOffset OPTIONAL,
    cellParameterID       CellParameterID,
    syncCase              SyncCase,
    timeSlot              TimeSlot,
    pSCH-TimeSlot         PSCH-TimeSlot OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,

```

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```

    iE-Extensions          ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  }
}

NeighbouringTDD-CellInformationItem-RL-SetupFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkSetupFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

RadioLinkSetupFailureTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkSetupFailureTDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupFailureTDD-Extensions}}          OPTIONAL,
  ...
}

RadioLinkSetupFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
    CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD
    PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs} } OPTIONAL,
  ...
}

UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkSetupFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST FDD
--
-- *****
```



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```
RadioLinkAdditionRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionRequestFDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{RadioLinkAdditionRequestFDD-Extensions}}
    ...
}

RadioLinkAdditionRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-EbNoTarget          CRITICALITY ignore TYPE UL-EbNo          PRESENCE mandatory } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD CRITICALITY ignore TYPE RL-InformationList-RL-AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-InformationList-RL-AdditionRqstFDD ::= RL-IE-ContainerList { {RL-Information-RL-AdditionRqstFDD-IEs} }

RL-Information-RL-AdditionRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstFDD CRITICALITY ignore TYPE RL-Information-RL-AdditionRqstFDD PRESENCE mandatory },
    ...
}

RL-Information-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    c-ID          C-ID,
    frameOffset   FrameOffset,
    chipOffset    ChipOffset,
    diversityControlField DiversityControlField,
    primaryCPICH-EcNo PrimaryCPICH-EcNo OPTIONAL,
    sSDT-CellID   SSdT-CellID OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-AdditionRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION REQUEST TDD
--
-- *****

RadioLinkAdditionRequestTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionRequestTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{RadioLinkAdditionRequestTDD-Extensions}}
    ...
}

RadioLinkAdditionRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-AdditionRqstTDD CRITICALITY ignore TYPE RL-Information-RL-AdditionRqstTDD PRESENCE mandatory },
    ...
}
```

```

}
...
}
RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                 C-ID,
    frameOffset          FrameOffset,
    chipOffset           ChipOffset,
    diversityControlField DiversityControlField,
    primaryCCPCH-RSCP    PrimaryCCPCH-RSCP,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-AdditionRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE FDD
--
-- *****

RadioLinkAdditionResponseFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionResponseFDD-Extensions}}          OPTIONAL,
    ...
}

RadioLinkAdditionResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional } |
    { ID id-RL-InformationResponseList-RL-AdditionRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseList-RL-AdditionRspFDD
      PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-AdditionRspFDD ::= RL-IE-ContainerList { {RL-InformationResponseItemIEs-RL-AdditionRspFDD} }

RL-InformationResponseItemIEs-RL-AdditionRspFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-AdditionRspFDD
      CRITICALITY ignore TYPE RL-InformationResponseItem-RL-AdditionRspFDD          PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
    rL-ID                RL-ID,

```

```

sAI                SAI,
ul-InterferenceLevel  ScaledUL-InterferenceLevel,
Secondary--CCPCH--Info  Secondary--CCPCH--Info-RL-AdditionRspFDD,
dl-CodeInformation    DL-CodeInformationList-RL-AdditionRspFDD,
sSDT-SupportIndicator  SSdT-SupportIndicator,
maxUL-EbNo            UL-EbNo,
minUL-EbNo            UL-EbNo,
neighbouringFDD-CellInformation  NeighbouringFDD-CellInformationList-RL-SetupRsp OPTIONAL,
neighbouringTDD-CellInformation  NeighbouringTDD-CellInformationList-RL-SetupRsp OPTIONAL,

iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Secondary--CCPCH--Info-RL-AdditionRspFDD ::= SEQUENCE {
  fdd-S-CCPCH-Offset          FDD-S-CCPCH-Offset,
  dl-ScramblingCode           DL-ScramblingCode,
  fdd-DL-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
  dl-TFCS                     TransportFormatCombinationSet,
  secondaryCCPCHs             SecondaryCCPCH-List,
  tFCI-Presence               TFCI-Presence OPTIONAL,
  multiplexingPosition        MultiplexingPosition,
  sSDT-Indication             SSdT-Indication,
  fach-PCH-InformationList    Fach-PCH-InformationList-RL-AdditionRspFDD,
  schedulingInformation       SchedulingInformation-RL-AdditionRspFDD,
  iE-Extensions               ProtocolExtensionContainer { { Secondary-CCPCH-Info-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
  ...
}

Secondary-CCPCH-Info-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Fach-PCH-InformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE(1..maxFachCount)) OF
  SEQUENCE {
    transportFormatSet        TransportFormatSet,
    iE-Extensions             ProtocolExtensionContainer { { Fach-PCH-InformationList-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
  }

Fach-PCH-InformationList-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

SchedulingInformation-RL-AdditionRspFDD ::= SEQUENCE {
    iB-SG-Rep                IB-SG-Rep,
    segmentInformationList   SegmentInformationList-RL-AdditionRspFDD OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { SchedulingInformation-RL-AdditionRspFDD-ExtIEs } } OPTIONAL,
    ...
}

SchedulingInformation-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SegmentInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE(1..maxIBSEG-1)) OF
    SEQUENCE {
        iB-SG-Pos                IB-SG-Pos,
        iE-Extensions           SIB-PosOffsetInformationList-RL-AdditionRspFDD SegmentInformationList-RL-
        AdditionRspFDD-ExtIEs } } OPTIONAL,
    ...
}

SegmentInformationList-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

-- \*\* NOTE: Shall this be made as an IE container? \*\*

```
DL-CodeInformationList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-AdditionRspFDD
```

```
DL-CodeInformationItem-RL-AdditionRspFDD ::= SEQUENCE {
    dl-ScramblingCode        DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    -- ** NOTE: How many alternatives are there, 2 or 3? **
    diversityIndication      CHOICE {
        combining            SEQUENCE {
            rL-ID            RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-AdditionRspFDD DCH-InformationResponseList-RL-AdditionRspFDD OPTIONAL
        }
    } OPTIONAL
    -- This IE is present only if the RL is not the first on in the RL Information -- ,
    iE-Extensions           ProtocolExtensionContainer { {DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
}

```

```
DL-CodeInformationItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

-- \*\* NOTE: Shall this be made as an IE container? \*\*

```
DCH-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionRspFDD
```

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```
DCH-InformationResponseItem-RL-AdditionRspFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    bindingID             BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions         ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationResponseItem-RL-AdditionRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Both FDD and TDD messages use these definitions **
NeighbouringFDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
    NeighbouringFDD-CellInformationItem-RL-AdditionRsp

NeighbouringFDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN              UARFCN,
    frameOffset         FrameOffset OPTIONAL,
    primaryScramblingCode PrimaryScramblingCode,
    primaryCPICH-Power  PrimaryCPICH-Power OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

NeighbouringTDD-CellInformationList-RL-AdditionRsp ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
    NeighbouringTDD-CellInformationItem-RL-AdditionRsp

NeighbouringTDD-CellInformationItem-RL-AdditionRsp ::= SEQUENCE {
    uC-ID                C-ID,
    cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
    cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
    uARFCN              UARFCN,
    frameOffset         FrameOffset OPTIONAL,
    cellParameterID     CellParameterID,
    syncCase            SyncCase,
    timeSlot            TimeSlot,
    pSCH-TimeSlot       PSCH-TimeSlot OPTIONAL
    -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
    iE-Extensions         ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs} } OPTIONAL,
    ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionRsp-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```

RadioLinkAdditionResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****

RadioLinkAdditionResponseTDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{RadioLinkAdditionResponseTDD-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{RadioLinkAdditionResponseTDD-Extensions}}      OPTIONAL,
    ...
}

RadioLinkAdditionResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE optional } |
    { ID id-RL-InformationResponse-RL-AdditionRspTDD
      CRITICALITY ignore TYPE RL-InformationResponse-RL-AdditionRspTDD PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    SAI                  SAI,
    ul-InterferenceLevel ScaledUL-InterferenceLevel,
    ul-CCTrCHInformation UL-CCTrCHInformationList-RL-AdditionRspTDD,
    dl-CCTrCHInformation DL-CCTrCHInformationList-RL-AdditionRspTDD,
    diversityIndication CHOICE {
        combining          SEQUENCE {
            rL-ID          RL-ID
        },
        nonCombiningOrIENotPresent SEQUENCE {
            dCH-InformationResponse-RL-AdditionRspFDD DCH-InformationResponseList-RL-AdditionRspFDD OPTIONAL
        }
    } OPTIONAL,
    maxUL-EbNo          UL-EbNo,
    minUL-EbNo          UL-EbNo,
    neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-AdditionRspTDD OPTIONAL,
    neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-AdditionRspTDD OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCHInformationItem-RL-AdditionRspTDD

```

```

UL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    ul-DPCH-Information      UL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions            ProtocolExtensionContainer { {UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
UL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationItem-RL-AdditionRspTDD

UL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                  DPCH-ID,
    tDD-ChannelisationCode   TDD-ChannelisationCode,
    burstType                 BurstType,
    midambleShift            MidambleShift,
    timeSlot                  TimeSlot,
    offset                    Offset,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset,
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tFCI-Presence             TFCI-Presence,
    iE-Extensions            ProtocolExtensionContainer { {UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CCTrCHInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCHInformationItem-RL-AdditionRspTDD

DL-CCTrCHInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    cCTrCH-ID                CCTrCH-ID,
    dl-DPCH-Information      DL-DPCH-InformationList-RL-AdditionRspTDD,
    iE-Extensions            ProtocolExtensionContainer { {DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCHInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-DPCH-InformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationItem-RL-AdditionRspTDD

DL-DPCH-InformationItem-RL-AdditionRspTDD ::= SEQUENCE {
    dPCH-ID                  DPCH-ID,

```

```

tDD-ChannelisationCode      TDD-ChannelisationCode,
burstType                    BurstType,
midambleShift                MidambleShift,
timeSlot                      TimeSlot,
tDD-PhysicalChannelOffset    TDD-PhysicalChannelOffset,
repetitionPeriod             RepetitionPeriod,
repetitionLength             RepetitionLength,
tFCI-Presence                TFCI-Presence,
iE-Extensions                ProtocolExtensionContainer { {DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringFDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
uC-ID                        C-ID,
cN-PS-DomainIdentifier       CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier       CN-CS-DomainIdentifier OPTIONAL,
uARFCN                        UARFCN,
frameOffset                  FrameOffset OPTIONAL,
primaryScramblingCode        PrimaryScramblingCode,
primaryCPICH-Power           PrimaryCPICH-Power OPTIONAL,
iE-Extensions                ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

NeighbouringFDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-AdditionRspTDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD

NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD ::= SEQUENCE {
uC-ID                        C-ID,
cN-PS-DomainIdentifier       CN-PS-DomainIdentifier OPTIONAL,
cN-CS-DomainIdentifier       CN-CS-DomainIdentifier OPTIONAL,
uARFCN                        UARFCN,
frameOffset                  FrameOffset OPTIONAL,
cellParameterID              CellParameterID,
syncCase                      SyncCase,
timeSlot                      TimeSlot,
pSCH-TimeSlot                PSCH-TimeSlot OPTIONAL
-- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
iE-Extensions                ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs} } OPTIONAL,
...
}

```



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```
NeighbouringTDD-CellInformationItem-RL-AdditionRspTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE FDD
--
-- *****

RadioLinkAdditionFailureFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionFailureFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionFailureFDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkAdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      PRESENCE mandatory } |
    { ID id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      CRITICALITY ignore TYPE SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD
      PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
      CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD
      PRESENCE mandatory },
    ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    cause          Cause,
    iE-Extensions ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD ::= RL-IE-ContainerList { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs} }
```

```

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    CRITICALITY ignore TYPE SuccessfulRL-InformationResponse-RL-AdditionFailureFDD
    PRESENCE mandatory },
  ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID RL-ID,
  sAI SAI,
  ul-InterferenceLevel ScaledUL-InterferenceLevel,
  dl-CodeInformation DL-CodeInformationList-RL-AdditionFailureFDD,
  sSDT-SupportIndicator SSDT-SupportIndicator,
  maxUL-EbNo UL-EbNo,
  minUL-EbNo UL-EbNo,
  neighbouringFDD-CellInformation NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
  neighbouringTDD-CellInformation NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { {SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

SuccessfulRL-InformationResponse-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DL-CodeInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNoOfDL-Codes)) OF DL-CodeInformationItem-RL-AdditionFailureFDD

DL-CodeInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  dl-ScramblingCode DL-ScramblingCode,
  dl-ChannelisationCode DL-ChannelisationCode,
  diversityIndication CHOICE {
    combining SEQUENCE {
      rL-ID RL-ID
    },
    nonCombiningOrIENotPresent SEQUENCE {
      dCH-InformationResponse-RL-AdditionFailureFDD DCH-InformationResponseList-RL-AdditionFailureFDD OPTIONAL
    }
  } OPTIONAL
  -- This IE is present only if the RL is not the first on in the RL Information -- ,
  iE-Extensions ProtocolExtensionContainer { {DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CodeInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- ** NOTE: Shall this be made as an IE container? **
DCH-InformationResponseList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem-RL-AdditionFailureFDD

DCH-InformationResponseItem-RL-AdditionFailureFDD ::= SEQUENCE {

```

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```
dCH-ID                DCH-ID,
bindingID              BindingID,
transportLayerAddress TransportLayerAddress,
iE-Extensions         ProtocolExtensionContainer { {DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
...
}

DCH-InformationResponseItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringFDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfFDD-Neighbours)) OF
  NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID                C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN               UARFCN,
  frameOffset          FrameOffset OPTIONAL,
  primaryScramblingCode PrimaryScramblingCode,
  cPICH-Power          CPICH-Power OPTIONAL,
  iE-Extensions         ProtocolExtensionContainer { {NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringFDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

NeighbouringTDD-CellInformationList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfTDD-Neighbours)) OF
  NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD ::= SEQUENCE {
  uC-ID                C-ID,
  cN-PS-DomainIdentifier CN-PS-DomainIdentifier OPTIONAL,
  cN-CS-DomainIdentifier CN-CS-DomainIdentifier OPTIONAL,
  uARFCN               UARFCN,
  frameOffset          FrameOffset OPTIONAL,
  cellParameterID      CellParameterID,
  syncCase             SyncCase,
  timeSlot             TimeSlot,
  pSCH-TimeSlot        PSCH-TimeSlot OPTIONAL
  -- This IE is present only if pSCH-PCCPCH-Allocation = Case3 -- ,
  iE-Extensions         ProtocolExtensionContainer { {NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

NeighbouringTDD-CellInformationItem-RL-AdditionFailureFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkAdditionFailureFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
```

```

}
...
}
-- *****
--
-- RADIO LINK ADDITION FAILURE TDD
--
-- *****

RadioLinkAdditionFailureTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkAdditionFailureTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkAdditionFailureTDD-Extensions}}          OPTIONAL,
    ...
}

RadioLinkAdditionFailureTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UnsuccessfulRL-InformationResponse CRITICALITY ignore TYPE UnsuccessfulRL-InformationResponse PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics             CRITICALITY ignore TYPE CriticalityDiagnostics             PRESENCE optional },
    ...
}

UnsuccessfulRL-InformationResponse ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { {UnsuccessfulRL-InformationResponse-ExtIEs} } OPTIONAL,
    ...
}

UnsuccessfulRL-InformationResponse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkAdditionFailureTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK DELETION REQUEST
--
-- *****

RadioLinkDeletionRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkDeletionRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkDeletionRequest-Extensions}}          OPTIONAL,
    ...
}

RadioLinkDeletionRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationList-RL-DeletionRqst CRITICALITY ignore TYPE RL-InformationList-RL-DeletionRqst PRESENCE mandatory },
    ...
}

```

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```
RL-InformationList-RL-DeletionRqst ::= RL-IE-ContainerList { {RL-Information-RL-DeletionRqst-IEs} }

RL-Information-RL-DeletionRqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-DeletionRqst      CRITICALITY ignore  TYPE RL-Information-RL-DeletionRqst  PRESENCE mandatory },
  ...
}

RL-Information-RL-DeletionRqst ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-DeletionRqst-ExtIEs} } OPTIONAL,
  ...
}

RL-Information-RL-DeletionRqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkDeletionRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

RadioLinkDeletionResponse ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{RadioLinkDeletionResponse-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkDeletionResponse-Extensions}}      OPTIONAL,
  ...
}

RadioLinkDeletionResponse-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CriticalityDiagnostics      CRITICALITY ignore  TYPE CriticalityDiagnostics      PRESENCE optional },
  ...
}

RadioLinkDeletionResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

RadioLinkReconfigurationPrepareFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{RadioLinkReconfigurationPrepareFDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareFDD-Extensions}}      OPTIONAL,
  ...
}
```

```

RadioLinkReconfigurationPrepareFDD-IES RNSAP-PROTOCOL-IES ::= {
  { ID id-AllowedQueuingTime          CRITICALITY ignore TYPE AllowedQueuingTime          PRESENCE mandatory } |
  { ID id-UL-DPCH-Information          CRITICALITY ignore TYPE UL-DPCH-Information          PRESENCE optional } |
  { ID id-DL-DPCH-Information          CRITICALITY ignore TYPE DL-DPCH-Information          PRESENCE optional } |
  { ID id-DCH-ModifyList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DCH-AddList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-AddList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-DCH-DeleteList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY ignore TYPE RL-InformationList-RL-ReconfPrepFDD PRESENCE mandatory },
  ...
}

UL-DPCH-Information ::= SEQUENCE {
  ul-ScramblingCode          UL-ScramblingCode          OPTIONAL,
  minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength OPTIONAL,
  maxNrOfUL-DPCHs           MaxNrOfUL-DPCHs           OPTIONAL
  -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 --,
  ul-PunctureLimit          PunctureLimit              OPTIONAL,
  tFCS                      TransportFormatCombinationSet OPTIONAL,
  ul-DPCCH-SlotFormat       UL-DPCCH-SlotFormat       OPTIONAL,
  sSDT-CellIDLength         SSDT-CellID-Length         OPTIONAL,
  s-FieldLength             S-FieldLength             OPTIONAL,
  meanBitRate               MeanBitRate                OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { {UL-DPCH-Information-ExtIEs} } OPTIONAL,
  ...
}

UL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-DPCH-Information ::= SEQUENCE {
  tFCS                      TransportFormatCombinationSet OPTIONAL,
  dl-DPCCH-SlotFormat       DL-DPCCH-SlotFormat       OPTIONAL,
  tFCI-SignallingMode       TFCI-SignallingMode       OPTIONAL,
  tFCI-Presence             TFCI-Presence             OPTIONAL
  -- This IE is present if Slot Format is from 12 to 16 --,
  multiplexingPosition      MultiplexingPosition      OPTIONAL,
  meanBitRate               MeanBitRate                OPTIONAL,
  iE-Extensions             ProtocolExtensionContainer { {DL-DPCH-Information-ExtIEs} } OPTIONAL,
  ...
}

DL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-ModifyList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfPrepFDD-IEs} }

DCH-Modify-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfPrepFDD PRESENCE mandatory },
  ...
}

```

```

DCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    ul-TransportformatSet  TransportFormatSet    OPTIONAL,
    dl-TransportformatSet  TransportFormatSet    OPTIONAL,
    allocationRetentionPriority  AllocationRetentionPriority  OPTIONAL,
    frameHandlingPriority    FrameHandlingPriority    OPTIONAL,
    ul-FP-Mode              UL-FP-Mode          OPTIONAL,
    toAWS                    ToAWS              OPTIONAL,
    toAWE                     ToAWE              OPTIONAL,
    dRACControl              DRACControl OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfPrepFDD          ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfPrepFDD-IEs} }

DCH-Add-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfPrepFDD          CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfPrepFDD          PRESENCE mandatory  },
    ...
}

DCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    rLC-Mode              RLC-Mode,
    dCH-CombinationInd    DCH-CombinationInd    OPTIONAL,
    ul-TransportformatSet  TransportFormatSet,
    dl-TransportformatSet  TransportFormatSet,
    ul-BLER                BLER,
    dl-BLER                BLER,
    allocationRetentionPriority  AllocationRetentionPriority,
    frameHandlingPriority    FrameHandlingPriority,
    payloadCRC-PresenceIndicator  PayloadCRC-PresenceIndicator,
    ul-FP-Mode              UL-FP-Mode,
    toAWS                    ToAWS,
    toAWE                     ToAWE,
    dRACControl              DRACControl,
    iE-Extensions            ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepFDD          ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfPrepFDD-IEs} }

DCH-Delete-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-DeleteItem-RL-ReconfPrepFDD          CRITICALITY ignore  TYPE DCH-DeleteItem-RL-ReconfPrepFDD          PRESENCE mandatory  },

```

```

}
...
}
DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    iE-Extensions        ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}
DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RL-InformationList-RL-ReconfPrepFDD      ::= RL-IE-ContainerList { {RL-Information-RL-ReconfPrepFDD-IEs} }
RL-Information-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-ReconfPrepFDD      CRITICALITY ignore  TYPE RL-Information-RL-ReconfPrepFDD      PRESENCE mandatory  },
    ...
}
RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sSDT-Indication      SSdT-Indication      OPTIONAL,
    sSDT-CellIdentity    SSdT-CellID         OPTIONAL
    -- The IE may be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}
RL-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RadioLinkReconfigurationPrepareFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- *****
RadioLinkReconfigurationPrepareTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{RadioLinkReconfigurationPrepareTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareTDD-Extensions}}
    ...
}
RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime      CRITICALITY ignore  TYPE AllowedQueuingTime      PRESENCE optional  } |
    { ID id-UL-MeanBitRate          CRITICALITY ignore  TYPE MeanBitRate            PRESENCE optional  } |
    { ID id-DL-MeanBitRate          CRITICALITY ignore  TYPE MeanBitRate            PRESENCE optional  } |

```



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```
{ ID id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD
    CRITICALITY ignore TYPE UL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE mandatory } |
{ ID id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD
    CRITICALITY ignore TYPE DL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE mandatory } |
{ ID id-DCH-ModifyList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfPrepTDD PRESENCE mandatory } |
{ ID id-DCH-AddList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-AddList-RL-ReconfPrepTDD PRESENCE mandatory } |
{ ID id-DCH-DeleteList-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfPrepTDD PRESENCE mandatory },
...
}

UL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-Information-RL-ReconfPrepTDD CRITICALITY ignore TYPE UL-CCTrCH-Information-RL-ReconfPrepTDD PRESENCE mandatory },
    ...
}

UL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    tFCS TransportFormatCombinationSet OPTIONAL,
    tFCI-Coding TFCI-Coding OPTIONAL,
    punctureLimit PunctureLimit OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {UL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-Information-RL-ReconfPrepTDD CRITICALITY ignore TYPE DL-CCTrCH-Information-RL-ReconfPrepTDD PRESENCE mandatory },
    ...
}

DL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    tFCS TransportFormatCombinationSet OPTIONAL,
    tFCI-Coding TFCI-Coding OPTIONAL,
    punctureLimit PunctureLimit OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfPrepTDD-IEs} }

DCH-Modify-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
```

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```
{ ID id-DCH-ModifyItem-RL-ReconfPrepTDD      CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfPrepTDD      PRESENCE mandatory  },
...
}

DCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
dCH-ID                DCH-ID,
ul-CCTrCH-ID          CCTrCH-ID          OPTIONAL,
dl-CCTrCH-ID          CCTrCH-ID          OPTIONAL,
ul-TransportformatSet TransportFormatSet OPTIONAL,
dl-TransportformatSet TransportFormatSet OPTIONAL,
allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
frameHandlingPriority FrameHandlingPriority OPTIONAL,
ul-FP-Mode            UL-FP-Mode          OPTIONAL,
toAWS                 ToAWS              OPTIONAL,
toAWE                 ToAWE              OPTIONAL,
iE-Extensions         ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-AddList-RL-ReconfPrepTDD          ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfPrepTDD-IEs} }

DCH-Add-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-AddItem-RL-ReconfPrepTDD      CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfPrepTDD      PRESENCE mandatory  },
...
}

DCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
dCH-ID                DCH-ID,
rLC-Mode              RLC-Mode,
ul-CCTrCH-ID          CCTrCH-ID,
dl-CCTrCH-ID          CCTrCH-ID,
dCH-CombinationInd    DCH-CombinationInd OPTIONAL,
ul-TransportformatSet TransportFormatSet,
dl-TransportformatSet TransportFormatSet,
ul-BLER               BLER,
dl-BLER               BLER,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority FrameHandlingPriority,
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode            UL-FP-Mode,
toAWS                 ToAWS,
toAWE                 ToAWE,
iE-Extensions         ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
...
}

DCH-AddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
}
```

```

DCH-DeleteList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfPrepTDD-IEs} }

DCH-Delete-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-DeleteItem-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-DeleteItem-RL-ReconfPrepTDD PRESENCE mandatory },
  ...
}

DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  iE-Extensions ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY FDD
--
-- *****

RadioLinkReconfigurationReadyFDD ::= SEQUENCE {
  protocolIEs ProtocolIE-Container {{RadioLinkReconfigurationReadyFDD-IEs}},
  protocolExtensions ProtocolExtensionContainer {{RadioLinkReconfigurationReadyFDD-Extensions}} OPTIONAL,
  ...
}

RadioLinkReconfigurationReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseList-RL-ReconfReadyFDD
    CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfReadyFDD
    PRESENCE optional } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

RL-InformationResponseList-RL-ReconfReadyFDD ::= RL-IE-ContainerList { {RL-InformationResponse-RL-ReconfReadyFDD-IEs} }

RL-InformationResponse-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-ReconfReadyFDD
    CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfReadyFDD
    PRESENCE mandatory },
  ...
}

RL-InformationResponseItem-RL-ReconfReadyFDD ::= SEQUENCE {
  rL-ID RL-ID,

```

```

max-UL-EbNo          UL-EbNo,
min-UL-EbNo          UL-EbNo,
Secondary--CCPCH--Info          Secondary--CCPCH--Info-RL-ReconfReadyFDD,

dCHsToBeAdded        DCH-AddList-RL-ReconfReadyFDD          OPTIONAL,
dCHsToBeModified     DCH-ModifyList-RL-ReconfReadyFDD       OPTIONAL,

iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationResponseItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

Secondary--CCPCH--Info-RL-ReconfReadyFDD ::= SEQUENCE {
  fDD-S-CCPCH-Offset          FDD-S-CCPCH-Offset,
  dl-ScramblingCode           DL-ScramblingCode,
  fDD-DL-ChannelisationCodeNumber          FDD-DL-ChannelisationCodeNumber,
  dl-TFCS                      TransportFormatCombinationSet,
  secondaryCCPCHs              SecondaryCCPCH-List,
  tFCI-Presence                TFCI-Presence OPTIONAL,
  multiplexingPosition         MultiplexingPosition,
  sSDT-Indication              SSDT-Indication,
  fACH-PCH-InformationList     FACH-PCH-InformationList-RL-ReconfReadyFDD,
  schedulingInformation        SchedulingInformation-RL-ReconfReadyFDD,
  iE-Extensions                ProtocolExtensionContainer { { Secondary-CCPCH-Info-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
  ...
}

Secondary-CCPCH-Info-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

FACH-PCH-InformationList-RL-ReconfReadyFDD ::= SEQUENCE (SIZE(1..maxFACHCount)) OF
  SEQUENCE {
    transportFormatSet         TransportFormatSet,
    iE-Extensions              ProtocolExtensionContainer { { FACH-PCH-InformationList-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
    ...
  }

FACH-PCH-InformationList-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

SchedulingInformation-RL-ReconfReadyFDD ::= SEQUENCE {
  iB-SG-Rep                   IB-SG-Rep,
  segmentInformationList       SegmentInformationList-RL-ReconfReadyFDD          OPTIONAL,
  iE-Extensions                ProtocolExtensionContainer { { SchedulingInformation-RL-ReconfReadyFDD-ExtIEs } } OPTIONAL,

```

```

]
...
SchedulingInformation-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
]
...
]
SegmentInformationList-RL-ReconfReadyFDD ::= SEQUENCE (SIZE(1..maxIBSEG-1)) OF
SEQUENCE {
iB-SG-Pos IB-SG-Pos,
iE-Extensions ProtocolExtensionContainer { { -SIB-PosOffsetInformationList-RL-ReconfReadyFDD SegmentInformationList-RL-
ReconfReadyFDD-ExtIEs } } OPTIONAL,
...
]
SegmentInformationList-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
]
...
]

```

```

DCH-AddList-RL-ReconfReadyFDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfReadyFDD-IEs} }

```

```

DCH-Add-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-AddItem-RL-ReconfReadyFDD CRITICALITY ignore TYPE DCH-AddItem-RL-ReconfReadyFDD PRESENCE mandatory },
...
}

```

```

DCH-AddItem-RL-ReconfReadyFDD ::= SEQUENCE {
dCH-ID DCH-ID,
bindingID BindingID,
transportLayerAddress TransportLayerAddress,
iE-Extensions ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
...
}

```

```

DCH-AddItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

DCH-ModifyList-RL-ReconfReadyFDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfReadyFDD-IEs} }

```

```

DCH-Modify-RL-ReconfReadyFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-ModifyItem-RL-ReconfReadyFDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfReadyFDD PRESENCE mandatory },
...
}

```

```

DCH-ModifyItem-RL-ReconfReadyFDD ::= SEQUENCE {
dCH-ID DCH-ID,
bindingID BindingID,
transportLayerAddress TransportLayerAddress,

```

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```
iE-Extensions          ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfReadyFDD-ExtIEs} } OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfReadyFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkReconfigurationReadyFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY TDD
--
-- *****

RadioLinkReconfigurationReadyTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationReadyTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationReadyTDD-Extensions}} OPTIONAL,
    ...
}

RadioLinkReconfigurationReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponse-RL-ReconfReadyTDD
      CRITICALITY ignore TYPE RL-InformationResponse-RL-ReconfReadyTDD PRESENCE optional } |
    { ID id-CriticalityDiagnostics
      CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

RL-InformationResponse-RL-ReconfReadyTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    max-UL-EbNo          UL-EbNo,
    min-UL-EbNo          UL-EbNo,
    ul-CCTrCH-Information UL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
    dl-CCTrCH-Information DL-CCTrCH-InformationList-RL-ReconfReadyTDD OPTIONAL,
    dCHsToBeAdded        DCH-AddList-RL-ReconfReadyTDD OPTIONAL,
    dCHsToBeModified     DCH-ModifyList-RL-ReconfReadyTDD OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponse-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

UL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-InformationList-RL-ReconfReadyTDD-IEs} }

UL-CCTrCH-InformationList-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID
      CRITICALITY ignore TYPE CCTrCH-ID PRESENCE mandatory } |
    { ID id-UL-DPCH-InformationList-RL-ReconfReadyTDD
      CRITICALITY ignore TYPE UL-DPCH-InformationList-RL-ReconfReadyTDD
```

```

    PRESENCE mandatory },
}
...
}
UL-DPCH-InformationList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType              BurstType OPTIONAL,
    midambleShift          MidambleShift OPTIONAL,
    timeSlot               TimeSlot OPTIONAL,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    repetitionPeriod       RepetitionPeriod OPTIONAL,
    repetitionLength       RepetitionLength OPTIONAL,
    tFCI-Presence          TFCI-Presence OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {UL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}
UL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-CCTrCH-InformationList-RL-ReconfReadyTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-InformationList-RL-ReconfReadyTDD-IEs} }
DL-CCTrCH-InformationList-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID          CRITICALITY ignore TYPE CCTrCH-ID          PRESENCE mandatory } |
    { ID id-DL-DPCH-InformationList-RL-ReconfReadyTDD
      CRITICALITY ignore TYPE DL-DPCH-InformationList-RL-ReconfReadyTDD
      PRESENCE mandatory },
    ...
}
DL-DPCH-InformationList-RL-ReconfReadyTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID                DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType              BurstType OPTIONAL,
    midambleShift          MidambleShift OPTIONAL,
    timeSlot               TimeSlot OPTIONAL,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    repetitionPeriod       RepetitionPeriod OPTIONAL,
    repetitionLength       RepetitionLength OPTIONAL,
    tFCI-Presence          TFCI-Presence OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {DL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
    ...
}
DL-DPCH-InformationList-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DCH-AddList-RL-ReconfReadyTDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfReadyTDD-IEs} }

```

```

DCH-Add-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem          CRITICALITY ignore TYPE DCH-AddItem-RL-ReconfReadyTDD PRESENCE mandatory },
  ...
}

DCH-AddItem-RL-ReconfReadyTDD ::= SEQUENCE {
  dCH-ID          DCH-ID,
  bindingID       BindingID,
  transportLayerAddress TransportLayerAddress,
  iE-Extensions  ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-AddItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-ModifyList-RL-ReconfReadyTDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfReadyTDD-IEs} }

DCH-Modify-RL-ReconfReadyTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem          CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfReadyTDD PRESENCE mandatory },
  ...
}

DCH-ModifyItem-RL-ReconfReadyTDD ::= SEQUENCE {
  dCH-ID          DCH-ID,
  bindingID       BindingID,
  transportLayerAddress TransportLayerAddress,
  iE-Extensions  ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfReadyTDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-ModifyItem-RL-ReconfReadyTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkReconfigurationReadyTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

RadioLinkReconfigurationCommit ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container  {{{RadioLinkReconfigurationCommit-IEs}}},
  protocolExtensions  ProtocolExtensionContainer {{{RadioLinkReconfigurationCommit-Extensions}}} OPTIONAL,
  ...
}

```



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```
RadioLinkReconfigurationCommit-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CFN          CRITICALITY ignore  TYPE CFN          PRESENCE mandatory },
  ...
}

RadioLinkReconfigurationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

RadioLinkReconfigurationFailure ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationFailure-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationFailure-Extensions}} OPTIONAL,
  ...
}

RadioLinkReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Cause          CRITICALITY ignore  TYPE Cause          PRESENCE mandatory } |
  { ID id-RL-ReconfigurationFailureList-RL-ReconfFail
    CRITICALITY ignore  TYPE RL-ReconfigurationFailureList-RL-ReconfFail
    PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}

RL-ReconfigurationFailureList-RL-ReconfFail ::= RL-IE-ContainerList { {RL-ReconfigurationFailure-RL-ReconfFail-IEs} }

RL-ReconfigurationFailure-RL-ReconfFail-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-ReconfigurationFailure-RL-ReconfFail CRITICALITY ignore  TYPE RL-ReconfigurationFailure-RL-ReconfFail PRESENCE mandatory },
  ...
}

RL-ReconfigurationFailure-RL-ReconfFail ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions  ProtocolExtensionContainer { {RL-ReconfigurationFailure-RL-ReconfFail-ExtIEs} } OPTIONAL,
  ...
}

RL-ReconfigurationFailure-RL-ReconfFail-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
```

```

--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

RadioLinkReconfigurationCancel ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationCancel-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationCancel-Extensions}}      OPTIONAL,
    ...
}

RadioLinkReconfigurationCancel-IEs RNSAP-PROTOCOL-IES ::= {
    ...
}

RadioLinkReconfigurationCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

RadioLinkReconfigurationRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationRequestFDD-Extensions}}      OPTIONAL,
    ...
}

RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore TYPE AllowedQueuingTime          PRESENCE mandatory } |
    { ID id-UL-DPCH-Information          CRITICALITY ignore TYPE UL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DL-DPCH-Information          CRITICALITY ignore TYPE DL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfRqstFDD PRESENCE mandatory } |
    { ID id-DCH-AddList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-AddList-RL-ReconfRqstFDD PRESENCE mandatory } |
    { ID id-DCH-DeleteList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfRqstFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS          TransportFormatCombinationSet OPTIONAL,
    meanBitRate   MeanBitRate OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {

```

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```
tFCS                TransportFormatCombinationSet  OPTIONAL,
tFCI-SignallingMode TFCI-SignallingMode OPTIONAL,
meanBitRate         MeanBitRate      OPTIONAL,
IE-Extensions      ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-ModifyList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfRqstFDD-IEs} }

DCH-Modify-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-ModifyItem-RL-ReconfRqstFDD      CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfRqstFDD      PRESENCE mandatory  },
...
}

DCH-ModifyItem-RL-ReconfRqstFDD ::= SEQUENCE {
dCH-ID                DCH-ID,
ul-TransportformatSet TransportFormatSet  OPTIONAL,
dl-TransportformatSet TransportFormatSet  OPTIONAL,
allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
frameHandlingPriority FrameHandlingPriority  OPTIONAL,
ul-FP-Mode            UL-FP-Mode      OPTIONAL,
toAWS                 ToAWS          OPTIONAL,
toAWE                 ToAWE          OPTIONAL,
dRACControl           DRACControl  OPTIONAL,
IE-Extensions        ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-AddList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfRqstFDD-IEs} }

DCH-Add-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-AddItem-RL-ReconfRqstFDD      CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfRqstFDD      PRESENCE mandatory  },
...
}

DCH-AddItem-RL-ReconfRqstFDD ::= SEQUENCE {
dCH-ID                DCH-ID,
rLC-Mode              RLC-Mode,
dCH-CombinationInd    DCH-CombinationInd  OPTIONAL,
ul-TransportformatSet TransportFormatSet,
dl-TransportformatSet TransportFormatSet,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority FrameHandlingPriority,
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode            UL-FP-Mode,
```

```

toAWS                ToAWS,
toAWE                ToAWE,
dRACControl          DRACControl,
iE-Extensions        ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
...
}

DCH-AddItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-DeleteList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfRqstFDD-IEs} }

DCH-Delete-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-DeleteItem-RL-ReconfRqstFDD    CRITICALITY ignore    TYPE DCH-DeleteItem-RL-ReconfRqstFDD    PRESENCE mandatory    },
...
}

DCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
dCH-ID                DCH-ID,
iE-Extensions        ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
...
}

DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- *****

RadioLinkReconfigurationRequestTDD ::= SEQUENCE {
protocolIEs           ProtocolIE-Container    {{RadioLinkReconfigurationRequestTDD-IEs}},
protocolExtensions    ProtocolExtensionContainer {{RadioLinkReconfigurationRequestTDD-Extensions}}
...
}

RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-AllowedQueuingTime    CRITICALITY ignore    TYPE AllowedQueuingTime    PRESENCE optional    } |
{ ID id-UL-MeanBitRate        CRITICALITY ignore    TYPE MeanBitRate            PRESENCE optional    } |
{ ID id-DL-MeanBitRate        CRITICALITY ignore    TYPE MeanBitRate            PRESENCE optional    } |
{ ID id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD
                           CRITICALITY ignore    TYPE UL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE mandatory    } |
{ ID id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD
                           CRITICALITY ignore    TYPE DL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE mandatory    } |
{ ID id-DCH-ModifyList-RL-ReconfRqstTDD    CRITICALITY ignore    TYPE DCH-ModifyList-RL-ReconfRqstTDD    PRESENCE mandatory    } |

```

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```
{ ID id-DCH-AddList-RL-ReconfRqstTDD      CRITICALITY ignore  TYPE DCH-AddList-RL-ReconfRqstTDD  PRESENCE mandatory } |
{ ID id-DCH-DeleteList-RL-ReconfRqstTDD   CRITICALITY ignore  TYPE DCH-DeleteList-RL-ReconfRqstTDD   PRESENCE mandatory },
...
}

UL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-Information-RL-ReconfRqstTDD-IEs} }

UL-CCTrCH-Information-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-Information-RL-ReconfRqstTDD  CRITICALITY ignore  TYPE UL-CCTrCH-Information-RL-ReconfRqstTDD PRESENCE mandatory },
  ...
}

UL-CCTrCH-Information-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS               TransportFormatCombinationSet,
  iE-Extensions     ProtocolExtensionContainer { {UL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

UL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-Information-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-Information-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-Information-RL-ReconfRqstTDD  CRITICALITY ignore  TYPE DL-CCTrCH-Information-RL-ReconfRqstTDD PRESENCE mandatory },
  ...
}

DL-CCTrCH-Information-RL-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  tFCS               TransportFormatCombinationSet,
  iE-Extensions     ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
  ...
}

DL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-ModifyList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfRqstTDD-IEs} }

DCH-Modify-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem-RL-ReconfRqstTDD      CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfRqstTDD      PRESENCE mandatory },
  ...
}

DCH-ModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
  dCH-ID          DCH-ID,
  ul-CCTrCH-ID    CCTrCH-ID      OPTIONAL,
  dl-CCTrCH-ID    CCTrCH-ID      OPTIONAL,
  ul-TransportformatSet  TransportFormatSet  OPTIONAL,
```

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```
dl-TransportformatSet      TransportFormatSet OPTIONAL,
allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
frameHandlingPriority      FrameHandlingPriority   OPTIONAL,
ul-FP-Mode                UL-FP-Mode           OPTIONAL,
toAWS                     ToAWS              OPTIONAL,
toAWE                     ToAWE              OPTIONAL,
iE-Extensions             ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-AddList-RL-ReconfRqstTDD           ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfRqstTDD-IEs} }

DCH-Add-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-AddItem-RL-ReconfRqstTDD      CRITICALITY ignore   TYPE DCH-AddItem-RL-ReconfRqstTDD      PRESENCE mandatory },
...
}

DCH-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
dCH-ID                DCH-ID,
rLC-Mode              RLC-Mode,
ul-CCTrCH-ID         CCTrCH-ID,
dl-CCTrCH-ID         CCTrCH-ID,
dCH-CombinationInd   DCH-CombinationInd OPTIONAL,
ul-TransportformatSet TransportFormatSet,
dl-TransportformatSet TransportFormatSet,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority FrameHandlingPriority,
ul-FP-Mode           UL-FP-Mode,
toAWS                ToAWS,
toAWE                ToAWE,
iE-Extensions        ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

DCH-AddItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-DeleteList-RL-ReconfRqstTDD           ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfRqstTDD-IEs} }

DCH-Delete-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-DeleteItem-RL-ReconfRqstTDD      CRITICALITY ignore   TYPE DCH-DeleteItem-RL-ReconfRqstTDD      PRESENCE mandatory },
...
}

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
dCH-ID                DCH-ID,
iE-Extensions        ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}
```

```

}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE FDD
--
-- *****

RadioLinkReconfigurationResponseFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationResponseFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationResponseFDD-Extensions}} OPTIONAL,
    ...
}

RadioLinkReconfigurationResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseList-RL-ReconfRspFDD          CRITICALITY ignore          TYPE RL-InformationResponseList-RL-ReconfRspFDD
    PRESENCE optional } |
    { ID id-CriticalityDiagnostics          CRITICALITY ignore          TYPE CriticalityDiagnostics          PRESENCE optional },
    ...
}

RL-InformationResponseList-RL-ReconfRspFDD ::= RL-IE-ContainerList { {RL-InformationResponse-RL-ReconfRspFDD-IEs} }

RL-InformationResponse-RL-ReconfRspFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationResponseItem-RL-ReconfRspFDD
    CRITICALITY ignore          TYPE RL-InformationResponseItem-RL-ReconfRspFDD
    PRESENCE mandatory },
    ...
}

RL-InformationResponseItem-RL-ReconfRspFDD ::= SEQUENCE {
    rL-ID          RL-ID,
    max-UL-EbNo    UL-EbNo,
    min-UL-EbNo    UL-EbNo,
    ssecondary--CCPCH--Info          Secondary--CCPCH--Info-RL-ReconfRspFDD,
    dCHsToBeAdded          DCH-AddList-RL-ReconfRspFDD          OPTIONAL,
    dCHsToBeModified       DCH-ModifyList-RL-ReconfRspFDD          OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { {RL-InformationResponseItem-RL-ReconfRspFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationResponseItem-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

Secondary--CCPCH--Info-RL-ReconfRspFDD ::= SEQUENCE {
    fdd-S-CCPCH-Offset          FDD-S-CCPCH-Offset,
    dl-ScramblingCode          DL-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    dl-TFCS                    TransportFormatCombinationSet,
    secondaryCCPCHs            SecondaryCCPCH-List,
    tFCI-Presence              TFCI-Presence OPTIONAL,
    multiplexingPosition       MultiplexingPosition,
    sSDT-Indication            SSDT-Indication,
    fach-PCH-InformationList    FACH-PCH-InformationList-RL-ReconfRspFDD,
    schedulingInformation       SchedulingInformation-RL-ReconfRspFDD,
    iE-Extensions              ProtocolExtensionContainer { { Secondary-CCPCH-Info-RL-ReconfRspFDD-ExtIEs } } OPTIONAL,
    ...
}

```

```

Secondary-CCPCH-Info-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

FACH-PCH-InformationList-RL-ReconfRspFDD ::= SEQUENCE (SIZE(1..maxFACHCount)) OF
SEQUENCE {
    transportFormatSet          TransportFormatSet,
    iE-Extensions              ProtocolExtensionContainer { { FACH-PCH-InformationList-RL-ReconfRspFDD-ExtIEs } } OPTIONAL,
    ...
}

```

```

FACH-PCH-InformationList-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

SchedulingInformation-RL-ReconfRspFDD ::= SEQUENCE {
    iB-SG-Rep                  IB-SG-Rep,
    segmentInformationList     SegmentInformationList-RL-ReconfRspFDD OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { SchedulingInformation-RL-ReconfRspFDD-ExtIEs } } OPTIONAL,
    ...
}

```

```

SchedulingInformation-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

SegmentInformationList-RL-ReconfRspFDD ::= SEQUENCE (SIZE(1..maxIBSEG-1)) OF
SEQUENCE {
    iB-SG-Pos                  IB-SG-Pos,
    iE-Extensions              ProtocolExtensionContainer { { SIB-PosOffsetInformationList-RL-ReconfRspFDD SegmentInformationList-RL-
ReconfRspFDD-ExtIEs } } OPTIONAL,
    ...
}

```

```

SegmentInformationList-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```



```

    ...
}

DCH-AddList-RL-ReconfRspFDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfRspFDD-IEs} }

DCH-Add-RL-ReconfRspFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfRspFDD CRITICALITY ignore TYPE DCH-AddItem-RL-ReconfRspFDD PRESENCE mandatory },
    ...
}

DCH-AddItem-RL-ReconfRspFDD ::= SEQUENCE {
    dCH-ID DCH-ID,
    bindingID BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRspFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfRspFDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfRspFDD-IEs} }

DCH-Modify-RL-ReconfRspFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfRspFDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfRspFDD PRESENCE mandatory },
    ...
}

DCH-ModifyItem-RL-ReconfRspFDD ::= SEQUENCE {
    dCH-ID DCH-ID,
    bindingID BindingID,
    transportLayerAddress TransportLayerAddress,
    iE-Extensions ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRspFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfRspFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE TDD
--
-- *****

```

```
RadioLinkReconfigurationResponseTDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{RadioLinkReconfigurationResponseTDD-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkReconfigurationResponseTDD-Extensions}}
  ...
}
```

```
RadioLinkReconfigurationResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CriticalityDiagnostics          CRITICALITY ignore  TYPE CriticalityDiagnostics          PRESENCE optional },
  ...
}
```

```
RadioLinkReconfigurationResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****
```

```
RadioLinkFailureIndication ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container      {{RadioLinkFailureIndication-IEs}},
  protocolExtensions  ProtocolExtensionContainer {{RadioLinkFailureIndication-Extensions}}
  ...
}
```

```
RadioLinkFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationList-RL-FailureInd  CRITICALITY ignore  TYPE RL-InformationList-RL-FailureInd  PRESENCE mandatory },
  ...
}
```

```
RL-InformationList-RL-FailureInd          ::= RL-IE-ContainerList { {RL-Information-RL-FailureInd-IEs} }
```

```
RL-Information-RL-FailureInd-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-FailureInd      CRITICALITY ignore  TYPE RL-Information-RL-FailureInd      PRESENCE mandatory },
  ...
}
```

```
RL-Information-RL-FailureInd ::= SEQUENCE {
  rL-ID          RL-ID,
  cause          Cause,
  iE-Extensions ProtocolExtensionContainer { {RL-Information-RL-FailureInd-ExtIEs} } OPTIONAL,
  ...
}
```

```
RL-Information-RL-FailureInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
RadioLinkFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```

}

-- *****
--
-- RADIO LINK RESTORE INDICATION
--
-- *****

RadioLinkRestoreIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkRestoreIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkRestoreIndication-Extensions}}
    ...
}

RadioLinkRestoreIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationList-RL-RestoreInd    CRITICALITY ignore    TYPE RL-InformationList-RL-RestoreInd    PRESENCE mandatory },
    ...
}

RL-InformationList-RL-RestoreInd          ::= RL-IE-ContainerList { {RL-Information-RL-RestoreInd-IEs} }

RL-Information-RL-RestoreInd-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-Information-RL-RestoreInd    CRITICALITY ignore    TYPE RL-Information-RL-RestoreInd    PRESENCE mandatory },
    ...
}

RL-Information-RL-RestoreInd ::= SEQUENCE {
    rL-ID          RL-ID,
    iE-Extensions   ProtocolExtensionContainer { {RL-Information-RL-RestoreInd-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-RestoreInd-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkRestoreIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DOWNLINK POWER CONTROL REQUEST
--
-- *****

DL-PowerControlRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DL-PowerControlRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DL-PowerControlRequest-Extensions}}
    ...
}

DL-PowerControlRequest-IEs RNSAP-PROTOCOL-IES ::= {

```

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```
{ ID id-ProcedureScope-DL-PC-Rqst          CRITICALITY ignore  TYPE ProcedureScope-DL-PC-Rqst          PRESENCE mandatory  },
...
}

ProcedureScope-DL-PC-Rqst ::= CHOICE {
  allRLs                DL-Power,
  individualRLs         DL-ReferencePowerInformationList-DL-PC-Rqst,
  ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= RL-IE-ContainerList { {DL-ReferencePowerInformation-DL-PC-Rqst-IEs} }

DL-ReferencePowerInformation-DL-PC-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DL-ReferencePowerInformation-DL-PC-Rqst CRITICALITY ignore  TYPE DL-ReferencePowerInformation-DL-PC-Rqst  PRESENCE mandatory  },
  ...
}

DL-ReferencePowerInformation-DL-PC-Rqst ::= SEQUENCE {
  rL-ID                RL-ID,
  dl-Power             DL-Power,
  iE-Extensions       ProtocolExtensionContainer { {DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs} } OPTIONAL,
  ...
}

DL-ReferencePowerInformation-DL-PC-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-PowerControlRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST FDD
--
-- *****

PhysicalChannelReconfigurationRequestFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container   {{PhysicalChannelReconfigurationRequestFDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{PhysicalChannelReconfigurationRequestFDD-Extensions}}      OPTIONAL,
  ...
}

PhysicalChannelReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-PhyChReconfRqstFDD  CRITICALITY ignore  TYPE RL-Information-PhyChReconfRqstFDD  PRESENCE mandatory  },
  ...
}

RL-Information-PhyChReconfRqstFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  dl-CodeInformations  DL-CodeInformationList-PhyChReconfRqstFDD,
  iE-Extensions       ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
  ...
}
```

```

}
...
}
RL-Information-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}
DL-CodeInformationList-PhyChReconfRqstFDD ::= DL-Code-IE-ContainerList { {DL-CodeInformation-PhyChReconfRqstFDD-IEs} }

DL-CodeInformation-PhyChReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DL-CodeInformation-PhyChReconfRqstFDD CRITICALITY ignore TYPE DL-CodeInformation-PhyChReconfRqstFDD PRESENCE mandatory },
...
}

DL-CodeInformation-PhyChReconfRqstFDD ::= SEQUENCE {
dl-scramblingCode DL-ScramblingCode,
fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
iE-Extensions ProtocolExtensionContainer { {DL-CodeInformation-PhyChReconfRqstFDD-ExtIEs} } OPTIONAL,
...
}

DL-CodeInformation-PhyChReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

PhysicalChannelReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****

PhysicalChannelReconfigurationRequestTDD ::= SEQUENCE {
protocolIEs ProtocolIE-Container {{PhysicalChannelReconfigurationRequestTDD-IEs}},
protocolExtensions ProtocolExtensionContainer {{PhysicalChannelReconfigurationRequestTDD-Extensions}} OPTIONAL,
...
}

PhysicalChannelReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-RL-Information-PhyChReconfRqstTDD CRITICALITY ignore TYPE RL-Information-PhyChReconfRqstTDD PRESENCE mandatory },
...
}

RL-Information-PhyChReconfRqstTDD ::= SEQUENCE {
rL-ID RL-ID,
ul-CCTrCH-Information UL-CCTrCH-InformationList-PhyChReconfRqstTDD,
dl-CCTrCH-Information DL-CCTrCH-InformationList-PhyChReconfRqstTDD,
iE-Extensions ProtocolExtensionContainer { {RL-Information-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

```

```

RL-Information-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs} }

UL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID CRITICALITY ignore TYPE CCTrCH-ID PRESENCE mandatory } |
    { ID id-UL-DPCH-InformationList-PhyChReconfRqstTDD
      CRITICALITY ignore TYPE UL-DPCH-InformationList-PhyChReconfRqstTDD
      PRESENCE mandatory },
    ...
}

-- List items have same criticality as parent
UL-DPCH-InformationList-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType BurstType OPTIONAL,
    midambleShift MidambleShift OPTIONAL,
    timeSlot TimeSlot OPTIONAL,
    tDD-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    repetitionPeriod RepetitionPeriod OPTIONAL,
    repetitionLength RepetitionLength OPTIONAL,
    tFCI-Presence TFCI-Presence OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {UL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-PhyChReconfRqstTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs} }

DL-CCTrCH-InformationList-PhyChReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CCTrCH-ID CRITICALITY ignore TYPE CCTrCH-ID PRESENCE mandatory } |
    { ID id-DL-DPCH-InformationList-PhyChReconfRqstTDD
      CRITICALITY ignore TYPE DL-DPCH-InformationList-PhyChReconfRqstTDD
      PRESENCE mandatory },
    ...
}

-- List items have same criticality as parent
DL-DPCH-InformationList-PhyChReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF
SEQUENCE {
    dPCH-ID DPCH-ID,
    tDD-ChannelisationCode TDD-ChannelisationCode OPTIONAL,
    burstType BurstType OPTIONAL,
    midambleShift MidambleShift OPTIONAL,
    timeSlot TimeSlot OPTIONAL,

```

```

tDD-PhysicalChannelOffset      TDD-PhysicalChannelOffset      OPTIONAL,
repetitionPeriod               RepetitionPeriod               OPTIONAL,
repetitionLength               RepetitionLength               OPTIONAL,
tFCI-Presence                  TFCI-Presence                  OPTIONAL,
iE-Extensions                   ProtocolExtensionContainer { {DL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-InformationList-PhyChReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

PhysicalChannelReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION COMMAND
--
-- *****

PhysicalChannelReconfigurationCommand ::= SEQUENCE {
  protocolIEs                ProtocolIE-Container    {{PhysicalChannelReconfigurationCommand-IEs}},
  protocolExtensions         ProtocolExtensionContainer {{PhysicalChannelReconfigurationCommand-Extensions}}
  ...
}

PhysicalChannelReconfigurationCommand-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-CFN                CRITICALITY ignore TYPE CFN                PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

PhysicalChannelReconfigurationCommand-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- PHYSICAL CHANNEL RECONFIGURATION FAILURE
--
-- *****

PhysicalChannelReconfigurationFailure ::= SEQUENCE {
  protocolIEs                ProtocolIE-Container    {{PhysicalChannelReconfigurationFailure-IEs}},
  protocolExtensions         ProtocolExtensionContainer {{PhysicalChannelReconfigurationFailure-Extensions}}
  ...
}

PhysicalChannelReconfigurationFailure-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-Cause                CRITICALITY ignore TYPE Cause                PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },

```

```

}
...
PhysicalChannelReconfigurationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
}
...
-- *****
--
-- UPLINK SIGNALLING TRANSFER INDICATION
--
-- *****

UplinkSignallingTransferIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container          {{UplinkSignallingTransferIndication-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{UplinkSignallingTransferIndication-Extensions}}
    ...
}

UplinkSignallingTransferIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UC-ID          CRITICALITY ignore TYPE UC-ID          PRESENCE mandatory } |
    { ID id-SAI           CRITICALITY ignore TYPE SAI            PRESENCE mandatory } |
    { ID id-C-RNTI        CRITICALITY ignore TYPE C-RNTI        PRESENCE mandatory } |
    { ID id-S-RNTI        CRITICALITY ignore TYPE S-RNTI        PRESENCE mandatory } |
    { ID id-D-RNTI        CRITICALITY ignore TYPE D-RNTI        PRESENCE optional   } |
    { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE mandatory } |
    { ID id-CN-PS-DomainIdentifier CRITICALITY ignore TYPE CN-PS-DomainIdentifier PRESENCE optional } |
    { ID id-CN-CS-DomainIdentifier CRITICALITY ignore TYPE CN-CS-DomainIdentifier PRESENCE optional } |
    { ID id-URA-ID        CRITICALITY ignore TYPE URA-ID        PRESENCE mandatory } |
    { ID id-MultipleURAsIndicator CRITICALITY ignore TYPE MultipleURAsIndicator PRESENCE mandatory } |
    { ID id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind
      CRITICALITY ignore TYPE RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind
      PRESENCE mandatory },
    ...
}

-- All RNC-IDs share same criticality!
RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind ::= SEQUENCE (SIZE (1..maxRNCinURA)) OF
    SEQUENCE {
        rNC-ID          RNC-ID,
        iE-Extensions  ProtocolExtensionContainer { {RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind-ExtIEs} } OPTIONAL,
        ...
    }

RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
}
...

UplinkSignallingTransferIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
}
...
-- *****

```



```

--
-- DOWNLINK SIGNALLING TRANSFER REQUEST
--
-- *****

DownlinkSignallingTransferRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DownlinkSignallingTransferRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DownlinkSignallingTransferRequest-Extensions}}      OPTIONAL,
    ...
}

DownlinkSignallingTransferRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-C-ID          CRITICALITY ignore TYPE C-ID          PRESENCE mandatory } |
    { ID id-D-RNTI       CRITICALITY ignore TYPE D-RNTI        PRESENCE mandatory } |
    { ID id-L3-Information CRITICALITY ignore TYPE L3-Information PRESENCE mandatory } |
    { ID id-D-RNTI-ReleaseIndication CRITICALITY ignore TYPE D-RNTI-ReleaseIndication PRESENCE mandatory },
    ...
}

DownlinkSignallingTransferRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RELOCATION COMMIT
--
-- *****

RelocationCommit ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RelocationCommit-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RelocationCommit-Extensions}}      OPTIONAL,
    ...
}

RelocationCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE mandatory } |
    { ID id-RANAP-RelocationInformation CRITICALITY ignore TYPE RANAP-RelocationInformation PRESENCE mandatory },
    ...
}

RelocationCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PAGING REQUEST
--
-- *****

PagingRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{PagingRequest-IEs}},

```

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```
    protocolExtensions          ProtocolExtensionContainer {{PagingRequest-Extensions}}
    ...
}

PagingRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-PagingArea-PagingRqst          CRITICALITY ignore TYPE PagingArea-PagingRqst          PRESENCE mandatory } |
  { ID id-SRNC-ID                        CRITICALITY ignore TYPE SRNC-ID                        PRESENCE mandatory } |
  { ID id-S-RNTI                          CRITICALITY ignore TYPE S-RNTI                          PRESENCE mandatory } |
  { ID id-DRX-Parameter                  CRITICALITY ignore TYPE DRX-Parameter                  PRESENCE mandatory },
  ...
}

PagingArea-PagingRqst ::= CHOICE {
  uRA          URA-ID,
  cell         C-ID,
  ...
}

PagingRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****

DedicatedMeasurementInitiationRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container          {{DedicatedMeasurementInitiationRequest-IEs}},
  protocolExtensions  ProtocolExtensionContainer    {{DedicatedMeasurementInitiationRequest-Extensions}}
  ...
}

DedicatedMeasurementInitiationRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rqst PRESENCE mandatory } |
  { ID id-MeasurementCharacteristics          CRITICALITY ignore TYPE MeasurementCharacteristics          PRESENCE mandatory } |
  { ID id-ReportCharacteristics              CRITICALITY ignore TYPE ReportCharacteristics              PRESENCE mandatory },
  ...
}

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {
  rLs          RL-InformationList-DM-Rqst,
  ...
}

RL-InformationList-DM-Rqst ::= RL-IE-ContainerList { {RL-Information-DM-Rqst-IEs} }

RL-Information-DM-Rqst-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rqst          CRITICALITY ignore TYPE RL-InformationItem-DM-Rqst          PRESENCE mandatory },
  ...
}
```

```

RL-InformationItem-DM-Rqst ::= SEQUENCE {
    rL-ID                RL-ID,
    dPCH-ID              DPCH-ID    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-InformationItem-DM-Rqst-ExtIEs} } OPTIONAL,
    ...
}

RL-InformationItem-DM-Rqst-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementInitiationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

DedicatedMeasurementInitiationResponse ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementInitiationResponse-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementInitiationResponse-Extensions}}
    ...
}

DedicatedMeasurementInitiationResponse-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID                CRITICALITY ignore TYPE MeasurementID                PRESENCE mandatory } |
    { ID id-DedicatedMeasurementObjectType-DM-Rspns CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rspns PRESENCE mandatory } |
    { ID id-CFN                            CRITICALITY ignore TYPE CFN                            PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics         CRITICALITY ignore TYPE CriticalityDiagnostics         PRESENCE optional },
    ...
}

DedicatedMeasurementObjectType-DM-Rspns ::= CHOICE {
    rLs                RL-InformationList-DM-Rspns,
    allRL              AllRL-Information-DM-Rspns,
    ...
}

RL-InformationList-DM-Rspns ::= RL-IE-ContainerList { {RL-Information-DM-Rspns-IEs} }

RL-Information-DM-Rspns-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rspns    CRITICALITY ignore TYPE RL-InformationItem-DM-Rspns    PRESENCE mandatory },
    ...
}

RL-InformationItem-DM-Rspns ::= SEQUENCE {
    rL-ID                RL-ID,
    dPCH-ID              DPCH-ID    OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,

```

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```
iE-Extensions          ProtocolExtensionContainer { {RL-InformationItem-DM-Rspns-ExtIEs} } OPTIONAL,
...
}

RL-InformationItem-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

AllRL-Information-DM-Rspns ::= SEQUENCE {
    dedicatedMeasurementValue    DedicatedMeasurementValue,
    iE-Extensions                ProtocolExtensionContainer { {AllRL-Information-DM-Rspns-ExtIEs} } OPTIONAL,
    ...
}

AllRL-Information-DM-Rspns-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DedicatedMeasurementInitiationResponse-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION FAILURE
--
-- *****

DedicatedMeasurementInitiationFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementInitiationFailure-IEs}},
    protocolExtensions  ProtocolExtensionContainer {{DedicatedMeasurementInitiationFailure-Extensions}}
    ...
}

DedicatedMeasurementInitiationFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-Cause                  CRITICALITY ignore TYPE Cause                  PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

DedicatedMeasurementInitiationFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- DEDICATED MEASUREMENT REPORT
--
-- *****

DedicatedMeasurementReport ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementReport-IEs}},
```

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```
    protocolExtensions          ProtocolExtensionContainer {{DedicatedMeasurementReport-Extensions}}
    ...
}

DedicatedMeasurementReport-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
  { ID id-DedicatedMeasurementObjectType-DM-Rprt CRITICALITY ignore TYPE DedicatedMeasurementObjectType-DM-Rprt PRESENCE mandatory } |
  { ID id-CFN                    CRITICALITY ignore TYPE CFN                    PRESENCE optional },
  ...
}

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
  rLs          RL-InformationList-DM-Rprt,
  allRL        AllRL-Information-DM-Rprt,
  ...
}

RL-InformationList-DM-Rprt          ::= RL-IE-ContainerList { {RL-Information-DM-Rprt-IEs} }

RL-Information-DM-Rprt-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rprt          CRITICALITY ignore TYPE RL-InformationItem-DM-Rprt          PRESENCE mandatory },
  ...
}

RL-InformationItem-DM-Rprt ::= SEQUENCE {
  rL-ID          RL-ID,
  dPCH-ID        DPCH-ID          OPTIONAL,
  dedicatedMeasurementValue DedicatedMeasurementValue,
  iE-Extensions ProtocolExtensionContainer { {RL-InformationItem-DM-Rprt-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationItem-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

AllRL-Information-DM-Rprt ::= SEQUENCE {
  dedicatedMeasurementValue DedicatedMeasurementValue,
  iE-Extensions            ProtocolExtensionContainer { {AllRL-Information-DM-Rprt-ExtIEs} } OPTIONAL,
  ...
}

AllRL-Information-DM-Rprt-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DedicatedMeasurementReport-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
```

```

--
-- *****
DedicatedMeasurementTerminationRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementTerminationRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementTerminationRequest-Extensions}}
    ...
}
DedicatedMeasurementTerminationRequest-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory },
    ...
}
DedicatedMeasurementTerminationRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
-- *****
DedicatedMeasurementFailureIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{DedicatedMeasurementFailureIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{DedicatedMeasurementFailureIndication-Extensions}}
    ...
}
DedicatedMeasurementFailureIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-MeasurementID          CRITICALITY ignore TYPE MeasurementID          PRESENCE mandatory } |
    { ID id-Cause                  CRITICALITY ignore TYPE Cause                  PRESENCE mandatory },
    ...
}
DedicatedMeasurementFailureIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RELEASE REQUEST
--
-- *****
CommonTransportChannelResourcesReleaseRequest ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CommonTransportChannelResourcesReleaseRequest-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelResourcesReleaseRequest-Extensions}}
OPTIONAL,
    ...
}

```

```

CommonTransportChannelResourcesReleaseRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE mandatory } |
  { ID id-C-RNTI          CRITICALITY ignore TYPE C-RNTI          PRESENCE optional  },
  ...
}

CommonTransportChannelResourcesReleaseRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES REQUEST
--
-- *****

CommonTransportChannelResourcesRequest ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CommonTransportChannelResourcesRequest-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelResourcesRequest-Extensions}}    OPTIONAL,
  ...
}

CommonTransportChannelResourcesRequest-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE mandatory } |
  { ID id-TransportBearerRequestIndicator CRITICALITY ignore TYPE TransportBearerRequestIndicator PRESENCE mandatory } |
  { ID id-TransportBearerID CRITICALITY ignore TYPE TransportBearerID PRESENCE mandatory },
  ...
}

CommonTransportChannelResourcesRequest-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE FDD
--
-- *****

CommonTransportChannelResourcesResponseFDD ::= SEQUENCE {
  protocolIEs          ProtocolIE-Container    {{CommonTransportChannelResourcesResponseFDD-IEs}},
  protocolExtensions   ProtocolExtensionContainer {{CommonTransportChannelResourcesResponseFDD-Extensions}}    OPTIONAL,
  ...
}

CommonTransportChannelResourcesResponseFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
  { ID id-FACH-InfoForS-CCPCH-CoupledToPRACH CRITICALITY ignore TYPE FACH-InfoForS-CCPCH-CoupledToPRACH PRESENCE mandatory } |
  { ID id-FACH-InfoForOptionalS-CCPCH        CRITICALITY ignore TYPE FACH-InfoForOptionalS-CCPCH        PRESENCE optional } |
  { ID id-TransportLayerAddress              CRITICALITY ignore TYPE TransportLayerAddress              PRESENCE optional } |
  { ID id-BindingID                          CRITICALITY ignore TYPE BindingID                          PRESENCE optional } |
  { ID id-CriticalityDiagnostics              CRITICALITY ignore TYPE CriticalityDiagnostics              PRESENCE optional },
  ...
}

```

```

}

FACH-InfoForS-CCPCH-CoupledToPRACH ::= SEQUENCE {
    priorityIndicatorAndInitialWindowSizes      PriorityIndicatorAndInitialWindowSizeList,
    iE-Extensions                               ProtocolExtensionContainer { {FACH-InfoForS-CCPCH-CoupledToPRACH-ExtIEs} } OPTIONAL,
    ...
}

FACH-InfoForS-CCPCH-CoupledToPRACH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PriorityIndicatorAndInitialWindowSizeList ::= SEQUENCE (SIZE (1..16)) OF
SEQUENCE {
    fACH-PriorityIndicator          FACH-PriorityIndicator,
    mAC-c-SDU-Lengths              MAC-c-SDU-LengthList,
    fACH-InitialWindowSize         FACH-InitialWindowSize,
    iE-Extensions                  ProtocolExtensionContainer { {PriorityIndicatorAndInitialWindowSizeList-ExtIEs} } OPTIONAL,
    ...
}

PriorityIndicatorAndInitialWindowSizeList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

MAC-c-SDU-LengthList ::= SEQUENCE (SIZE (1..maxNrOfMACcSDU-Length)) OF
SEQUENCE {
    mAC-c-SDU-Length              MAC-c-SDU-Length,
    iE-Extensions                  ProtocolExtensionContainer { {MAC-c-SDU-LengthList-ExtIEs} } OPTIONAL,
    ...
}

MAC-c-SDU-LengthList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-InfoForOptionalS-CCPCH ::= SEQUENCE {
    fDD-S-CCPCH-Offset            FDD-S-CCPCH-Offset,
    dl-ScramblingCode             DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    dl-TFCS                       TransportFormatCombinationSet,
    secondaryCCPCHs               SecondaryCCPCH-List,
    tFCI-Presence                  TFCI-Presence OPTIONAL,
    pilotBitsUsedIndicator      PilotBitsUsedIndicator,
    multiplexingPosition           MultiplexingPosition,
    sSDT-Indication               SSdT-Indication,
    priorityIndicatorAndInitialWindowSizeList PriorityIndicatorAndInitialWindowSizeList,
    fACH-DataFrameSize            FACH-DataFrameSize,
    fACH-InitialWindowSize        FACH-InitialWindowSize,
    iE-Extensions                  ProtocolExtensionContainer { {FACH-InfoForOptionalS-CCPCH-ExtIEs} } OPTIONAL,
    ...
}

```



```

FACH-InfoForOptionalS-CCPCH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCCPCH-List ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF
    SEQUENCE {
        tDD-ChannelisationCode          TDD-ChannelisationCode,
        timeSlot                        TimeSlot,
        burstType                       BurstType,
        midambleShift                   MidambleShift,
        offset                          Offset,
        repetitionPeriod                RepetitionPeriod,
        repetitionLength                RepetitionLength,
        iE-Extensions                   ProtocolExtensionContainer { {SecondaryCCPCH-List-ExtIEs} } OPTIONAL,
        ...
    }

SecondaryCCPCH-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelResourcesResponseFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES RESPONSE TDD
--
-- *****

CommonTransportChannelResourcesResponseTDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{{CommonTransportChannelResourcesResponseTDD-IEs}}},
    protocolExtensions         ProtocolExtensionContainer {{{CommonTransportChannelResourcesResponseTDD-Extensions}}}
    ...
}

CommonTransportChannelResourcesResponseTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI                CRITICALITY ignore TYPE S-RNTI                PRESENCE mandatory } |
    { ID id-FACH-InfoForS-CCPCH-CoupledToPRACH CRITICALITY ignore TYPE FACH-InfoForS-CCPCH-CoupledToPRACH PRESENCE optional } |
    { ID id-FACH-InfoForOptionalGroupS-CCPCH CRITICALITY ignore TYPE FACH-InfoForOptionalGroupOfS-CCPCH PRESENCE optional } |
    { ID id-TransportLayerAddress CRITICALITY ignore TYPE TransportLayerAddress PRESENCE optional } |
    { ID id-BindingID              CRITICALITY ignore TYPE BindingID              PRESENCE optional } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

FACH-InfoForOptionalGroupOfS-CCPCH ::= SEQUENCE {
    dl-TFCS                TransportFormatCombinationSet,
    secondaryCCPCHs        SecondaryCCPCH-TDD-List,
    iE-Extensions          ProtocolExtensionContainer { {FACH-InfoForOptionalGroupOfS-CCPCH-ExtIEs} } OPTIONAL,
    ...
}

```

```

FACH-InfoForOptionalGroupOfS-CCPCH-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCCPCH-TDD-List ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF
    SEQUENCE {
        tDD-ChannelisationCode          TDD-ChannelisationCode,
        timeSlot                        TimeSlot,
        burstType                       BurstType,
        midambleShift                   MidambleShift,
        tDD-PhysicalChannelOffset       TDD-PhysicalChannelOffset,
        repetitionPeriod                RepetitionPeriod,
        repetitionLength                RepetitionLength,
        sSDT-Indication                 SSDT-Indication,
        priorityIndicatorAndInitialWindowSizeList PriorityIndicatorAndInitialWindowSizeList,
        iE-Extensions                   ProtocolExtensionContainer { {SecondaryCCPCH-TDD-List-ExtIEs} } OPTIONAL,
        ...
    }

SecondaryCCPCH-TDD-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelResourcesResponseTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RESOURCES FAILURE
--
-- *****

CommonTransportChannelResourcesFailure ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{CommonTransportChannelResourcesFailure-IEs}},
    protocolExtensions         ProtocolExtensionContainer {{CommonTransportChannelResourcesFailure-Extensions}}    OPTIONAL,
    ...
}

CommonTransportChannelResourcesFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI              CRITICALITY ignore TYPE S-RNTI              PRESENCE mandatory } |
    { ID id-Cause               CRITICALITY ignore TYPE Cause              PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

CommonTransportChannelResourcesFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--

```

```

-- COMPRESSED MODE PREPARE
--
-- *****

CompressedModePrepare ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CompressedModePrepare-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CompressedModePrepare-Extensions}}
    ...
}

CompressedModePrepare-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-TGP1          CRITICALITY ignore TYPE GapPeriod          PRESENCE mandatory } |
    { ID id-TGP2          CRITICALITY ignore TYPE GapPeriod          PRESENCE optional } |
    { ID id-TGL           CRITICALITY ignore TYPE TGL                PRESENCE mandatory } |
    { ID id-TGD           CRITICALITY ignore TYPE TGD                PRESENCE mandatory } |
    { ID id-PD            CRITICALITY ignore TYPE PD                 PRESENCE mandatory } |
    { ID id-UL-DL-CompressedModeSelection CRITICALITY ignore TYPE UL-DL-CompressedModeSelection PRESENCE mandatory } |
    { ID id-CompressedModeMethod CRITICALITY ignore TYPE CompressedModeMethod PRESENCE mandatory } |
    { ID id-GapPositionMode CRITICALITY ignore TYPE GapPositionMode PRESENCE mandatory } |
    { ID id-SN            CRITICALITY ignore TYPE SN                 PRESENCE conditional
-- This IE is present only if "GapPositionMode" equals to "flexible" --
    } |
    { ID id-DL-FrameType CRITICALITY ignore TYPE DL-FrameType       PRESENCE mandatory } |
    { ID id-ScramblingCodeChange CRITICALITY ignore TYPE ScramblingCodeChange PRESENCE conditional
-- This IE is present only if "CompressedModeMethod" equals to "SF/2" --
    } |
    { ID id-PowerControlMode CRITICALITY ignore TYPE PowerControlMode PRESENCE mandatory } |
    { ID id-PowerResumeMode CRITICALITY ignore TYPE PowerResumeMode PRESENCE mandatory } |
    { ID id-UL-DeltaEbNo CRITICALITY ignore TYPE UL-EbNo            PRESENCE mandatory } |
    { ID id-UL-DeltaEbNoAfter CRITICALITY ignore TYPE UL-EbNo      PRESENCE mandatory },
    ...
}

CompressedModePrepare-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMPRESSED MODE READY
--
-- *****

CompressedModeReady ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CompressedModeReady-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CompressedModeReady-Extensions}}
    ...
}

CompressedModeReady-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

CompressedModeReady-Extensions RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
-- *****
--
-- COMPRESSED MODE FAILURE
--
-- *****

CompressedModeFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CompressedModeFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CompressedModeFailure-Extensions}}           OPTIONAL,
    ...
}

CompressedModeFailure-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
    ...
}

CompressedModeFailure-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMPRESSED MODE COMMIT
--
-- *****

CompressedModeCommit ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{CompressedModeCommit-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CompressedModeCommit-Extensions}}           OPTIONAL,
    ...
}

CompressedModeCommit-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-CFN          CRITICALITY ignore TYPE CFN          PRESENCE mandatory },
    ...
}

CompressedModeCommit-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMPRESSED MODE CANCEL
--
-- *****

CompressedModeCancel ::= SEQUENCE {

```

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```
    protocolIEs          ProtocolIE-Container    {{CompressedModeCancel-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{CompressedModeCancel-Extensions}}
    ...
}

CompressedModeCancel-IEs RNSAP-PROTOCOL-IES ::= {
    ...
}

CompressedModeCancel-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- ERROR INDICATION
--
-- *****

ErrorIndication ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{ErrorIndication-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{ErrorIndication-Extensions}}
    ...
}

ErrorIndication-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-Cause          CRITICALITY ignore TYPE Cause          PRESENCE conditional } |
    -- At least either of Cause IE or Criticality IE shall be present --
    { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE conditional } |
    -- At least either of Cause IE or Criticality IE shall be present --
    ...
}

ErrorIndication-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
    privateExtensions   PrivateExtensionContainer {{PrivateExtensions}},
    ...
}

PrivateExtensions RNSAP-PRIVATE-EXTENSION ::= {
    ...
}

END
```

### 9.3.4 Information Element Definitions

```

-- *****
--
-- Information Element Definitions
--
-- *****

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCS,
    maxNrOfTFs,
    maxTTL-Count,
    maxIBSEG
FROM RNSAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM RNSAP-CommonDataTypes

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

-- A

AllocationRetentionPriority ::= FrameHandlingPriority

AllowedQueuingTime ::= INTEGER (0..60)
-- seconds

-- B

-- ** NOTE: Size in tabular 1..4,... **
BindingID ::= OCTET STRING (SIZE (1..MAX))

BLER ::= INTEGER (-63..0)
-- Step 0.1 (Range -6.3..0). It is the Log10 of the BLER

BurstType ::= ENUMERATED {
    type1 (1),

```

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```
    type2 (2)
}
-- C
Cause ::= CHOICE {
    radioNetwork          CauseRadioNetwork,
    transmissionNetwork   CauseTransmissionNetwork,
    protocol              CauseProtocol,
    misc                  CauseMisc,
    ...
}

CauseMisc ::= ENUMERATED {
    control-processing-overload,
    hardware-failure,
    om-intervention,
    not-enough-user-plane-processing-resources,
    unspecified,
    ...
}

CauseProtocol ::= ENUMERATED {
    transaction-not-allowed,
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    unspecified,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    ul-scrambling-code-already-in-use,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    measurement-not-supported-for-the-object,
    macrodiversity-combining-not-possible,
    reconfiguration-not-allowed,
    Ssynchronisation-failure,
    unspecified,
    ...
}

CauseTransmissionNetwork ::= ENUMERATED {
    transmission-link-failure,
    transmission-port-not-available,
    unspecified,
    ...
}
```

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```
C-ID ::= INTEGER (0..65535)

CCTrCH-ID ::= INTEGER (0..15)

CellParameterID ::= INTEGER (0..127)

CFN ::= INTEGER (0..255)

ChannelCodingType ::= ENUMERATED {
    no-coding,
    convolutional-coding,
    turbo-coding--,
    -- ...
}

-- ** TODO **
ChipOffset ::= INTEGER

CodingRate ::= ENUMERATED {
    half,
    third--,
    -- ...
}

CompressedModeMethod ::= ENUMERATED {
    none,
    puncturing,
    sF2,
    gating
}

CPICH-EcIo ::= INTEGER

CRC-Size ::= INTEGER (0| 8| 12| 16| 24)

CriticalityDiagnostics ::= SEQUENCE {
    procedureCode ProcedureCode OPTIONAL,
    triggeringMessage TriggeringMessage OPTIONAL,
    criticalityResponse Criticality OPTIONAL,
    transactionID TransactionID OPTIONAL,
    iEsCriticalityResponses CriticalityDiagnostics-IE-List OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,
    ...
}

CriticalityDiagnostics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF
    SEQUENCE {
        criticalityResponse Criticality,
```



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```
        iE-ID          ProtocolIE-ID,
        iE-Extensions  ProtocolExtensionContainer { {CriticalityDiagnostics-IE-List-ExtIEs} } OPTIONAL,
        ...
    }
```

```
CriticalityDiagnostics-IE-List-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
-- ** TODO **
CTFC ::= INTEGER
-- See formula (must be resolved)
```

```
CN-CS-DomainIdentifier ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
    iE-Extensions    ProtocolExtensionContainer { {CN-CS-DomainIdentifier-ExtIEs} } OPTIONAL,
    LAC              LAC
}
```

```
CN-CS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
CN-PS-DomainIdentifier ::= SEQUENCE {
    pLMN-ID          PLMN-ID,
    LAC              LAC,
    iE-Extensions    ProtocolExtensionContainer { {CN-PS-DomainIdentifier-ExtIEs} } OPTIONAL,
    rAC              RAC
}
```

```
CN-PS-DomainIdentifier-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
-- **TODO**
CPICH-Power ::= INTEGER

C-RNTI ::= INTEGER (0..65535)
```

```
-- D
```

```
DCH-CombinationInd ::= INTEGER (0..255)
```

```
DCH-ID ::= INTEGER (0..255)
```

```
DedicatedMeasurementObjectType ::= ENUMERATED {
    rL,
    all-rL,
    ...
}
```

```
-- ** OR:
-- DedicatedMeasurementObjectType ::= INTEGER {
--    rL(0),
```

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```
-- allRL(1)
-- } (0..255)
-- **

DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
    rSCP,
    ...
}
-- timeslotTSCP is used by TDD only

-- ** OR:
-- DedicatedMeasurementType ::= INTEGER {
--     sIR(0),
--     sIR-Error(1),
--     transmittedCodePower(2),
--     rSCP(3)
-- } (0..255)
-- **

-- ** NOTE: Extensibility added **
-- **TODO**

DedicatedMeasurementValue ::= SEQUENCE {
    sIR-Value          ScaledSIR-Value          OPTIONAL,
    sIR-ErrorValue    ScaledSIR-ErrorValue     OPTIONAL,
    transmittedCodePowerValue ScaledTransmittedCodePowerValue OPTIONAL, -- Relative to CPICH
    rSCP              TBD                      OPTIONAL, -- TDD only
    iE-Extensions     ProtocolExtensionContainer { {DedicatedMeasurementValue-ExtIEs} } OPTIONAL,
    ...
}

DedicatedMeasurementValue-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
DiversityControlField ::= INTEGER

-- ** TODO **
DiversityMode ::= INTEGER

-- ** TODO **
DL-ChannelisationCode ::= INTEGER

-- ** TODO **
DL-DPCCH-SlotFormat ::= INTEGER

-- ** TODO **
DL-DPCH-SlotNumber ::= INTEGER
```

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```
DL-EbNo ::= ScaledUL-EbNo

DL-EbNoTarget ::= ScaledUL-EbNo

-- ** TODO **
DL-Power ::= INTEGER

D-RNTI ::= INTEGER (0..1048576)
-- ** OR:
-- D-RNTI ::= BIT STRING (SIZE (20))
-- **

D-RNTI-ReleaseIndication ::= ENUMERATED {
    not-release-D-RNTI,
    release-D-RNTI
}

-- ** TODO **
DL-ScramblingCode ::= INTEGER

DL-FrameType ::= ENUMERATED {
    typeA,
    typeB,
    ...
}

DPCH-ID ::= INTEGER (0..239)

DRACControl ::= ENUMERATED {
    requested,
    not-requested
}

-- **TODO**
DRX-Parameter ::= TBD

-- **TODO**
DSCH-TransportFormatCombinationSet ::= INTEGER

-- **TODO**
DSCH-TFS ::= INTEGER

-- **TODO**
D-FieldLength ::= INTEGER

-- E

EventA ::= SEQUENCE {
    measurementTreshold MeasurementThreshold,
    measurementHysteresisTime ScaledMeasurementHysteresisTime OPTIONAL,
    IE-Extensions ProtocolExtensionContainer { {EventA-ExtIEs} } OPTIONAL,
    ...
}
```

```
EventA-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

EventB ::= SEQUENCE {
    measurementTreshold      MeasurementThreshold,
    measurementHysteresisTime ScaledMeasurementHysteresisTime OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {EventB-ExtIEs} } OPTIONAL,
    ...
}

EventC ::= SEQUENCE {
    measurementIncreaseThreshold MeasurementIncreaseThreshold,
    measurementChangeTime       ScaledMeasurementChangeTime,
    ...
}

EventB-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

EventD ::= SEQUENCE {
    measurementDecreaseThreshold MeasurementDecreaseThreshold,
    measurementChangeTime       ScaledMeasurementChangeTime,
    iE-Extensions                ProtocolExtensionContainer { {EventD-ExtIEs} } OPTIONAL,
    ...
}

EventD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

EventE ::= SEQUENCE {
    measurementThreshold1      MeasurementThreshold,
    measurementThreshold2      MeasurementThreshold OPTIONAL,
    measurementHysteresisTime ScaledMeasurementHysteresisTime OPTIONAL,
    reportPeriodicity          ReportPeriodicity OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {EventE-ExtIEs} } OPTIONAL,
    ...
}

EventE-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

EventF ::= SEQUENCE {
    measurementThreshold1      MeasurementThreshold,
    measurementThreshold2      MeasurementThreshold OPTIONAL,
    measurementHysteresisTime ScaledMeasurementHysteresisTime OPTIONAL,
    reportPeriodicity          ReportPeriodicity OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {EventF-ExtIEs} } OPTIONAL,
    ...
}
```

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```
}  
  
EventF-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {  
    ...  
}  
  
-- F  
  
FACH-DataFrameSize ::= INTEGER (1..5000)  
-- Size of data frame in number of bits  
  
FACH-InitialWindowSize ::= INTEGER { unlimited(255) } (0..255)  
-- Number of FACH data frames.  
-- 255 = Unlimited number of FACH data frames  
  
-- ** TODO **  
FACH-InfoForOptionalS-CCPCH ::= INTEGER  
  
-- ** TODO **  
FACH-InfoForS-CCPCH-CoupledToPRACH ::= INTEGER  
  
-- ** TODO **  
FDD-DL-ChannelisationCodeNumber ::= INTEGER  
  
-- ** TODO **  
FDD-FL-ChannelisationCodeNumber ::= INTEGER  
  
-- ** TODO **  
FDD-S-CCPCH-Offset ::= INTEGER  
  
FACH-PriorityIndicator ::= INTEGER { lowest(0), highest(15) } (0..15)  
  
FrameHandlingPriority ::= INTEGER { lowest(0), highest(15) } (0..15)  
  
FrameOffset ::= INTEGER (0..255)  
-- Frames  
  
-- G  
  
GapPositionMode ::= ENUMERATED {  
    fixed,  
    flexible  
}  
  
GapPeriod ::= INTEGER (0..255)  
  
-- H  
-- I  
  
-- **TODO**  
InitialDL-TX-Power ::= INTEGER
```

```
-- J
-- K
-- L

LAC ::= OCTET STRING (SIZE (2)) --(EXCEPT ('0000'H|'FFFF'H))

-- ** TODO **
L3-Information ::= INTEGER

-- M

-- ** TODO **
MaxNrOfUL-DPCHs ::= INTEGER

MAC-c-SDU-Length ::= INTEGER (1..5000)

-- **TODO**
MACd-MACsh-TransportFormatSet ::= INTEGER

-- **NOTE: extensibility**
MeasurementCharacteristics ::= SEQUENCE {
    measurementFrequency TBD,
    averagingDuration TBD,
    IE-Extensions ProtocolExtensionContainer { {MeasurementCharacteristics-ExtIEs} } OPTIONAL,
    ...
}

MeasurementCharacteristics-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
MeanBitRate ::= INTEGER

MeasurementID ::= INTEGER (0..1048576)
-- **OR:
-- MeasurementID ::= BIT STRING (SIZE (20))
-- **

MultipleURAsIndicator ::= ENUMERATED {
    single-URA-exists,
    multiple-URAs-exist
}

-- ** TODO **
MCC-Digit ::= OCTET STRING (SIZE (3))
-- FFS
-- Reference: 24.008

-- ** TODO **
MNC-Digit ::= OCTET STRING (SIZE (3))
-- FFS
```

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```
-- Reference: 24.008

ScaledMeasurementChangeTime ::= INTEGER (1..1000)
-- MeasurementChangeTime = ScaledMeasurementChangeTime * 10
-- Unit is ms

-- ** TODO **
MeasurementDecreaseThreshold ::= INTEGER

ScaledMeasurementHysteresisTime ::= INTEGER (1..1000)
-- MeasurementHysteresisTime = ScaledMeasurementHysteresisTime * 10
-- Unit is ms

-- ** TODO **
MeasurementIncreaseThreshold ::= INTEGER

-- ** TODO **
MeasurementThreshold ::= INTEGER

MidambleShift ::= INTEGER (0..15)

MinUL-ChannelisationCodeLength ::= INTEGER

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- N
NrOfTransportBlocks ::= INTEGER (0..4095)

-- O
Offset ::= INTEGER (0..63)

-- P
PD ::= INTEGER (0..2047, ...)

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    crc-not-included,
    crc-included--,
    ...
}

PSCH-TimeSlot ::= INTEGER (0..6)

Periodic ::= SEQUENCE {
    reportPeriodicity ReportPeriodicity,
    iE-Extensions ProtocolExtensionContainer { {Periodic-ExtIEs} } OPTIONAL,
    ...
}
```

```
Periodic-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
PilotBitsUsedIndicator ::= INTEGER

|
-- ** TODO **
PLMN-ID ::= SEQUENCE {
    mCC-digit MCC-Digit,
    iE-Extensions ProtocolExtensionContainer { {PLMN-ID-ExtIEs} } OPTIONAL,
    mNC-digit MNC-Digit
}
-- FFS

PLMN-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

PowerControlMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

PowerOffset ::= INTEGER (0..24)

PowerResumeMode ::= ENUMERATED {
    v0,
    v1,
    ...
}

-- ** TODO **
PrimaryCPICH-Power ::= INTEGER

PrimaryCPICH-EcNo ::= INTEGER (-30..30)

-- ** TODO **
PrimaryCCPCH-RSCP ::= INTEGER

PrimaryScramblingCode ::= ScramblingCode

PropagationDelay ::= INTEGER (0..255)

SyncCase ::= ENUMERATED {
    case1,
    case2,
    case3--,
    ...
}
```



```
-- ** TODO **
PSCH-CCPCH-TimeSlot      ::= TimeSlot

-- ** TODO **
PSCH-PCCPCH-TimeSlot    ::= TimeSlot

-- ** TODO **
P-CPICH-Power           ::= INTEGER

PunctureLimit           ::= INTEGER (0..100)
-- Unit is %

-- Q
-- R

-- ** TODO **
RAC                      ::= INTEGER

-- ** TODO **
-- OCTET STRING?
RANAP-RelocationInformation ::= BIT STRING

RateMatchingAttribute    ::= INTEGER (1..maxRateMatching)

RepetitionLength         ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
    v64--,
-- ...
}

-- This is changed from the tabular format because it seems that
-- this is what is wanted.
ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          Periodic,
    eventA            EventA,
    eventB            EventB,
    eventC            EventC,
    eventD            EventD,
    eventE            EventE,
    eventF            EventF--,
-- ...
}

-- Changed
```

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```
ReportPeriodicity ::= CHOICE {
    msec          INTEGER (1..1000),
    min           INTEGER (1..60)
}

RLC-Mode ::= ENUMERATED {
    acknowledged-mode,
    unacknowledged-mode,
    transparent-mode
}

RL-ID          ::= INTEGER (0..31)

RNC-ID         ::= INTEGER (0..4095)

-- S

-- Changed BIT STRING -> OCTET STRING
SAC            ::= OCTET STRING (SIZE (2))

SAI ::= SEQUENCE {
    pLMN-ID     PLMN-ID,
    LAC         LAC,
    sAC         SAC,
    iE-Extensions ProtocolExtensionContainer { {SAI-ExtIEs} } OPTIONAL
}

SAI-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- ** TODO **
ScramblingCode          ::= INTEGER

ScramblingCodeChange ::= ENUMERATED {
    no-code-change,
    code-change
}

ScaledSIR-ErrorValue    ::= INTEGER (-100..100)
-- ScaledSIR-ErrorValue = SIR-ErrorValue * 10
-- If SIR-ErrorValue <= -10 ScaledSIR-ErrorValue shall be set to -100
-- If SIR-ErrorValue >= 10 ScaledSIR-ErrorValue shall be set to 100
-- SIR-ErrorValue step 0.1 dB

ScaledSIR-Value         ::= INTEGER (-100..200)
-- ScaledSIR-Value = SIR-Value * 10
-- SIR-Value step 0.1 dB

ScaledTransmittedCodePowerValue ::= INTEGER (-350..150)
-- ScaledTransmittedCodePowerValue = TransmittedCodePowerValue * 10
-- TransmittedCodePowerValue step 0.1 dB
```

```
-- ** TODO **
SharedChannelType ::= INTEGER

-- ** TODO **
SecondaryCCPCH-SlotFormat ::= INTEGER

IB-SG-Pos ::= INTEGER (0..4095)

IB-SG-Rep ::= INTEGER (16| 32| 64| 128| 256| 512
| 1024| 2480)

SN ::= TimeSlot

SpreadingFactorOfChannelisationCode ::= ENUMERATED {
    v256,
    v128,
    v64,
    v32,
    v16,
    v8,
    v4,
    v2,
    v1
}

-- Changed
S-FieldLength ::= INTEGER (1..2)

S-RNTI ::= INTEGER (0..1048575)
-- From 0 to 2^20-1

-- ** TODO **
SRNC-ID ::= INTEGER

SSDT-CellID ::= ENUMERATED {
    a,
    b,
    c,
    d,
    e,
    f,
    g,
    h
}

SSDT-CellID-Length ::= ENUMERATED {
    short,
    medium,
    long
}
```

```
SSDT-Indication ::= ENUMERATED {
    sSDT-active-in-the-UE,
    sSDT-not-active-in-the-UE
}

SSDT-SupportIndicator ::= ENUMERATED {
    sSDT-not-supported,
    sSDT-supported
}

-- T

-- ** TODO **
TBD ::= NULL
-- Remove this type

TDD-ChannelisationCode ::= INTEGER (1..31)

TDD-PhysicalChannelOffset ::= INTEGER (0..63)

TFCI-Coding ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32
}

TFCI-Presence ::= ENUMERATED {
    not-present,
    present
}

TFCI-SignallingMode ::= ENUMERATED {
    normal,
    split
}

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}
```

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```
}

TGD ::= INTEGER (0..255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
    -- ...
}

TransportBearerID ::= INTEGER (0..4095)

-- Compare title and IE name in table TransportBearerRequestIndicator vs.
-- FACH-PriorityIndicator
TransportBearerRequestIndicator ::= INTEGER { lowest (0), highest (15) } (0..15)

TransportBlockSize ::= INTEGER (1..5000)
-- Unit is bits

TransportFormatCombinationSet ::= SEQUENCE (SIZE (1..maxNrOfTFCs)) OF
    SEQUENCE {
        cTFC CTFC,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatCombinationSet-ExtIEs} } OPTIONAL,
        ...
    }

TransportFormatCombinationSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet ::= SEQUENCE {
    dynamicParts TransportFormatSet-DynamicPartList,
    semi-staticPart TransportFormatSet-Semi-staticPart,
    iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-ExtIEs} } OPTIONAL,
    ...
}

TransportFormatSet-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
    SEQUENCE {
        nrOfTransportBlocks NrOfTransportBlocks,
        transportBlockSize TransportBlockSize OPTIONAL
        -- This IE is only present if nrOfTransportBlocks is greater than 0 --,
        mode TransportFormatSet-ModeDP,
        iE-Extensions ProtocolExtensionContainer { {TransportFormatSet-DynamicPartList-ExtIEs} } OPTIONAL,
        ...
    }
```

```

}

TransportFormatSet-DynamicPartList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-ModeDP ::= CHOICE {
  tdd          TransmissionTimeIntervalList,
  -- This IE is mandatory if not defined as semistatic parameter, otherwise it is absent --
  ...
}

TransmissionTimeIntervalList ::= SEQUENCE (SIZE (1..maxTTI-Count)) OF
  SEQUENCE {
    transmissionTimeInterval  TransmissionTimeInterval,
    iE-Extensions             ProtocolExtensionContainer { {TransmissionTimeIntervalList-ExtIEs} } OPTIONAL,
    ...
  }

TransmissionTimeIntervalList-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
  transmissionTime          TransmissionTimeInterval,
  channelCoding             ChannelCodingType,
  codingRate                CodingRate OPTIONAL
  -- This IE is only present if channelCoding is 'convolutional' or 'turbo' --,
  rateMatchingAttribute     RateMatchingAttribute,
  cRC-Size                 CRC-Size,
  mode                     TransportFormatSet-ModeSSP OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { {TransportFormatSet-Semi-staticPart-ExtIEs} } OPTIONAL,
  ...
}

TransportFormatSet-Semi-staticPart-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportFormatSet-ModeSSP ::= CHOICE {
  tdd          SecondInterleavingMode,
  ...
}

SecondInterleavingMode ::= ENUMERATED {
  frame-related,
  timeslot-related,
  ...
}

-- TransportLayerAddress          ::= BIT STRING (1..160, ...)
TransportLayerAddress            ::= OCTET STRING (SIZE (1..20, ...))

```

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```
-- U
UARFCN ::= INTEGER (0..698, ...)
UL-DL-CompressedModeSelection ::= ENUMERATED {
    ul-only,
    dl-only,
    both
}
UL-DeltaEbNo ::= INTEGER (-60..100)
UL-DeltaEbNoAfter ::= INTEGER (-60..100)
-- ** TODO **
UL-EbNo ::= INTEGER
-- ** TODO **
UL-EbNoTarget ::= INTEGER
UC-ID ::= SEQUENCE {
    rNC-ID RNC-ID,
    c-ID C-ID,
    iE-Extensions ProtocolExtensionContainer { {UC-ID-ExtIEs} } OPTIONAL,
    ...
}
UC-ID-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
UL-DPCCH-SlotFormat ::= INTEGER (0..5)
ScaledUL-EbNo ::= INTEGER (0..255)
-- Ul-EbNo = ScaledUL-EbNo / 10
UL-FP-Mode ::= ENUMERATED {
    normal,
    silent--,
    ...
}
ScaledUL-InterferenceLevel ::= INTEGER (-1280..-600)
-- UL-InterferenceLevel = UL-InterferenceLevel / 10
-- Relation to the ScramblingCode??
UL-ScramblingCode ::= SEQUENCE {
    ul-ScramblingCodeNumber UL-ScramblingCodeNumber,
    ul-ScramblingCodeLength UL-ScramblingCodeLength,
    iE-Extensions ProtocolExtensionContainer { {UL-ScramblingCode-ExtIEs} } OPTIONAL
}
UL-ScramblingCode-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
```

```

}
...
}
UL-ScramblingCodeLength ::= ENUMERATED {
    short,
    long
}
UL-ScramblingCodeNumber ::= INTEGER (0..16777215)
URA-ID ::= INTEGER (0..65535)
-- V
-- W
-- X
-- Y
-- Z
END

```

### 9.3.5 Common Definitions

```

-- *****
--
-- Common definitions
--
-- *****

RNSAP-CommonDataTypes -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Criticality ::= ENUMERATED { reject, ignore, notify }

Presence ::= ENUMERATED { optional, conditional, mandatory }

PrivateExtensionID ::= CHOICE {
    local          INTEGER (0..65535),
    global         OBJECT IDENTIFIER
}

ProcedureCode ::= INTEGER (0..255)

ProcedureID ::= SEQUENCE {
    procedureCode ProcedureCode,
    ddMode        ENUMERATED { tdd, fdd, common }
}

ProtocolExtensionID ::= INTEGER (0..65535)

```



```

ProtocolIE-ID      ::= INTEGER (0..65535)

TransactionID     ::= INTEGER (0..65535)

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome, outcome }

END

```

### 9.3.6 Constant Definitions

```

-- *****
--
-- Constant definitions
--
-- *****

RNSAP-Constants -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- Elementary Procedures
--
-- *****

id-commonTransportChannelResourcesInitiationFDD      INTEGER ::= 0
id-commonTransportChannelResourcesInitiationTDD     INTEGER ::= 1
id-commonTransportChannelResourcesRelease           INTEGER ::= 2
id-compressedModeCancellationFDD                   INTEGER ::= 3
id-compressedModeCommitFDD                          INTEGER ::= 4
id-compressedModePrepareFDD                        INTEGER ::= 5
id-downlinkPowerControl                            INTEGER ::= 6
id-downlinkSignallingTransfer                       INTEGER ::= 7
id-errorIndication                                 INTEGER ::= 8
id-measurementFailure                               INTEGER ::= 9
id-measurementInitiation                           INTEGER ::= 10
id-measurementReporting                             INTEGER ::= 11
id-measurementTermination                           INTEGER ::= 12
id-pagingRequest                                   INTEGER ::= 13
id-physicalChannelReconfiguration                   INTEGER ::= 14
id-privateMessage                                  INTEGER ::= 15
id-radioLinkAddition                               INTEGER ::= 16
id-radioLinkDeletion                               INTEGER ::= 17
id-radioLinkFailure                                INTEGER ::= 18
id-radioLinkRestoration                            INTEGER ::= 19
id-radioLinkSetup                                  INTEGER ::= 20
id-srnsRelocationCommit                            INTEGER ::= 21
id-synchronisedRadioLinkReconfigurationCancellation INTEGER ::= 22
id-synchronisedRadioLinkReconfigurationCommit        INTEGER ::= 23
id-synchronisedRadioLinkReconfigurationPrepare       INTEGER ::= 24

```

```

id-unSynchronisedRadioLinkReconfiguration          INTEGER ::= 25
id-uplinkSignallingTransfer                       INTEGER ::= 26
id-RL-InformationResponseList-RL-ReconfRspFDD    INTEGER ::= 27
id-RL-InformationResponseItem-RL-ReconfRspFDD    INTEGER ::= 28
id-DCH-AddItem-RL-ReconfRspFDD                  INTEGER ::= 29
id-DCH-ModifyItem-RL-ReconfRspFDD                INTEGER ::= 30

-- *****
--
-- Extension constants
--
-- *****

maxPrivateExtensions                             INTEGER ::= 65535
maxProtocolExtensions                           INTEGER ::= 65535
maxProtocolIEs                                  INTEGER ::= 65535

-- *****
--
-- Lists
--
-- *****

maxRateMatching                                INTEGER ::= 10
maxNrOfTFCs                                    INTEGER ::= 10
maxNrOfTFs                                      INTEGER ::= 10

maxNoOfDL-Codes                                INTEGER ::= 10
maxNrOfCCTrCHs                                  INTEGER ::= 10
maxNrOfDCHs                                     INTEGER ::= 10
maxNrOfDL-Codes                                 INTEGER ::= 10
maxNrOfDPCHs                                    INTEGER ::= 10
maxNrOfErrors                                   INTEGER ::= 10
maxNrOfFACH-FD-Size                             INTEGER ::= 10
maxNrOfFDD-Neighbours                           INTEGER ::= 10
maxNrOfMACcSDU-Length                           INTEGER ::= 10
maxNrOfTDD-Neighbours                           INTEGER ::= 10
maxNrOfRLs                                       INTEGER ::= 10
maxNrOfSCCPCHs                                  INTEGER ::= 10
maxRNCinURA                                    INTEGER ::= 10
maxTTI-Count                                    INTEGER ::= 10
maxFACHCount                                    INTEGER ::= 10
maxIBSEG                                         INTEGER ::= 16

-- *****
--
-- IEs
--
-- *****

id-AllowedQueuingTime                           INTEGER ::= 0
id-BindingID                                    INTEGER ::= 1

```

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```
id-C-ID INTEGER ::= 2
id-C-RNTI INTEGER ::= 3
id-CCTrCH-ID INTEGER ::= 4
id-CFN INTEGER ::= 5
id-CN-CS-DomainIdentifier INTEGER ::= 6
id-CN-PS-DomainIdentifier INTEGER ::= 7
id-Cause INTEGER ::= 8
id-CompressedModeMethod INTEGER ::= 9
id-D-RNTI INTEGER ::= 10
id-D-RNTI-ReleaseIndication INTEGER ::= 11
id-DCH-AddItem INTEGER ::= 12
id-DCH-AddItem-RL-ReconfPrepFDD INTEGER ::= 13
id-DCH-AddItem-RL-ReconfPrepTDD INTEGER ::= 14
id-DCH-AddItem-RL-ReconfReadyFDD INTEGER ::= 15
id-DCH-AddItem-RL-ReconfRqstFDD INTEGER ::= 16
id-DCH-AddItem-RL-ReconfRqstTDD INTEGER ::= 17
id-DCH-AddList-RL-ReconfPrepFDD INTEGER ::= 18
id-DCH-AddList-RL-ReconfPrepTDD INTEGER ::= 19
id-DCH-AddList-RL-ReconfRqstFDD INTEGER ::= 20
id-DCH-AddList-RL-ReconfRqstTDD INTEGER ::= 21
id-DCH-DeleteItem-RL-ReconfPrepFDD INTEGER ::= 22
id-DCH-DeleteItem-RL-ReconfPrepTDD INTEGER ::= 23
id-DCH-DeleteItem-RL-ReconfRqstFDD INTEGER ::= 24
id-DCH-DeleteItem-RL-ReconfRqstTDD INTEGER ::= 25
id-DCH-DeleteList-RL-ReconfPrepFDD INTEGER ::= 26
id-DCH-DeleteList-RL-ReconfPrepTDD INTEGER ::= 27
id-DCH-DeleteList-RL-ReconfRqstFDD INTEGER ::= 28
id-DCH-DeleteList-RL-ReconfRqstTDD INTEGER ::= 29
id-DCH-Information-RL-SetupReqFDD INTEGER ::= 30
id-DCH-InformationItem-RL-SetupReqFDD INTEGER ::= 31
id-DCH-InformationItem-RL-SetupReqTDD INTEGER ::= 32
id-DCH-InformationList-RL-SetupReqTDD INTEGER ::= 33
id-DCH-ModifyItem INTEGER ::= 34
id-DCH-ModifyItem-RL-ReconfPrepFDD INTEGER ::= 35
id-DCH-ModifyItem-RL-ReconfPrepTDD INTEGER ::= 36
id-DCH-ModifyItem-RL-ReconfReadyFDD INTEGER ::= 37
id-DCH-ModifyItem-RL-ReconfRqstFDD INTEGER ::= 38
id-DCH-ModifyItem-RL-ReconfRqstTDD INTEGER ::= 39
id-DCH-ModifyList-RL-ReconfPrepFDD INTEGER ::= 40
id-DCH-ModifyList-RL-ReconfPrepTDD INTEGER ::= 41
id-DCH-ModifyList-RL-ReconfRqstFDD INTEGER ::= 42
id-DCH-ModifyList-RL-ReconfRqstTDD INTEGER ::= 43
id-DL-CCTrCH-Information-RL-ReconfPrepTDD INTEGER ::= 44
id-DL-CCTrCH-Information-RL-ReconfRqstTDD INTEGER ::= 45
id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD INTEGER ::= 46
id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD INTEGER ::= 47
id-DL-CCTrChInformationItem-RL-SetupReqTDD INTEGER ::= 48
id-DL-CCTrChInformationList-RL-SetupReqTDD INTEGER ::= 49
id-DL-CodeInformation-PhyChReconfRqstFDD INTEGER ::= 50
id-DL-DPCH-Information INTEGER ::= 51
id-DL-DPCH-Information-RL-SetupReqFDD INTEGER ::= 52
id-DL-DPCH-InformationList-PhyChReconfRqstTDD INTEGER ::= 53
id-DL-DPCH-InformationList-RL-ReconfReadyTDD INTEGER ::= 54
```

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|   |                 |
|---|-----------------|
| id-DL-EbNoTarget                                | INTEGER ::= 55  |
| id-DL-FrameType                                 | INTEGER ::= 56  |
| id-DL-MeanBitRate                               | INTEGER ::= 57  |
| id-DL-ReferencePowerInformation-DL-PC-Rqst      | INTEGER ::= 58  |
| id-DRX-Parameter                                | INTEGER ::= 59  |
| id-DedicatedMeasurementObjectType-DM-Rprt       | INTEGER ::= 60  |
| id-DedicatedMeasurementObjectType-DM-Rqst       | INTEGER ::= 61  |
| id-DedicatedMeasurementObjectType-DM-Rspns      | INTEGER ::= 62  |
| id-FACH-InfoForOptionalGroupS-CCPCH             | INTEGER ::= 63  |
| id-FACH-InfoForOptionals-CCPCH                  | INTEGER ::= 64  |
| id-FACH-InfoForS-CCPCH-CoupledToPRACH           | INTEGER ::= 65  |
| id-GapPositionMode                              | INTEGER ::= 66  |
| id-L3-Information                               | INTEGER ::= 67  |
| id-MeasurementCharacteristics                   | INTEGER ::= 68  |
| id-MeasurementID                                | INTEGER ::= 69  |
| id-MultipleURAsIndicator                        | INTEGER ::= 70  |
| id-PD   | INTEGER ::= 71  |
| id-PagingArea-PagingRqst                        | INTEGER ::= 72  |
| id-PowerControlMode                             | INTEGER ::= 73  |
| id-PowerResumeMode                              | INTEGER ::= 74  |
| id-ProcedureScope-DL-PC-Rqst                    | INTEGER ::= 75  |
| id-RANAP-RelocationInformation                  | INTEGER ::= 76  |
| id-RL-Information-PhyChReconfRqstFDD            | INTEGER ::= 77  |
| id-RL-Information-PhyChReconfRqstTDD            | INTEGER ::= 78  |
| id-RL-Information-RL-AdditionRqstFDD            | INTEGER ::= 79  |
| id-RL-Information-RL-AdditionRqstTDD            | INTEGER ::= 80  |
| id-RL-Information-RL-DeletionRqst               | INTEGER ::= 81  |
| id-RL-Information-RL-FailureInd                 | INTEGER ::= 82  |
| id-RL-Information-RL-ReconfPrepFDD              | INTEGER ::= 83  |
| id-RL-Information-RL-RestoreInd                 | INTEGER ::= 84  |
| id-RL-Information-RL-SetupReqFDD                | INTEGER ::= 85  |
| id-RL-Information-RL-SetupReqTDD                | INTEGER ::= 86  |
| id-RL-InformationItem-DM-Rprt                   | INTEGER ::= 87  |
| id-RL-InformationItem-DM-Rqst                   | INTEGER ::= 88  |
| id-RL-InformationItem-DM-Rspns                  | INTEGER ::= 89  |
| id-RL-InformationItem-RL-SetupReqFDD            | INTEGER ::= 90  |
| id-RL-InformationList-RL-AdditionRqstFDD        | INTEGER ::= 91  |
| id-RL-InformationList-RL-DeletionRqst           | INTEGER ::= 92  |
| id-RL-InformationList-RL-FailureInd             | INTEGER ::= 93  |
| id-RL-InformationList-RL-ReconfPrepFDD          | INTEGER ::= 94  |
| id-RL-InformationList-RL-RestoreInd             | INTEGER ::= 95  |
| id-RL-InformationResponse-RL-AdditionRspTDD     | INTEGER ::= 96  |
| id-RL-InformationResponse-RL-ReconfReadyTDD     | INTEGER ::= 97  |
| id-RL-InformationResponse-RL-SetupRspTDD        | INTEGER ::= 98  |
| id-RL-InformationResponseItem-RL-AdditionRspFDD | INTEGER ::= 99  |
| id-RL-InformationResponseItem-RL-ReconfReadyFDD | INTEGER ::= 100 |
| id-RL-InformationResponseItem-RL-SetupRspFDD    | INTEGER ::= 101 |
| id-RL-InformationResponseList-RL-AdditionRspFDD | INTEGER ::= 102 |
| id-RL-InformationResponseList-RL-ReconfReadyFDD | INTEGER ::= 103 |
| id-RL-InformationResponseList-RL-SetupRspFDD    | INTEGER ::= 104 |
| id-RL-ReconfigurationFailure-RL-ReconfFail      | INTEGER ::= 105 |
| id-RL-ReconfigurationFailureList-RL-ReconfFail  | INTEGER ::= 106 |
| id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind | INTEGER ::= 107 |

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```
id-ReportCharacteristics          INTEGER ::= 108
id-S-RNTI                          INTEGER ::= 109
id-SAI                             INTEGER ::= 110
id-SN                              INTEGER ::= 111
id-SRNC-ID                         INTEGER ::= 112
id-ScramblingCodeChange           INTEGER ::= 113
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD  INTEGER ::= 114
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD    INTEGER ::= 115
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD  INTEGER ::= 116
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD    INTEGER ::= 117
id-TGD                             INTEGER ::= 118
id-TGL                             INTEGER ::= 119
id-TGP1                            INTEGER ::= 120
id-TGP2                            INTEGER ::= 121
id-TransportBearerID              INTEGER ::= 122
id-TransportBearerRequestIndicator  INTEGER ::= 123
id-TransportLayerAddress          INTEGER ::= 124
id-UC-ID                          INTEGER ::= 125
id-UL-CCTrCH-Information-RL-ReconfPrepTDD                INTEGER ::= 126
id-UL-CCTrCH-Information-RL-ReconfRqstTDD                INTEGER ::= 127
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD            INTEGER ::= 128
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD            INTEGER ::= 129
id-UL-CCTrChInformationItem-RL-SetupReqTDD               INTEGER ::= 130
id-UL-CCTrChInformationList-RL-SetupReqTDD               INTEGER ::= 131
id-UL-DL-CompressedModeSelection  INTEGER ::= 132
id-UL-DPCH-Information            INTEGER ::= 133
id-UL-DPCH-Information-RL-SetupReqFDD                    INTEGER ::= 134
id-UL-DPCH-InformationList-PhyChReconfRqstTDD            INTEGER ::= 135
id-UL-DPCH-InformationList-RL-ReconfReadyTDD             INTEGER ::= 136
id-UL-DeltaEbNo                  INTEGER ::= 137
id-UL-DeltaEbNoAfter              INTEGER ::= 138
id-UL-EbNoTarget                  INTEGER ::= 139
id-UL-MeanBitRate                 INTEGER ::= 140
id-URA-ID                       INTEGER ::= 141
id-UnsuccessfulRL-InformationResponse                    INTEGER ::= 142
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD  INTEGER ::= 143
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD    INTEGER ::= 144
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD    INTEGER ::= 145
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD  INTEGER ::= 146
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD  INTEGER ::= 147
id-CriticalityDiagnostics          INTEGER ::= 148
```

END

### 9.3.7 Container Definitions

```
-- *****
--
-- Container definitions
--
-- *****
```

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```
RNSAP-Containers -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    Criticality,
    Presence,
    PrivateExtensionID,
    ProtocolExtensionID,
    ProtocolIE-ID
FROM RNSAP-CommonDataTypes

    maxPrivateExtensions,
    maxProtocolExtensions,
    maxProtocolIEs
FROM RNSAP-Constants;

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

RNSAP-PROTOCOL-IES ::= CLASS {
    &id          ProtocolIE-ID          UNIQUE,
    &criticality Criticality,
    &Value,
    &presence    Presence
}
WITH SYNTAX {
    ID          &id
    CRITICALITY &criticality
    TYPE        &Value
    PRESENCE    &presence
}

-- *****
--
-- Class Definition for Protocol IEs
--
-- *****

RNSAP-PROTOCOL-IES-PAIR ::= CLASS {
    &id          ProtocolIE-ID          UNIQUE,
    &firstCriticality Criticality,
    &FirstValue,
```

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```
&secondCriticality      Criticality,
&SecondValue,
&presence                Presence
}
WITH SYNTAX {
  ID                      &id
  FIRST CRITICALITY      &firstCriticality
  FIRST TYPE             &FirstValue
  SECOND CRITICALITY     &secondCriticality
  SECOND TYPE            &SecondValue
  PRESENCE               &presence
}

-- *****
--
-- Class Definition for Protocol Extensions
--
-- *****

RNSAP-PROTOCOL-EXTENSION ::= CLASS {
  &id                    ProtocolExtensionID          UNIQUE,
  &criticality           Criticality,
  &Extension
}
WITH SYNTAX {
  ID                    &id
  CRITICALITY          &criticality
  EXTENSION            &Extension
}

-- *****
--
-- Class Definition for Private Extensions
--
-- *****

RNSAP-PRIVATE-EXTENSION ::= CLASS {
  &id                    PrivateExtensionID,
  &criticality           Criticality,
  &Extension
}
WITH SYNTAX {
  ID                    &id
  CRITICALITY          &criticality
  EXTENSION            &Extension
}

-- *****
--
-- Container for Protocol IEs
--
-- *****
```

```

ProtocolIE-Container {RNSAP-PROTOCOL-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field {RNSAP-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {
  id          RNSAP-PROTOCOL-IES.&id          ({IEsSetParam}),
  criticality RNSAP-PROTOCOL-IES.&criticality  ({IEsSetParam}@id}),
  value       RNSAP-PROTOCOL-IES.&Value       ({IEsSetParam}@id)}
}

-- *****
--
-- Container for Protocol IE Pairs
--
-- *****

ProtocolIE-ContainerPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
  SEQUENCE (SIZE (0..maxProtocolIEs)) OF
    ProtocolIE-FieldPair {{IEsSetParam}}

ProtocolIE-FieldPair {RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::= SEQUENCE {
  id          RNSAP-PROTOCOL-IES-PAIR.&id          ({IEsSetParam}),
  firstCriticality RNSAP-PROTOCOL-IES-PAIR.&firstCriticality  ({IEsSetParam}@id}),
  firstValue      RNSAP-PROTOCOL-IES-PAIR.&FirstValue      ({IEsSetParam}@id}),
  secondCriticality RNSAP-PROTOCOL-IES-PAIR.&secondCriticality ({IEsSetParam}@id}),
  secondValue     RNSAP-PROTOCOL-IES-PAIR.&SecondValue     ({IEsSetParam}@id)}
}

-- *****
--
-- Container Lists for Protocol IE Containers
--
-- *****

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-Container {{IEsSetParam}}

ProtocolIE-ContainerPairList {INTEGER : lowerBound, INTEGER : upperBound, RNSAP-PROTOCOL-IES-PAIR : IEsSetParam} ::=
  SEQUENCE (SIZE (lowerBound..upperBound)) OF
    ProtocolIE-ContainerPair {{IEsSetParam}}

-- *****
--
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
    ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField {RNSAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {

```



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```
id RNSAP-PROTOCOL-EXTENSION.&id ({ExtensionSetParam}),
criticality RNSAP-PROTOCOL-EXTENSION.&criticality ({ExtensionSetParam}@id}),
extensionValue RNSAP-PROTOCOL-EXTENSION.&Extension ({ExtensionSetParam}@id)
}

-- *****
--
-- Container for Private Extensions
--
-- *****

PrivateExtensionContainer {RNSAP-PRIVATE-EXTENSION : ExtensionSetParam} ::=
SEQUENCE (SIZE (1..maxPrivateExtensions)) OF
PrivateExtensionField {{ExtensionSetParam}}

PrivateExtensionField {RNSAP-PRIVATE-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
id RNSAP-PRIVATE-EXTENSION.&id ({ExtensionSetParam}),
criticality RNSAP-PRIVATE-EXTENSION.&criticality ({ExtensionSetParam}@id}),
extensionValue RNSAP-PRIVATE-EXTENSION.&Extension ({ExtensionSetParam}@id)
}

END
```

**3GPP TSG-RA WG3 Meeting #11**  
**Sophia Antipolis, 28 Feb – 3 Mar 2000**

**Document R3-000777**

e.g. for 3GPP use the format TP-99xxx  
 or for SMG, use the format P-99-xxx

|   |  |  |                    |
|---|--|--|--------------------|
| <b>CHANGE REQUEST</b>                             |  | Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. |                    |
| <b>25.423 CR 042r1</b>                            |  | Current Version: <b>3.0.0</b>  |                    |
| GSM (AA.BB) or 3G (AA.BBB) specification number ↑ |  | ↑ CR number as allocated by MCC support team   |                    |
| For submission to: <b>RAN#7</b>                   | for approval <input checked="" type="checkbox"/> | strategic <input type="checkbox"/>   | (for SMG use only) |
| <i>list expected approval meeting # here ↑</i>    | for information <input type="checkbox"/>         | non-strategic <input type="checkbox"/>   |                    |

Form: CR cover sheet, version 2 for 3GPP and SMG      The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

**Proposed change affects:** (U)SIM  ME  UTRAN / Radio  Core Network   
*(at least one should be marked with an X)*

**Source:** R-WG3 **Date:** \_\_\_\_\_

**Subject:** Clarification on the definition of the parameter "Allocation/Retention Priority"

**Work item:** \_\_\_\_\_

|  |  |                 |  |
|--|--|-----------------|--|
| <b>Category:</b>                                     | F Correction <input checked="" type="checkbox"/>                             | <b>Release:</b> | Phase 2 <input type="checkbox"/>               |
|  | A Corresponds to a correction in an earlier release <input type="checkbox"/> |                 | Release 96 <input type="checkbox"/>            |
| <i>(only one category shall be marked with an X)</i> | B Addition of feature <input type="checkbox"/>                               |                 | Release 97 <input type="checkbox"/>            |
|  | C Functional modification of feature <input type="checkbox"/>                |                 | Release 98 <input type="checkbox"/>            |
|  | D Editorial modification <input type="checkbox"/>                            |                 | Release 99 <input checked="" type="checkbox"/> |
|  |  |                 | Release 00 <input type="checkbox"/>            |

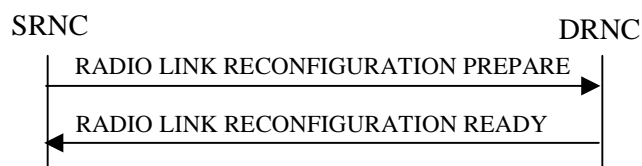
**Reason for change:** The 'Allocation/Retention Priority' parameter was agreed in WG3 meeting #6. It is linked to the RAB Parameter 'Allocation/Retention priority', defined in 23.107 as 'specifies the relative importance compared to other Radio access bearers for allocation and retention of the Radio access bearer'. In RNSAP the Allocation/Retention Priority specifies the priority to be used for the allocation and retention of the resources in the DRNC. This CR clarifies the use of such parameter.

**Clauses affected:** 8.3.4.2, 8.3.7.2, 9.2.1.1

|                              |  |                |  |
|------------------------------|--|----------------|--|
| <b>Other specs affected:</b> | Other 3G core specifications <input type="checkbox"/>  | → List of CRs: |  |
|                              | Other GSM core specifications <input type="checkbox"/> | → List of CRs: |  |
|                              | MS test specifications <input type="checkbox"/>        | → List of CRs: |  |
|                              | BSS test specifications <input type="checkbox"/>       | → List of CRs: |  |
|                              | O&M specifications <input type="checkbox"/>            | → List of CRs: |  |

**Other comments:** \_\_\_\_\_

### 8.3.4.2 Successful Operation



**Figure 1: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation**

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the DRNC.

Upon reception, the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

#### **DCH Modification :**

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

~~[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]~~

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new ToAWE in the user plane for this DCH in the new configuration.

#### **DCH Addition:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and

2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

~~The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when reserving resources for this DCH in the new configuration.~~

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

The DRNS may use the included *RLC Mode* IE to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for this DCH in the new configuration.

#### **DCH Deletion:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be deleted from the Radio Link(s), the DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

#### **Physical Channel Modification:**

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Uplink Channelisation Code* IEs, the DRNS shall apply the new Uplink Channelisation Code(s) in the new configuration.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Spreading Factor of Channelisation Code (DL)* IE, for each *Spreading Factor of Channelisation Code (DL)* IE the DRNS shall allocate one new Downlink Channelisation Code per Radio Link and apply the new Downlink Channelisation Code(s) to the new configuration. Each Downlink Channelisation Code allocated for the new configuration shall be included as a *Channelisation Code (DL)* IE in the RADIO LINK RECONFIGURATION READY message when sent to the SRNC.]

The DRNS shall use the *TFCS (UL)* IE when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

The DRNS shall use the *TFCS (DL)* IE when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes on the *UL DPCCH Structure* IE, group the DRNS shall apply the new Uplink DPCCH Structure to the new configuration.]

#### **SSDT Activation/Deactivation:**

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT Active in the UE", the DRNS may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the SSDT Indication IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

If the requested modifications are allowed by the DRNS, and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s) it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the *Maximum Uplink Eb/No* IE and *Minimum Uplink Eb/No* IE for each Radio Link in the RADIO LINK RECONFIGURATION READY message.

[TDD – The DRNC shall include all the IEs corresponding to the new physical channel parameters for the DL DPCH and/or the UL DPCH to be reconfigured in the RADIO LINK RECONFIGURATION READY message.]

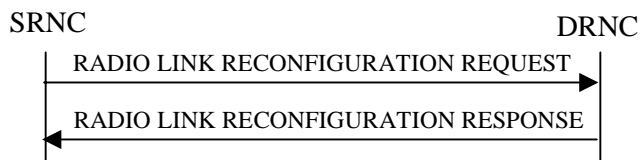
[Editor's note: Which information in the RL RECONFIGURATION PREPARE message triggers the DRNC to include any of the following *Optional* TDD information?:

- a) DL DPCH Group
- b) UL DPCH Group
- c) TDD Physical Channel Offset, *Repetition* Length, and TFCI Presence IEs as part of the DL DPCH Group
- d) TDD Physical Channel Offset, *Repetition* Length, and TFCI Presence IEs as part of the UL DPCH Group.]

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCHs in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

### 8.3.7.2 Successful Operation



**Figure 2: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation**

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION REQUEST message to the DRNC.

Upon reception, the DRNS shall modify the configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

#### **DCH Modification:**

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this ~~information~~ new value when reserving resources for this DCH in the new configuration.

~~[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]~~

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new ToAWE in the user plane for this DCH in the new configuration.

#### **DCH Addition:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall.

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

~~The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when allocating resources for this DCH in the new configuration.~~

~~[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]~~

The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RLC Mode* IE, the DRNS may use this information to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for this DCH in the new configuration.

#### **DCH Deletion:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be deleted from the Radio Link(s), the DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

#### **Physical Channel Modification:**

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (UL)* IE, the DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (DL)* IE, the DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

If the requested modifications are allowed by the DRNS, the DRNS has successfully allocated the required resources, and changed to the new configuration it shall respond to the SRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the IEs *Maximum Uplink Eb/No* and *Minimum Uplink Eb/No* for each Radio Link in the RADIO LINK RECONFIGURATION RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCH in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

### 9.2.1.1 Allocation/Retention Priority

This parameter indicates the priority level in the allocation and retention of ~~DCH~~ transport channel resources in DRNS. DRNS **may** use the Allocation/Retention priority information of the transport channels composing the RL to prioritise requests for RL Setup/addition and reconfiguration. In similar way, DRNS **may** use the allocation/Retention priority information of the transport channels composing the RL to prioritise which RL shall be set to failure, **in case** **prioritisation is possible.**

| IE/Group Name                         | Presence | Range | IE type and reference   | Semantics description |
|---------------------------------------|----------|-------|-------------------------|-----------------------|
| 9.2.1.1-Allocation/Retention Priority |          |       | Frame Handling Priority |                       |





### 9.2.2.x DL Power

The DL Power IE indicates the power level of the DPDCH symbols, expressed as a relative value with respect to the CPICH power.

| <u>Information Element/Group Name</u> | <u>Presence</u> | <u>Range</u> | <u>IE type and reference</u> | <u>Semantics description</u> |
|---------------------------------------|-----------------|--------------|------------------------------|------------------------------|
| DL Power                              |                 |              | Enumerated(-35..+15dB)       | Step 0.1dB                   |

### 9.3.4 Information Element Definitions

```
--- ** TODO **  
DL-Power ::= INTEGER(-350..150)  
-- Value = DL-Power / 10  
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB
```

|  |  |  |                    |
|--|--|--|--------------------|
| <h2 style="margin: 0;">CHANGE REQUEST</h2>   |  | Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly. |                    |
| <b>25.423</b>  | <b>CR 054r1</b>  | Current Version: <b>3.0.0</b>  |                    |
| GSM (AA.BB) or 3G (AA.BBB) specification number ↑  | ↑ CR number as allocated by MCC support team   |  |                    |
| For submission to: <b>TSG RAN #7</b><br><small>list expected approval meeting # here ↑</small> | for approval <input checked="" type="checkbox"/><br>for information <input type="checkbox"/> | strategic <input type="checkbox"/><br>non-strategic <input type="checkbox"/>                                     | (for SMG use only) |

Form: CR cover sheet, version 2 for 3GPP and SMG    The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:** (U)SIM     ME     UTRAN / Radio     Core Network   
(at least one should be marked with an X)

**Source:**    RAN-WG3    **Date:**    28 February 2000

**Subject:**    Modification to "TGD" unit and range (RNSAP)

**Work item:**    \_\_\_\_\_

|                  |  |                 |  |
|------------------|--|-----------------|--|
| <b>Category:</b> | F Correction <input checked="" type="checkbox"/><br>A Corresponds to a correction in an earlier release <input type="checkbox"/><br>B Addition of feature <input type="checkbox"/><br>C Functional modification of feature <input type="checkbox"/><br>D Editorial modification <input type="checkbox"/> | <b>Release:</b> | Phase 2 <input type="checkbox"/><br>Release 96 <input type="checkbox"/><br>Release 97 <input type="checkbox"/><br>Release 98 <input type="checkbox"/><br>Release 99 <input checked="" type="checkbox"/><br>Release 00 <input type="checkbox"/> |
|------------------|--|-----------------|--|

(only one category shall be marked with an X)

**Reason for change:**    In TR25.922, it is assumed that the number of frames for Transmission Gap Distance (TGD) may be provided in a fractional expression, as quoted below.

5.1.6.2.1.1                      *Setting of the compressed mode parameters for selection mode*

*During the transmission gaps, the UE shall perform measurements so as to be able to report to the UTRAN the frame timing, the scrambling code and the Ec/Io of Primary CCPCH of up FDD cells in the handover monitoring set.*

*When compressed mode is used for cell acquisition at each target FDD frequency, the parameters of compressed mode pattern are fixed to be:*

**TGL**  
**TGD**  
**TGP1**  
**TGP2**  
**PD**

Pattern1  
7  
24/15  
4  
20  
M

Pattern2  
7  
24/15  
4  
140  
M

Pattern3  
7

2  
4  
Not Used  
M

Pattern4  
7  
2  
4  
20  
M

Pattern5  
7  
2  
4  
140  
M

Pattern6  
14  
3  
6  
18  
M

Pattern7  
14  
3  
6  
138  
M

On the other hand, R3 has so far considered that the number of frames for TGD is an integer which has defined it as "INTEGER(0..255)".

In order to support Compressed Mode Pattern1 and 2 in the quotation above, it is proposed to express the TGD in unit of "Slots" rather than in "Frames". It is also proposed to expand the range of TGD in accordance with change of unit.

**Clauses affected:**

9.2.2.32 TGP  
9.3.4 Information Element Definitions

**Other specs affected:**

|                               |                          |                |
|-------------------------------|--------------------------|----------------|
| Other 3G core specifications  | <input type="checkbox"/> | → List of CRs: |
| Other GSM core specifications | <input type="checkbox"/> | → List of CRs: |
| MS test specifications        | <input type="checkbox"/> | → List of CRs: |
| BSS test specifications       | <input type="checkbox"/> | → List of CRs: |
| O&M specifications            | <input type="checkbox"/> | → List of CRs: |

**Other comments:**



help.doc

<----- [double-click here for help and instructions on how to create a CR.](#)

### 9.2.2.32 Transmission Gap Distance (TGD)

Transmission Gap Distance is the duration of transmission between two consecutive transmission gaps within a transmission gap period, expressed in number of [slotsframes](#). In case there is only one transmission gap in the transmission gap period, this parameter shall be set to zero.

| IE/Group Name | Presence | Range | IE type and reference               | Semantics description       |
|---------------|----------|-------|-------------------------------------|-----------------------------|
| TGD           |          |       | INTEGER(0..<br><del>3839255</del> ) | <a href="#">SlotsFrames</a> |

## 9.3.4 Information Element Definitions

----- omitted -----

```

-- ** TODO **
TimeReference ::= INTEGER
-- TimeReference ::= INTEGER (0..255)

TimeSlot ::= INTEGER (0..14)

ToAWE ::= INTEGER (0..2559)

ToAWS ::= INTEGER (0..1279)

TPC-StepSize ::= ENUMERATED {
    half,
    one
}

TGD ::= INTEGER (0..3839255)

TGL ::= INTEGER (3| 4| 7| 10| 14)

TransmissionTimeInterval ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80--,
    ...
}

TransportBearerID ::= INTEGER (0..4095)

```

----- omitted -----

|  |  |  |   |
|--|--|--|---|
| <h2 style="margin: 0;">CHANGE REQUEST</h2>   |  |  | <i>Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.</i> |
| <b>25.423</b>  | <b>CR 018 R1</b>   | Current Version: <b>3.0.0</b>  |   |
| GSM (AA.BB) or 3G (AA.BBB) specification number ↑                                      | ↑ CR number as allocated by MCC support team   |  |   |
| For submission to: <b>TSG RAN #7</b><br><i>list expected approval meeting # here ↑</i> | for approval <input checked="" type="checkbox"/><br>for information <input type="checkbox"/> | strategic <input type="checkbox"/><br>non-strategic <input type="checkbox"/> | <i>(for SMG use only)</i>   |

Form: CR cover sheet, version 2 for 3GPP and SMG    The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

**Proposed change affects:**    (U)SIM     ME     UTRAN / Radio     Core Network   
(at least one should be marked with an X)

**Source:**    RAN-WG3    **Date:**    2000-02-17

**Subject:**    Change of definition of the quality estimate (QE)

**Work item:**    \_\_\_\_\_

|                  |  |                 |  |
|------------------|--|-----------------|--|
| <b>Category:</b> | F Correction <input checked="" type="checkbox"/><br>A Corresponds to a correction in an earlier release <input type="checkbox"/><br>B Addition of feature <input type="checkbox"/><br>C Functional modification of feature <input type="checkbox"/><br>D Editorial modification <input type="checkbox"/> | <b>Release:</b> | Phase 2 <input type="checkbox"/><br>Release 96 <input type="checkbox"/><br>Release 97 <input type="checkbox"/><br>Release 98 <input type="checkbox"/><br>Release 99 <input checked="" type="checkbox"/><br>Release 00 <input type="checkbox"/> |
|------------------|--|-----------------|--|

*(only one category shall be marked with an X)*

**Reason for change:**    In WG1 the definition of Physical channel BER type 1 is proposed to be changed to Transport channel BER. Therefore the handling of the QE has to be updated.

**Clauses affected:**    8.3.1, 8.3.4, 8.3.7, 9.1.3.1, 9.1.11.1, 9.1.16, 9.2.2.x, 9.3.3, 9.3.4

|                    |  |                |   |
|--------------------|--|----------------|---|
| <b>Other specs</b> | Other 3G core specifications <input checked="" type="checkbox"/> | → List of CRs: | 25.215 3.1.0 CR-XXX,<br>25.427 3.1.0 CR-005,<br>25.433 3.0.0 CR-031 |
| <b>affected:</b>   | Other GSM core specifications <input type="checkbox"/>           | → List of CRs: |   |
|                    | MS test specifications <input type="checkbox"/>                  | → List of CRs: |   |
|                    | BSS test specifications <input type="checkbox"/>                 | → List of CRs: |   |
|                    | O&M specifications <input type="checkbox"/>                      | → List of CRs: |   |

**Other comments:**    \_\_\_\_\_



help.doc

<----- double-click here for help and instructions on how to create a CR.

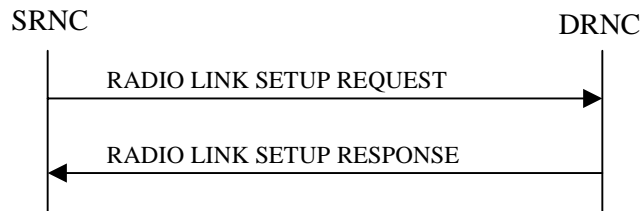
## 8.3.1 Radio Link Setup

### 8.3.1.1 General

This procedure is used for establishing the necessary resources in the DRNS for one or more radio links.

This procedure shall use the connection-oriented service of the signalling bearer.

### 8.3.1.2 Successful Operation



**Figure 1: Radio Link Setup procedure: Successful Operation**

When the SRNC makes an algorithmic decision to add the first cell or set of cells from a DRNS to the active set of a specific RRC connection, the RADIO LINK SETUP REQUEST message is sent to the corresponding DRNC to request setup of the radio link(s).

The message is also used to establish the connection-oriented service of the signalling bearer in the DRNC. The message includes the S-RNTI associated to the UE, and, if the UE context is already present in the DRNC, the corresponding D-RNTI.

[FDD - The Diversity Control Field indicates for each RL except for the first RL whether the DRNS shall combine the RL with any of the other RLs or not on the Iur. If the *Diversity Control Field* IE is set to "May" (be combined with another RL), then the DRNS shall decide for any of the alternatives. When an RL is to be combined the DRNS shall choose which RL(s) to combine it with.]

If the RADIO LINK SETUP REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

If the *Initial DL TX Power* IE and *UL Eb/No Target* IE [FDD] are present in the message, the DRNS shall use the indicated DL TX Power and UL Eb/No Target [FDD] as initial value.

If the *Primary CPICH Eb/No* IE [FDD] or the *Primary CCPCH RSCP* IE [TDD] is present, the DRNC should use them when deciding the Initial DL TX Power.

If the RADIO LINK SETUP REQUEST message includes the *DCH Combination Indicator* IE for a DCH, the DRNS shall treat all DCHs with the same value of this IE as a set of co-ordinated DCHs. The included *RLC Mode* IE of the DCH may be used by the DRNS to optimise the power control.

[FDD - For DCHs with a unique or no "DCH Combination Ind" and the *QE-Selector* IE set to "selected DCH", 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. [25.427]. If the *QE-Selector* is set to "non-selected DCH", the Physical channel BER shall be used for the QE in the UL data frames, ref. [25.427]].

[FDD - For DCHs with the same "DCH Combination Ind" the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected DCH" shall be used for the QE in the UL data frames, ref. [25.427]. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [25.427]. If all DCHs have *QE-Selector* IE set to "non-selected DCH" the Physical channel BER shall be used for the QE, ref. [25.427]].

The *Allocation/Retention Priority* IE defines the priority level that should be used by the DRNS to prioritise the allocation and the retention of the resources used by the DCH. The *Frame Handling Priority* IE defines the priority level that should be used by the DRNS to prioritise the discard/delay of the data frames of the DCH.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH as the new DCH FP Mode in the Uplink of the user plane for this DCH.



The DRNS shall use the included *ToAWS* IE for a DCH as the new Time of Arrival Window Start Point in the user plane for this DCH.

The DRNS shall use the included *ToAWE* IE for a DCH as the new Time of Arrival Window End Point in the user plane for this DCH.

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity* IE, the DRNS may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE.]

At the reception of the RADIO LINK SETUP REQUEST message, DRNS allocates requested type of channelisation codes and other physical channel resources for each RL and assigns a binding identifier and a transport layer address for each DCH or set of co-ordinated DCHs. This information shall be sent to the SRNS in the message RADIO LINK SETUP RESPONSE when all the RLs have been successfully setup.

If the *Initial DL TX Power* and the *UL Eb/No Target* IEs are not present in the RADIO LINK SETUP REQUEST message, then DRNC shall include the suggested initial UL Eb/No Target and the DL Eb/No Target in the RADIO LINK SETUP RESPONSE message.

In the case of combining one or more RLs the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that the RL is combined with another RL. In this case the Reference RL ID shall be included to indicate with which RL the combination is performed. The Reference RL ID shall be included for all but one of the combined RLs, for which the *Transport Layer Address* IE and the *Binding ID* IE shall be included.

In the case of not combining an RL with another RL, the DRNC shall indicate in the RADIO LINK SETUP RESPONSE message with the Diversity Indication that no combining is done. In this case the DRNC shall include both the *Transport Layer Address* IE and the *Binding ID* IE for the transport bearer to be established for each DCH of the RL in the RADIO LINK SETUP RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *Binding Identifier* IE and the *Transport Layer Address* IE shall be included only for one of the DCH in the set of co-ordinated DCHs.

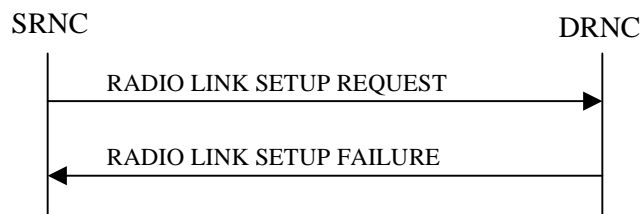
[FDD - Irrespective of SSDT activation, the DRNS shall include in the RADIO LINK SETUP RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK SETUP REQUEST message requested SSDT activation and the RADIO LINK SETUP RESPONSE message indicates that the SSDT capability is supported for this RL, SSDT is activated in the DRNS.]

The DRNS shall also provide the SRNC with the UTRAN Cell Identifier (UC-Id) and information of the neighbouring cells to the cell(s) where the radio link(s) are added.

If a neighbouring cell is controlled by another RNC, the DRNC shall report also the node identifications (i.e. RNC, CN domain nodes) of the RNC controlling the neighbouring cell.

If there was no UE context for this UE in the DRNS before the RADIO LINK SETUP REQUEST message was received the DRNC shall include the node identifications of the CN Domain nodes that the RNC is connected to (using LAC and RAC of the current cell), and the D-RNTI in the RADIO LINK SETUP RESPONSE message.

### 8.3.1.3 Unsuccessful Operation



**Figure 2: Radio Link Setup procedure: Unsuccessful Operation**

In unsuccessful case (i.e. one or more RLs can not be setup) the RADIO LINK SETUP FAILURE message shall be sent to the SRNC, indicating the reason for failure. If some radio links were established successfully, the DRNC shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.

[FDD - If more than one DCH of a set of co-ordinated DCHs has the *OE-Selector* IE set to "selected DCH" the DRNS shall regard the Radio Link Setup procedure as failed and shall respond with a RADIO LINK SETUP FAILURE message].

Typical cause values are:

**Radio Network Layer Causes:**

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Unknown C-ID
- Macrodiversity Combining not Possible
- Requested Configuration not Supported
- Cell not Available
- Power Level not Supported

**Transport Layer Causes:**

- Transport Link Failure

**Protocol Causes:**

- Transaction not Allowed

**Miscellaneous Causes:**

- Control Processing Overload
- HW Failure
- Not enough User Plane Processing Resources

### 8.3.1.4 Abnormal Conditions

If the DRNC receives either an S-RNTI or a D-RNTI which already has RL(s) established the DRNC shall send the RADIO LINK SETUP FAILURE message to the SRNC, indicating the reason for failure.

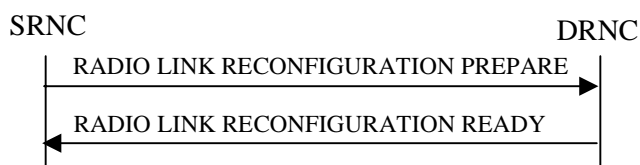
## 8.3.4 Synchronised Radio Link Reconfiguration Preparation

### 8.3.4.1 General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of all Radio Links related to one UE-UTRAN connection within a DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

### 8.3.4.2 Successful Operation



**Figure 3: Synchronised Radio Link Reconfiguration Preparation procedure, Successful Operation**

The Synchronised Radio Link Reconfiguration Preparation procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION PREPARE message to the DRNC.

Upon reception, the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

#### **DCH Modification :**

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new ToAWE in the user plane for this DCH in the new configuration.

#### **DCH Addition:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration

[FDD - For DCHs with a unique or no "DCH Combination Ind" and the *QE-Selector* IE set to "selected DCH", 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. [25.427]. If the *QE-Selector* is set to "non-selected DCH", the Physical channel BER shall be used for the QE in the UL data frames, ref. [25.427]].

[FDD - For DCHs with the same "DCH Combination Ind" the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected DCH" shall be used for the QE in the UL data frames, ref. [25.427]. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [25.427]. If all DCHs have *QE-Selector* IE set to "non-selected DCH" the Physical channel BER shall be used for the QE, ref. [25.427]].

The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

The DRNS may use the included *RLC Mode* IE to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for this DCH in the new configuration.

#### **DCH Deletion:**

If the RADIO LINK RECONFIGURATION PREPARE message includes any DCH to be deleted from the Radio Link(s), the DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

#### **Physical Channel Modification:**

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Uplink Scrambling Code* IE, the DRNS shall apply this Uplink Scrambling Code to the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Uplink Channelisation Code* IEs, the DRNS shall apply the new Uplink Channelisation Code(s) in the new configuration.

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes one or more *Spreading Factor of Channelisation Code (DL)* IE, for each *Spreading Factor of Channelisation Code (DL)* IE the DRNS shall allocate one new Downlink Channelisation Code per Radio Link and apply the new Downlink Channelisation Code(s) to the new configuration. Each Downlink Channelisation Code allocated for the new configuration shall be included as a *Channelisation Code (DL)* IE in the RADIO LINK RECONFIGURATION READY message when sent to the SRNC.]

The DRNS shall use the *TFCS (UL)* IE when reserving resources for the uplink of the new configuration. The DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

The DRNS shall use the *TFCS (DL)* IE when reserving resources for the downlink of the new configuration. The DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.

If the RADIO LINK RECONFIGURATION PREPARE message includes the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes on the *UL DPCCCH Structure* IE, group the DRNS shall apply the new Uplink DPCCCH Structure to the new configuration.]

#### SSDT Activation/Deactivation:

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT Active in the UE", the DRNS may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE in the new configuration.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *SSDT Indication* IE set to "SSDT not Active in the UE", the DRNS shall deactivate SSDT in the new configuration.]

If the requested modifications are allowed by the DRNS, and the DRNS has successfully reserved the required resources for the new configuration of the Radio Link(s) it shall respond to the SRNC with the RADIO LINK RECONFIGURATION READY message.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the *Maximum Uplink Eb/No* IE and *Minimum Uplink Eb/No* IE for each Radio Link in the RADIO LINK RECONFIGURATION READY message.

[TDD – The DRNC shall include all the IEs corresponding to the new physical channel parameters for the DL DPCH and/or the UL DPCH to be reconfigured in the RADIO LINK RECONFIGURATION READY message.]

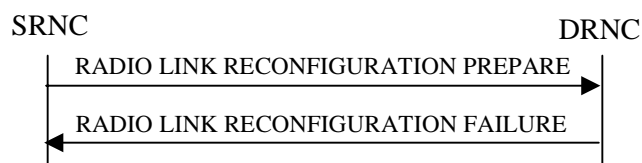
[Editor's note: Which information in the RL RECONFIGURATION PREPARE message triggers the DRNC to include any of the following *Optional TDD* information?:

- a) DL DPCH Group
- b) UL DPCH Group
- c) TDD Physical Channel Offset, *Repetition Length*, and TFCI Presence IEs as part of the DL DPCH Group
- d) TDD Physical Channel Offset, *Repetition Length*, and TFCI Presence IEs as part of the UL DPCH Group.]

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCHs in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

### 8.3.4.3 Unsuccessful Operation



**Figure 4: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation**

If the DRNS cannot reserve the necessary resources for all the new DCHs of one set of co-ordinated DCHs requested to be added, it shall regard the Synchronised Radio Link Reconfiguration procedure as having failed.

- If the requested Synchronised Radio Link Reconfiguration procedure fails for one or more RLs the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

[FDD - If more than one DCH of a set of co-ordinated DCHs has the *OE-Selector IE* set to "selected DCH" the DRNS shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.]

In which cases to include only the *Cause IE* on message level and in which cases the *Cause IE* also shall be included for a specific RL is FFS.

Typical cause values are:

**Radio Network Layer Causes:**

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Requested Configuration not Supported

**Protocol Causes:**

- Transaction not Allowed

**Miscellaneous Causes:**

- Control Processing Overload
- Not enough User Plane Processing Resources

#### 8.3.4.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of co-ordinated DCHs is requested to be deleted, the DRNS shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC.

## 8.3.7 Unsynchronised Radio Link Reconfiguration

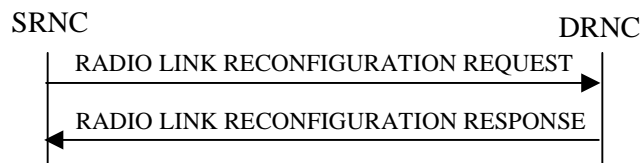
### 8.3.7.1 General

The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a DRNS.

The procedure is used when there is no need to synchronise the time of the switching from the old to the new radio link configuration in the cells used by the UE-UTRAN connection within the DRNS.

This procedure shall use the signalling bearer connection for the relevant UE context.

### 8.3.7.2 Successful Operation



**Figure 5: Unsynchronised Radio Link Reconfiguration procedure, Successful Operation**

The Unsynchronised Radio Link Reconfiguration procedure is initiated by the SRNC by sending the RADIO LINK RECONFIGURATION REQUEST message to the DRNC.

Upon reception, the DRNS shall modify the configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *Allowed Queuing Time* IE the DRNS may queue the request before providing a response to the SRNC.

#### **DCH Modification:**

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Allocation/Retention Priority* IE for a DCH to be modified, the DRNS should use this information when reserving resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Frame Handling Priority* IE for a DCH to be modified, the DRNS should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Transport Format Set (UL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Transport Format Set (DL)* IE for a DCH to be modified, the DRNS shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *UL DCH FP Mode* IE for a DCH to be modified, the DRNS shall apply the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *ToAWS* IE for a DCH to be modified, the DRNS shall apply the new ToAWS in the user plane for this DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *ToAWE* IE for a DCH to be modified, the DRNS shall apply the new ToAWE in the user plane for this DCH in the new configuration.



**DCH Addition:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be added to the Radio Link(s), the DRNS shall reserve necessary resources for the new configuration of the Radio Link(s) according to the parameters given in the message and include these DCH in the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *DCH Combination Indicator* IE for a DCH to be added, the DRNS shall.

1. treat all DCHs with the same value of this IE as a set of co-ordinated DCHs and
  2. include this DCH in the new configuration only if it can include all DCHs with the same value of the *DCH Combination Indicator* IE in the new configuration
- The DRNS should use the *Allocation/Retention Priority* IE received for a DCH to be added when allocating resources for this DCH in the new configuration.

[Editor's note: The priority handling in the DRNS has not been discussed in RAN WG3. Neither has the possibilities for pre-emption (not retaining a resource) of DCHs/RLs. The handling of the *Allocation/Retention Priority* IE is thus not clear and is regarded as FFS.]

[FDD - For DCHs with a unique or no "DCH Combination Ind" and the *QE-Selector* IE set to "selected DCH", 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. [25.427]. If the *QE-Selector* is set to "non-selected DCH", the Physical channel BER shall be used for the QE in the UL data frames, ref. [25.427]].

[FDD - For DCHs with the same "DCH Combination Ind" the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected DCH" shall be used for the QE in the UL data frames, ref. [25.427]. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [25.427]. If all DCHs have *QE-Selector* IE set to "non-selected DCH" the Physical channel BER shall be used for the QE, ref. [25.427]].

The DRNS should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the DRNS once the new configuration has been activated.

If the RADIO LINK RECONFIGURATION REQUEST message includes the *RLC Mode* IE, the DRNS may use this information to optimise the power control.

The DRNS shall use the included *UL DCH FP Mode* IE for a DCH to be added as the new DCH FP Mode in the Uplink of the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWS* IE for a DCH to be added as the new Time of Arrival Window Start Point in the user plane for this DCH in the new configuration.

The DRNS shall use the included *ToAWE* IE for a DCH to be added as the new Time of Arrival Window End Point in the user plane for this DCH in the new configuration.

**DCH Deletion:**

If the RADIO LINK RECONFIGURATION REQUEST message includes any DCH to be deleted from the Radio Link(s), the DRNS shall not include this DCH in the new configuration.

If all of the DCHs belonging to a set of co-ordinated DCHs are requested to be deleted, the DRNS shall not include this set of co-ordinated DCHs in the new configuration

**Physical Channel Modification:**

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (UL)* IE, the DRNS shall apply the new TFCS in the Uplink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *TFCS (DL)* IE, the DRNS shall apply the new TFCS in the Downlink of [TDD – the CCTrCH of] the new configuration.

If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Mean Bit Rate (UL)* IE, the DRNS should use this information when reserving resources for the Uplink of the new configuration.



If the RADIO LINK RECONFIGURATION REQUEST message includes on the *Mean Bit Rate (DL)* IE, the DRNS should use this information when reserving resources for the Downlink of the new configuration.

[Editor's note: There is presently no clear definition of the *Mean Bit Rate* IEs. The handling of these IEs is thus regarded as FFS.]

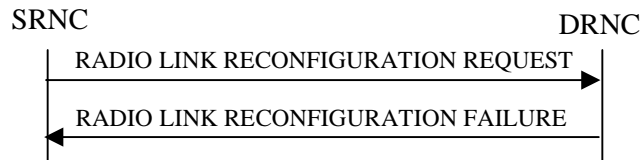
If the requested modifications are allowed by the DRNS, the DRNS has successfully allocated the required resources, and changed to the new configuration it shall respond to the SRNC with the RADIO LINK RECONFIGURATION RESPONSE message.

The DRNS decides the maximum and minimum Eb/No for the uplink of the Radio Link(s) and shall return this in the IEs *Maximum Uplink Eb/No* and *Minimum Uplink Eb/No* for each Radio Link in the RADIO LINK RECONFIGURATION RESPONSE message.

In case of a set of co-ordinated DCHs requiring a new transport bearer on Iur the *DCH to be Added* IE group or the *DCH to be Modified* IE group shall be included only for one of the DCH in the set of co-ordinated DCHs.

In case of a Radio Link being combined with another Radio Link within the DRNS the *DCH to be Added* IE group and the *DCH to be Modified* IE group shall be included only for one of the combined Radio Links.

### 8.3.7.3 Unsuccessful Operation



**Figure 6: Unsyncronised Radio Link Reconfiguration procedure, Unsuccessful Operation**

[FDD - If more than one DCH of a set of co-ordinated DCHs has the *OE-Selector* IE set to "selected DCH" the DRNS shall regard the Unsyncronised Radio Link Reconfiguration procedure as failed and shall respond with a RADIO LINK RECONFIGURATION FAILURE message.]

If the DRNS cannot allocate the necessary resources for all the new DCHs of a set of co-ordinated DCHs requested to be added it shall regard the Synchronised Radio Link Reconfiguration procedure as having failed.

If the requested Unsyncronised Radio Link Reconfiguration procedure fails for one or more Radio Link(s) the DRNC shall send the RADIO LINK RECONFIGURATION FAILURE message to the SRNC, indicating the reason for failure.

Typical cause values are:

#### Radio Network Layer Causes:

- UL Scrambling Code Already in Use
- DL Radio Resources not Available
- UL Radio Resources not Available
- Requested Configuration not Supported

#### Protocol Causes:

- Transaction not Allowed

#### Miscellaneous Causes:

- Control Processing Overload
- Not enough User Plane Processing Resources

## 9.1.3 RADIO LINK SETUP REQUEST

## 9.1.3.1 FDD Message

| IE/Group Name                       | Presence      | Range             | IE type and reference | Semantics description            |
|-------------------------------------|---------------|-------------------|-----------------------|----------------------------------|
| Message Type                        | M             |                   |                       |                                  |
| Transaction ID                      | M             |                   |                       |                                  |
| S-RNTI                              | M             |                   |                       |                                  |
| D-RNTI                              | O             |                   |                       |                                  |
| Allowed Queuing time                | O             |                   |                       |                                  |
| <b>UL DPCH Information</b>          |               | 1                 |                       |                                  |
| UL Scrambling Code                  | M             |                   |                       |                                  |
| Min UL Channelisation Code Length   | M             |                   |                       |                                  |
| Max Number of UL DPCHs              | C – CodeLen   |                   |                       |                                  |
| Puncture Limit                      | M             |                   |                       | For the UL.                      |
| UL Transport Format Combination Set | M             |                   |                       |                                  |
| UL DPCCH Slot Format                | M             |                   |                       |                                  |
| UL Eb/No Target                     | O             |                   |                       |                                  |
| Diversity mode                      | M             |                   |                       |                                  |
| D Field Length                      | C-FB          |                   |                       |                                  |
| SSDT Cell ID Length                 | O             |                   |                       |                                  |
| S Field Length                      | O             |                   |                       |                                  |
| Mean Bit Rate                       | O             |                   |                       | For the UL.                      |
| <b>DL DPCH Information</b>          |               | 1                 |                       |                                  |
| Transport Format Combination Set    | M             |                   |                       |                                  |
| DL DPCH Slot Format                 | M             |                   |                       |                                  |
| TFCI Signalling Mode                | M             |                   |                       |                                  |
| TFCI Presence                       | C- SlotFormat |                   |                       |                                  |
| Multiplexing Position               | M             |                   |                       |                                  |
| <b>Power Offset Information</b>     |               | 1                 |                       |                                  |
| PO1                                 | M             |                   | Power Offset          | Power offset for the TFCI bits.  |
| PO2                                 | M             |                   | Power Offset          | Power offset for the TPC bits.   |
| PO3                                 | M             |                   | Power Offset          | Power offset for the pilot bits. |
| TPC Downlink Step Size              | M             |                   |                       |                                  |
| Mean Bit Rate                       | O             |                   |                       | For the DL.                      |
| <b>DCH Information</b>              |               | 1..<maxnoofDCHs > |                       |                                  |
| DCH ID                              | M             |                   |                       |                                  |
| DCH Combination Ind                 | O             |                   |                       |                                  |
| RLC Mode                            | M             |                   |                       |                                  |
| Transport Format Set                | M             |                   |                       | For the UL.                      |
| Transport Format Set                | M             |                   |                       | For the DL.                      |
| BLER                                | M             |                   |                       | For the UL.                      |
| BLER                                | M             |                   |                       | For the DL.                      |
| Allocation/Retention Priority       | M             |                   |                       |                                  |
| Frame Handling Priority             | M             |                   |                       |                                  |
| Payload CRC Presence Indicator      | M             |                   |                       |                                  |
| UL FP Mode                          | M             |                   |                       |                                  |
| <b>QE-Selector</b>                  | <b>M</b>      |                   |                       |                                  |
| ToAWS                               | M             |                   |                       |                                  |
| ToAWE                               | M             |                   |                       |                                  |
| <b>RL Information</b>               |               | 1...<maxnoofRLs > |                       |                                  |

|                         |                   |  |          |  |
|-------------------------|-------------------|--|----------|--|
| RL ID                   | M                 |  |          |  |
| C-ID                    | M                 |  |          |  |
| Frame Offset            | M                 |  |          |  |
| Chip Offset             | M                 |  |          |  |
| Propagation Delay       | O                 |  |          |  |
| Diversity Control Field | C –<br>NotFirstRL |  |          |  |
| Initial DL TX Power     | O                 |  | DL Power |  |
| Primary CPICH Ec/lo     | O                 |  |          |  |
| SSDT Cell ID            | O                 |  |          |  |

| Condition  | Explanation  |
|------------|--|
| CodeLen    | This IE is present only if "Min UL Channelisation Code len" equals to 4                    |
| FB         | This IE is present only if Feed Back mode diversity is activated.                          |
| SlotFormat | This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16. |
| NotFirstRL | This IE is present only if the RL is not the first one in the <b>RL Information</b> .      |

| Range bound | Explanation                     |
|-------------|---------------------------------|
| MaxnoofDCHs | Maximum no. of DCHs for one UE. |
| MaxnoofRLs  | Maximum no. of RLs for one UE.  |

## 9.1.11 RADIO LINK RECONFIGURATION PREPARE

## 9.1.11.1 FDD Message

| IE/Group Name                     | Presence      | Range             | IE Type and Reference | Semantics Description |
|-----------------------------------|---------------|-------------------|-----------------------|-----------------------|
| Message Type                      | M             |                   |                       |                       |
| Transaction ID                    | M             |                   |                       |                       |
| Allowed Queuing Time              | O             |                   |                       |                       |
| <b>UL DPCH Information</b>        |               | 0..1              |                       |                       |
| UL Scrambling code                | O             |                   |                       |                       |
| Min UL Channelisation Code Length | O             |                   |                       |                       |
| Max Number of UL DPDCHs           | C – CodeLen   |                   |                       |                       |
| Puncture Limit                    | O             |                   |                       | For the UL.           |
| TFCS                              | O             |                   |                       | TFCS for the UL.      |
| UL DPCCCH Slot Format             | O             |                   |                       |                       |
| SSDT Cell Identity Length         | O             |                   |                       |                       |
| S-Field Length                    | O             |                   |                       |                       |
| Mean Bit Rate                     | O             |                   |                       | For the UL.           |
| <b>DL DPCH Information</b>        |               | 0..1              |                       |                       |
| TFCS                              | O             |                   |                       | TFCS for the DL.      |
| DL DPCH Slot Format               | O             |                   |                       |                       |
| TFCI Signalling Mode              | O             |                   |                       |                       |
| TFCI Presence                     | C- SlotFormat |                   |                       |                       |
| MultiplexingPosition              | O             |                   |                       |                       |
| Mean Bit Rate                     | O             |                   |                       | For the DL.           |
| <b>DCHs to Modify</b>             |               | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                            | M             |                   |                       |                       |
| Transport Format Set              | O             |                   |                       | For the UL.           |
| Transport Format Set              | O             |                   |                       | For the DL.           |
| Allocation/Retention Priority     | O             |                   |                       |                       |
| Frame Handling Priority           | O             |                   |                       |                       |
| UL FP Mode                        | O             |                   |                       |                       |
| ToAWS                             | O             |                   |                       |                       |
| ToAWE                             | O             |                   |                       |                       |
| <b>DCHs to Add</b>                |               | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                            | M             |                   |                       |                       |
| DCH Combination Indicator         | O             |                   |                       |                       |
| RLC Mode                          | M             |                   |                       |                       |
| Transport Format Set              | M             |                   |                       | For the UL.           |
| Transport Format Set              | M             |                   |                       | For the DL.           |
| BLER                              | M             |                   |                       | For the UL.           |
| BLER                              | M             |                   |                       | For the DL.           |
| Allocation/Retention Priority     | M             |                   |                       |                       |
| Frame Handling Priority           | M             |                   |                       |                       |
| Payload CRC Presence Indicator    | M             |                   |                       |                       |
| UL FP Mode                        | M             |                   |                       |                       |
| <u>QE-Selector</u>                | <u>M</u>      |                   |                       |                       |
| ToAWS                             | M             |                   |                       |                       |
| ToAWE                             | M             |                   |                       |                       |
| <b>DCHs to Delete</b>             |               | 0..<maxnoofDCHs > |                       |                       |
| DCH ID                            | M             |                   |                       |                       |
| <b>RL Information</b>             |               | 0..<maxnoofRLs>   |                       |                       |
| RL ID                             | M             |                   |                       |                       |
| SSDT Indication                   | O             |                   |                       |                       |

|                    |                  |  |  |  |
|--------------------|------------------|--|--|--|
| SSDT Cell Identity | C -<br>SSDTIndON |  |  |  |
|--------------------|------------------|--|--|--|

| Condition  | Explanation  |
|------------|--|
| SSDTIndON  | The IE may be present if the SSDT Indication is set to 'SSDT Active in the UE'.            |
| CodeLen    | This IE is present only if "Min UL Channelisation Code length" equals to 4.                |
| SlotFormat | This IE is only present if the DL DPCH Slot Format is equal to any of the values 12 to 16. |

| Range bound | Explanation                      |
|-------------|----------------------------------|
| MaxnoofDCHs | Maximum number of DCHs for a UE. |
| MaxnoofRLs  | Maximum number of RLs for a UE.  |

## 9.1.16 RADIO LINK RECONFIGURATION REQUEST

## 9.1.16.1 FDD Message

| IE/Group Name                  | Presence | Range                          | IE Type and Reference | Semantics Description |
|--------------------------------|----------|--------------------------------|-----------------------|-----------------------|
| Message Type                   | M        |                                |                       |                       |
| Transaction ID                 | M        |                                |                       |                       |
| Allowed Queuing Time           | O        |                                |                       |                       |
| <b>UL DPCH Information</b>     |          | <i>0..1</i>                    |                       |                       |
| TFCS                           | O        |                                |                       | TFCS for the UL.      |
| Mean Bit Rate                  | O        |                                |                       |                       |
| <b>DL DPCH Information</b>     |          | <i>0..1</i>                    |                       |                       |
| TFCS                           | O        |                                |                       | TFCS for the DL.      |
| TFCI Signalling Mode           | O        |                                |                       |                       |
| Mean Bit Rate                  | O        |                                |                       |                       |
| <b>DCHs to Modify</b>          |          | <i>0..&lt;maxnoofDCHs &gt;</i> |                       |                       |
| DCH ID                         | M        |                                |                       |                       |
| Transport Format Set           | O        |                                |                       | For the UL.           |
| Transport Format Set           | O        |                                |                       | For the DL.           |
| Allocation/Retention Priority  | O        |                                |                       |                       |
| Frame Handling Priority        | O        |                                |                       |                       |
| UL FP Mode                     | O        |                                |                       |                       |
| ToAWS                          | O        |                                |                       |                       |
| ToAWE                          | O        |                                |                       |                       |
| <b>DCHs to add</b>             |          | <i>0..&lt;maxnoofDCHs &gt;</i> |                       |                       |
| DCH ID                         | M        |                                |                       |                       |
| DCH Combination Ind            | O        |                                |                       |                       |
| RLC Mode                       | M        |                                |                       |                       |
| Transport Format Set           | M        |                                |                       | For the UL.           |
| Transport Format Set           | M        |                                |                       | For the DL.           |
| Allocation/Retention Priority  | M        |                                |                       |                       |
| Frame Handling Priority        | M        |                                |                       |                       |
| Payload CRC Presence Indicator | M        |                                |                       |                       |
| UL FP mode                     | M        |                                |                       |                       |
| <u>QE-Selector</u>             | <b>M</b> |                                |                       |                       |
| ToAWS                          | M        |                                |                       |                       |
| ToAWE                          | M        |                                |                       |                       |
| <b>DCHs to Delete</b>          |          | <i>0..&lt;maxnoofDCHs &gt;</i> |                       |                       |
| DCH ID                         | M        |                                |                       |                       |

| Range Bound | Explanation                      |
|-------------|----------------------------------|
| MaxnoofDCHs | Maximum number of DCHs for a UE. |

### 9.2.2.x QE-Selector

The QE-Selector indicates from which source the value for the quality estimate (QE) shall be taken.

| <u>IE/Group Name</u> | <u>Presence</u> | <u>Range</u> | <u>IE type and reference</u>                      | <u>Semantics description</u> |
|----------------------|-----------------|--------------|---|------------------------------|
| <u>QE-Selector</u>   |                 |              | <u>ENUMERATED(selected DCH, non-selected DCH)</u> |                              |

### 9.3.3 PDU Definitions

```
-- *****
--
-- PDU definitions for RNSAP.
--
-- *****

RNSAP-PDU-Contents -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****
--
-- IE parameter types from other modules.
--
-- *****

IMPORTS
    AllocationRetentionPriority,
    AllowedQueuingTime,
    BLER,
    BindingID,
    BurstType,
    C-ID,
    C-RNTI,
    CCTrCH-ID,
    CFN,
    CN-CS-DomainIdentifier,
    CN-PS-DomainIdentifier,
    CPICH-EcIo,
    CPICH-Power,
    Cause,
    CellParameterID,
    ChipOffset,
    CompressedModeMethod,
    CriticalityDiagnostics,
    D-FieldLength,
    D-RNTI,
    D-RNTI-ReleaseIndication,
    DCH-CombinationInd,
    DCH-ID,
    DL-ChannelisationCode,
    DL-DPCCH-SlotFormat,
    DL-DPCH-SlotNumber,
    DL-EbNo,
    DL-EbNoTarget,
    DL-FrameType,
    DL-Power,
    DL-ScramblingCode,
    DPCH-ID,
    DRX-Parameter,
```



DedicatedMeasurementValue,  
 DiversityControlField,  
 DiversityMode,  
 FACH-DataFrameSize,  
 FACH-InitialWindowSize,  
 FACH-PriorityIndicator,  
 FDD-DL-ChannelisationCodeNumber,  
 FDD-S-CCPCH-Offset,  
 FrameHandlingPriority,  
 FrameOffset,  
 GapPeriod,  
 GapPositionMode,  
 L3-Information,  
 MAC-c-SDU-Length,  
 MaxNrOfUL-DPCHs,  
 MeanBitRate,  
 MeasurementCharacteristics,  
 MeasurementID,  
 MidambleShift,  
 MinUL-ChannelisationCodeLength,  
 MultipleURAsIndicator,  
 MultiplexingPosition,  
 Offset,  
 PD,  
 PSCH-PCCPCH-TimeSlot,  
 PSCH-TimeSlot,  
 PayloadCRC-PresenceIndicator,  
 PilotBitsUsedIndicator,  
 PowerControlMode,  
 PowerOffset,  
 PowerResumeMode,  
 PrimaryCCPCH-RSCP,  
 PrimaryCPICH-EcNo,  
 PrimaryCPICH-Power,  
 PrimaryScramblingCode,  
 PropagationDelay,  
 PunctureLimit,  
QE-Selector,  
 RANAP-RelocationInformation,  
 RL-ID,  
 RLC-Mode,  
 RNC-ID,  
 RepetitionLength,  
 RepetitionPeriod,  
 ReportCharacteristics,  
 S-FieldLength,  
 S-RNTI,  
 SAI,  
 SN,  
 SRNC-ID,  
 SSST-CellID,  
 SSST-CellID-Length,  
 SSST-Indication,  
 SSST-SupportIndicator,  
 ScaledUL-InterferenceLevel,

```

ScramblingCode,
ScramblingCodeChange,
SecondaryCCPCH-SlotFormat,
SyncCase,
TDD-ChannelisationCode,
TDD-PhysicalChannelOffset,
TFCI-Coding,
TFCI-Presence,
TFCI-SignallingMode,
TGD,
TGL,
TPC-StepSize,
TimeSlot,
ToAWE,
ToAWS,
TransportBearerID,
TransportBearerRequestIndicator,
TransportFormatCombinationSet,
TransportFormatSet,
TransportLayerAddress,
UARFCN,
UC-ID,
UL-DL-CompressedModeSelection,
UL-DPCCH-SlotFormat,
UL-EbNo,
UL-EbNoTarget,
UL-FP-Mode,
UL-ScramblingCode,
URA-ID
FROM RNSAP-IEs

PrivateExtensionContainer{},
ProtocolExtensionContainer{},
ProtocolIE-ContainerList{},
ProtocolIE-ContainerPair{},
ProtocolIE-ContainerPairList{},
ProtocolIE-Container{},
RNSAP-PRIVATE-EXTENSION,
RNSAP-PROTOCOL-EXTENSION,
RNSAP-PROTOCOL-IES,
RNSAP-PROTOCOL-IES-PAIR
FROM RNSAP-Containers

maxNoOfDL-Codes,
maxNrOfCCTrCHs,
maxNrOfDCHs,
maxNrOfDL-Codes,
maxNrOfDPCHs,
maxNrOfFACH-FD-Size,
maxNrOfFDD-Neighbours,
maxNrOfMACcSDU-Length,
maxNrOfTDD-Neighbours,
maxNrOfRLs,
maxNrOfSCCPCHs,
maxRNCinURA,

```

id-AllowedQueuingTime,  
 id-BindingID,  
 id-C-ID,  
 id-C-RNTI,  
 id-CCTrCH-ID,  
 id-CFN,  
 id-CN-CS-DomainIdentifier,  
 id-CN-PS-DomainIdentifier,  
 id-Cause,  
 id-CompressedModeMethod,  
 id-CriticalityDiagnostics,  
 id-D-RNTI,  
 id-D-RNTI-ReleaseIndication,  
 id-DCH-AddItem,  
 id-DCH-AddItem-RL-ReconfPrepFDD,  
 id-DCH-AddItem-RL-ReconfPrepTDD,  
 id-DCH-AddItem-RL-ReconfReadyFDD,  
 id-DCH-AddItem-RL-ReconfRqstFDD,  
 id-DCH-AddItem-RL-ReconfRqstTDD,  
 id-DCH-AddList-RL-ReconfPrepFDD,  
 id-DCH-AddList-RL-ReconfPrepTDD,  
 id-DCH-AddList-RL-ReconfRqstFDD,  
 id-DCH-AddList-RL-ReconfRqstTDD,  
 id-DCH-DeleteItem-RL-ReconfPrepFDD,  
 id-DCH-DeleteItem-RL-ReconfPrepTDD,  
 id-DCH-DeleteItem-RL-ReconfRqstFDD,  
 id-DCH-DeleteItem-RL-ReconfRqstTDD,  
 id-DCH-DeleteList-RL-ReconfPrepFDD,  
 id-DCH-DeleteList-RL-ReconfPrepTDD,  
 id-DCH-DeleteList-RL-ReconfRqstFDD,  
 id-DCH-DeleteList-RL-ReconfRqstTDD,  
 id-DCH-Information-RL-SetupReqFDD,  
 id-DCH-InformationItem-RL-SetupReqFDD,  
 id-DCH-InformationItem-RL-SetupReqTDD,  
 id-DCH-InformationList-RL-SetupReqTDD,  
 id-DCH-ModifyItem,  
 id-DCH-ModifyItem-RL-ReconfPrepFDD,  
 id-DCH-ModifyItem-RL-ReconfPrepTDD,  
 id-DCH-ModifyItem-RL-ReconfReadyFDD,  
 id-DCH-ModifyItem-RL-ReconfRqstFDD,  
 id-DCH-ModifyItem-RL-ReconfRqstTDD,  
 id-DCH-ModifyList-RL-ReconfPrepFDD,  
 id-DCH-ModifyList-RL-ReconfPrepTDD,  
 id-DCH-ModifyList-RL-ReconfRqstFDD,  
 id-DCH-ModifyList-RL-ReconfRqstTDD,  
 id-DL-CCTrCH-Information-RL-ReconfPrepTDD,  
 id-DL-CCTrCH-Information-RL-ReconfRqstTDD,  
 id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD,  
 id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD,  
 id-DL-CCTrChInformationItem-RL-SetupReqTDD,  
 id-DL-CCTrChInformationList-RL-SetupReqTDD,  
 id-DL-CodeInformation-PhyChReconfRqstFDD,  
 id-DL-DPCH-Information,  
 id-DL-DPCH-Information-RL-SetupReqFDD,

id-DL-DPCH-InformationList-PhyChReconfRqstTDD,  
 id-DL-DPCH-InformationList-RL-ReconfReadyTDD,  
 id-DL-EbNoTarget,  
 id-DL-FrameType,  
 id-DL-MeanBitRate,  
 id-DL-ReferencePowerInformation-DL-PC-Rqst,  
 id-DRX-Parameter,  
 id-DedicatedMeasurementObjectType-DM-Rprt,  
 id-DedicatedMeasurementObjectType-DM-Rqst,  
 id-DedicatedMeasurementObjectType-DM-Rspns,  
 id-FACH-InfoForOptionalGroupS-CCPCH,  
 id-FACH-InfoForOptionals-CCPCH,  
 id-FACH-InfoForS-CCPCH-CoupledToPRACH,  
 id-GapPositionMode,  
 id-L3-Information,  
 id-MeasurementCharacteristics,  
 id-MeasurementID,  
 id-MultipleURAsIndicator,  
 id-PD,  
 id-PagingArea-PagingRqst,  
 id-PowerControlMode,  
 id-PowerResumeMode,  
 id-ProcedureScope-DL-PC-Rqst,  
 id-RANAP-RelocationInformation,  
 id-RL-Information-PhyChReconfRqstFDD,  
 id-RL-Information-PhyChReconfRqstTDD,  
 id-RL-Information-RL-AdditionRqstFDD,  
 id-RL-Information-RL-AdditionRqstTDD,  
 id-RL-Information-RL-DeletionRqst,  
 id-RL-Information-RL-FailureInd,  
 id-RL-Information-RL-ReconfPrepFDD,  
 id-RL-Information-RL-RestoreInd,  
 id-RL-Information-RL-SetupReqFDD,  
 id-RL-Information-RL-SetupReqTDD,  
 id-RL-InformationItem-DM-Rprt,  
 id-RL-InformationItem-DM-Rqst,  
 id-RL-InformationItem-DM-Rspns,  
 id-RL-InformationItem-RL-SetupReqFDD,  
 id-RL-InformationList-RL-AdditionRqstFDD,  
 id-RL-InformationList-RL-DeletionRqst,  
 id-RL-InformationList-RL-FailureInd,  
 id-RL-InformationList-RL-ReconfPrepFDD,  
 id-RL-InformationList-RL-RestoreInd,  
 id-RL-InformationResponse-RL-AdditionRspTDD,  
 id-RL-InformationResponse-RL-ReconfReadyTDD,  
 id-RL-InformationResponse-RL-SetupRspTDD,  
 id-RL-InformationResponseItem-RL-AdditionRspFDD,  
 id-RL-InformationResponseItem-RL-ReconfReadyFDD,  
 id-RL-InformationResponseItem-RL-SetupRspFDD,  
 id-RL-InformationResponseList-RL-AdditionRspFDD,  
 id-RL-InformationResponseList-RL-ReconfReadyFDD,  
 id-RL-InformationResponseList-RL-SetupRspFDD,  
 id-RL-ReconfigurationFailure-RL-ReconfFail,  
 id-RL-ReconfigurationFailureList-RL-ReconfFail,  
 id-RNCsWithCellsInTheAccessedURA-List-UL-ST-Ind,

```

id-ReportCharacteristics,
id-S-RNTI,
id-SAI,
id-SN,
id-SRNC-ID,
id-ScramblingCodeChange,
id-SuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-SuccessfulRL-InformationResponseList-RL-SetupFailureFDD,
id-TGD,
id-TGL,
id-TGP1,
id-TGP2,
id-TransportBearerID,
id-TransportBearerRequestIndicator,
id-TransportLayerAddress,
id-UC-ID,
id-UL-CCTrCH-Information-RL-ReconfPrepTDD,
id-UL-CCTrCH-Information-RL-ReconfRqstTDD,
id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD,
id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD,
id-UL-CCTrChInformationItem-RL-SetupReqTDD,
id-UL-CCTrChInformationList-RL-SetupReqTDD,
id-UL-DL-CompressedModeSelection,
id-UL-DPCH-Information,
id-UL-DPCH-Information-RL-SetupReqFDD,
id-UL-DPCH-InformationList-PhyChReconfRqstTDD,
id-UL-DPCH-InformationList-RL-ReconfReadyTDD,
id-UL-DeltaEbNo,
id-UL-DeltaEbNoAfter,
id-UL-EbNoTarget,
id-UL-MeanBitRate,
id-URA-ID,
id-UnsuccessfulRL-InformationResponse,
id-UnsuccessfulRL-InformationResponse-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureFDD,
id-UnsuccessfulRL-InformationResponse-RL-SetupFailureTDD,
id-UnsuccessfulRL-InformationResponseList-RL-AdditionFailureFDD,
id-UnsuccessfulRL-InformationResponseList-RL-SetupFailureFDD
FROM RNSAP-Constants;

-- *****
--
-- Common Container List
--
-- *****

DCH-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfDCHs,      { IEsSetParam } }
RL-IE-ContainerList      { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfRLs,      { IEsSetParam } }
CCTrCH-IE-ContainerList  { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfCCTrCHs, { IEsSetParam } }
DL-Code-IE-ContainerList { RNSAP-PROTOCOL-IES : IEsSetParam }      ::= ProtocolIE-ContainerList { 1, maxNrOfDL-Codes, { IEsSetParam } }

-- *****
--

```

```

-- RADIO LINK SETUP REQUEST FDD
--
-- *****

RadioLinkSetupRequestFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkSetupRequestFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkSetupRequestFDD-Extensions}}    OPTIONAL,
    ...
}

RadioLinkSetupRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-S-RNTI          CRITICALITY ignore TYPE S-RNTI          PRESENCE mandatory } |
    { ID id-D-RNTI          CRITICALITY ignore TYPE D-RNTI          PRESENCE optional   } |
    { ID id-AllowedQueuingTime CRITICALITY ignore TYPE AllowedQueuingTime PRESENCE optional   } |
    { ID id-UL-DPCH-Information-RL-SetupReqFDD CRITICALITY ignore TYPE UL-DPCH-Information-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-DL-DPCH-Information-RL-SetupReqFDD CRITICALITY ignore TYPE DL-DPCH-Information-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-DCH-Information-RL-SetupReqFDD CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReqFDD PRESENCE mandatory } |
    { ID id-RL-Information-RL-SetupReqFDD CRITICALITY ignore TYPE RL-InformationList-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    ul-ScramblingCode          UL-ScramblingCode,
    minUL-ChannelisationCodeLength MinUL-ChannelisationCodeLength,
    maxNrOfUL-DPCHs            MaxNrOfUL-DPCHs          OPTIONAL
    -- This IE is present only if minUL-ChannelisationCodeLength equals to 4 -- ,
    ul-PunctureLimit           PunctureLimit,
    ul-TransportFormatCombinationSet TransportFormatCombinationSet,
    ul-DPCCH-SlotFormat        UL-DPCCH-SlotFormat,
    ul-EbNoTarget              UL-EbNoTarget            OPTIONAL,
    diversityMode              DiversityMode,
    d-FieldLength              D-FieldLength            OPTIONAL
    -- This IE is present only if Feed Back mode diversity is activated -- ,
    sSDT-CellIdLength          SSDT-CellID-Length      OPTIONAL,
    s-FieldLength              S-FieldLength            OPTIONAL,
    ul-meanBitRate             MeanBitRate              OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { {UL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupReqFDD ::= SEQUENCE {
    transportFormatCombinationSet TransportFormatCombinationSet,
    dl-DPCH-SlotNumber          DL-DPCH-SlotNumber,
    tFCI-SignallingMode         TFCI-SignallingMode,
    tFCI-Presence               TFCI-Presence            OPTIONAL
    -- This IE is present if Slot Format is from 12 to 16 -- ,
    multiplexingPosition        MultiplexingPosition,
    powerOffsetInformation       SEQUENCE {
        po1-ForTFCI-Bits        PowerOffset,
        po2-ForTPC-Bits         PowerOffset,
        po3-ForPilotBits        PowerOffset,
    }
}

```

```

    },
    dl-TPC-StepSize          TPC-StepSize,
    meanBitRate              MeanBitRate      OPTIONAL,
    IE-Extensions            ProtocolExtensionContainer { {DL-DPCH-Information-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationList-RL-SetupReqFDD ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-SetupReqFDD} }

DCH-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqFDD CRITICALITY ignore TYPE DCH-InformationItem-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

DCH-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    dCH-ID                    DCH-ID,
    dCH-CombinationInd        DCH-CombinationInd      OPTIONAL,
    rLC-Mode                   RLC-Mode,
    ul-transportFormatSet      TransportFormatSet,
    dl-transportFormatSet      TransportFormatSet,
    ul-BLER                     BLER,
    dl-BLER                     BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority       FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode                  UL-FP-Mode,
    qE-Selector                 QE-Selector,
    toAWS                       ToAWS,
    toAWE                       ToAWE,
    IE-Extensions              ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-SetupReqFDD ::= RL-IE-ContainerList { {RL-InformationItemIEs-RL-SetupReqFDD} }

RL-InformationItemIEs-RL-SetupReqFDD RNSAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-RL-SetupReqFDD CRITICALITY ignore TYPE RL-InformationItem-RL-SetupReqFDD PRESENCE mandatory },
    ...
}

RL-InformationItem-RL-SetupReqFDD ::= SEQUENCE {
    rL-ID                      RL-ID,
    uC-ID                      C-ID,
    frameOffset                 FrameOffset,
    chipOffset                  ChipOffset,
    propagationDelay            PropagationDelay      OPTIONAL,

```

```

diversityControlField          DiversityControlField          OPTIONAL
-- This IE is present only if the RL is not the first one in the RL-InformationList-RL-SetupReqFDD --,
dl-InitialTX-Power            DL-Power                        OPTIONAL
-- Initial DL transmission power --,
cPICH-EcIo                    CPICH-EcIo                OPTIONAL,
sSDT-CellID                    SSDT-CellID                OPTIONAL,
iE-Extensions                  ProtocolExtensionContainer { {RL-InformationItem-RL-SetupReqFDD-ExtIEs} } OPTIONAL,
...
}

RL-InformationItem-RL-SetupReqFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

RadioLinkSetupRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- RADIO LINK SETUP REQUEST TDD
--
-- *****

RadioLinkSetupRequestTDD ::= SEQUENCE {
  protocolIEs                ProtocolIE-Container          {{RadioLinkSetupRequestTDD-IEs}},
  protocolExtensions          ProtocolExtensionContainer {{RadioLinkSetupRequestTDD-Extensions}}
                                OPTIONAL,
  ...
}

RadioLinkSetupRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-S-RNTI                CRITICALITY ignore TYPE S-RNTI                PRESENCE mandatory } |
  { ID id-D-RNTI                CRITICALITY ignore TYPE D-RNTI                PRESENCE optional } |
  { ID id-AllowedQueuingTime     CRITICALITY ignore TYPE AllowedQueuingTime     PRESENCE optional } |
  { ID id-UL-MeanBitRate         CRITICALITY ignore TYPE MeanBitRate         PRESENCE optional } |
  { ID id-DL-MeanBitRate         CRITICALITY ignore TYPE MeanBitRate         PRESENCE optional } |
  { ID id-UL-CCTrChInformationList-RL-SetupReqTDD CRITICALITY ignore TYPE UL-CCTrChInformationList-RL-SetupReqTDD PRESENCE mandatory } |
  { ID id-DL-CCTrChInformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DL-CCTrChInformationList-RL-SetupReqTDD PRESENCE mandatory } |
  { ID id-DCH-InformationList-RL-SetupReqTDD CRITICALITY ignore TYPE DCH-InformationList-RL-SetupReqTDD PRESENCE mandatory } |
  { ID id-RL-Information-RL-SetupReqTDD CRITICALITY ignore TYPE RL-Information-RL-SetupReqTDD PRESENCE mandatory },
  ...
}

UL-CCTrChInformationList-RL-SetupReqTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrChInformationItemIEs-RL-SetupReqTDD} }

UL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrChInformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE UL-CCTrChInformationItem-RL-SetupReqTDD PRESENCE mandatory },
  ...
}

UL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
  cCtRCH-ID                    CCTrCH-ID,
  ul-TFCS                      TransportFormatCombinationSet,
  tFCI-Coding                  TFCI-Coding,
  ul-PunctureLimit             PunctureLimit,

```



```

    iE-Extensions          ProtocolExtensionContainer { {UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}
UL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-CCTrChInformationList-RL-SetupReqTDD          ::= CCTrCH-IE-ContainerList { {DL-CCTrChInformationItemIEs-RL-SetupReqTDD} }
DL-CCTrChInformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrChInformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE DL-CCTrChInformationItem-RL-SetupReqTDD PRESENCE mandatory },
    ...
}
DL-CCTrChInformationItem-RL-SetupReqTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    dl-TFCS            TransportFormatCombinationSet,
    tFCI-Coding        TFCI-Coding,
    dl-PunctureLimit   PunctureLimit,
    iE-Extensions      ProtocolExtensionContainer { {DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}
DL-CCTrChInformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
DCH-InformationList-RL-SetupReqTDD          ::= DCH-IE-ContainerList { {DCH-InformationItemIEs-RL-SetupReqTDD} }
DCH-InformationItemIEs-RL-SetupReqTDD RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationItem-RL-SetupReqTDD CRITICALITY ignore TYPE DCH-InformationItem-RL-SetupReqTDD PRESENCE mandatory },
    ...
}
DCH-InformationItem-RL-SetupReqTDD ::= SEQUENCE {
    dCH-ID          DCH-ID,
    ul-cCTrCH-ID    CCTrCH-ID, -- UL CCTrCH in which the DCH is mapped
    dl-cCTrCH-ID    CCTrCH-ID, -- DL CCTrCH in which the DCH is mapped
    dCH-CombinationInd DCH-CombinationInd OPTIONAL,
    rLC-Mode        RLC-Mode,
    ul-transportFormatSet TransportFormatSet,
    dl-transportFormatSet TransportFormatSet,
    ul-BLER          BLER,
    dl-BLER          BLER,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
    ul-FP-Mode       UL-FP-Mode,
    qE-Selector      QE-Selector,
    toAWS            ToAWS,
    toAWE            ToAWE,
    iE-Extensions      ProtocolExtensionContainer { {DCH-InformationItem-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

DCH-InformationItem-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupReqTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    c-ID                 C-ID,
    frameOffset          FrameOffset,
    primaryCCPCH-RSCP    PrimaryCCPCH-RSCP    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-SetupReqTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-SetupReqTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkSetupRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

.
.
.
Several Messages Skipped
.
.
.

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

RadioLinkReconfigurationPrepareFDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationPrepareFDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareFDD-Extensions}}
    ...
}

RadioLinkReconfigurationPrepareFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore TYPE AllowedQueuingTime          PRESENCE mandatory } |
    { ID id-UL-DPCH-Information          CRITICALITY ignore TYPE UL-DPCH-Information          PRESENCE optional } |
    { ID id-DL-DPCH-Information          CRITICALITY ignore TYPE DL-DPCH-Information          PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfPrepFDD PRESENCE optional } |
    { ID id-DCH-AddList-RL-ReconfPrepFDD  CRITICALITY ignore TYPE DCH-AddList-RL-ReconfPrepFDD  PRESENCE optional } |
    { ID id-DCH-DeleteList-RL-ReconfPrepFDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfPrepFDD PRESENCE optional } |
    { ID id-RL-InformationList-RL-ReconfPrepFDD CRITICALITY ignore TYPE RL-InformationList-RL-ReconfPrepFDD PRESENCE mandatory } },
    ...
}

UL-DPCH-Information ::= SEQUENCE {

```

```

ul-ScramblingCode          UL-ScramblingCode          OPTIONAL,
minUL-ChannelisationCodeLength  MinUL-ChannelisationCodeLength  OPTIONAL,
maxNrOfUL-DPDCHs          MaxNrOfUL-DPDCHs          OPTIONAL
-- This IE is present only if minUL-ChannelisationCodeLength equals to 4 --,
ul-PunctureLimit          PunctureLimit          OPTIONAL,
tFCS                      TransportFormatCombinationSet  OPTIONAL,
ul-DPCCH-SlotFormat       UL-DPCCH-SlotFormat       OPTIONAL,
sSDT-CellIDLength         SSDT-CellID-Length         OPTIONAL,
s-FieldLength             S-FieldLength             OPTIONAL,
meanBitRate               MeanBitRate             OPTIONAL,
iE-Extensions             ProtocolExtensionContainer { {UL-DPCH-Information-ExtIEs} } OPTIONAL,
...
}

UL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DL-DPCH-Information ::= SEQUENCE {
tFCS                      TransportFormatCombinationSet  OPTIONAL,
dl-DPCCH-SlotFormat       DL-DPCCH-SlotFormat       OPTIONAL,
tFCI-SignallingMode       TFCI-SignallingMode       OPTIONAL,
tFCI-Presence             TFCI-Presence             OPTIONAL
-- This IE is present if Slot Format is from 12 to 16 --,
multiplexingPosition      MultiplexingPosition      OPTIONAL,
meanBitRate               MeanBitRate             OPTIONAL,
iE-Extensions             ProtocolExtensionContainer { {DL-DPCH-Information-ExtIEs} } OPTIONAL,
...
}

DL-DPCH-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-ModifyList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfPrepFDD-IEs} }

DCH-Modify-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
{ ID id-DCH-ModifyItem-RL-ReconfPrepFDD    CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfPrepFDD    PRESENCE mandatory  },
...
}

DCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
dCH-ID                    DCH-ID,
ul-TransportformatSet     TransportFormatSet     OPTIONAL,
dl-TransportformatSet     TransportFormatSet     OPTIONAL,
allocationRetentionPriority AllocationRetentionPriority  OPTIONAL,
frameHandlingPriority     FrameHandlingPriority  OPTIONAL,
ul-FP-Mode                UL-FP-Mode            OPTIONAL,
toAWS                     ToAWS                OPTIONAL,
toAWE                     ToAWE                OPTIONAL,
iE-Extensions             ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
...
}

DCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
DCH-AddList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfPrepFDD-IEs} }

DCH-Add-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem-RL-ReconfPrepFDD      CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfPrepFDD      PRESENCE mandatory },
  ...
}

DCH-AddItem-RL-ReconfPrepFDD ::= SEQUENCE {
  dCH-ID                DCH-ID,
  rLC-Mode              RLC-Mode,
  dCH-CombinationInd   DCH-CombinationInd      OPTIONAL,
  ul-TransportformatSet TransportFormatSet,
  dl-TransportformatSet TransportFormatSet,
  ul-BLER              BLER,
  dl-BLER              BLER,
  allocationRetentionPriority AllocationRetentionPriority,
  frameHandlingPriority FrameHandlingPriority,
  payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
  ul-FP-Mode           UL-FP-Mode,
  qE-Selector         QE-Selector,
  toAWS                ToAWS,
  toAWE                ToAWE,
  iE-Extensions       ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-AddItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-DeleteList-RL-ReconfPrepFDD ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfPrepFDD-IEs} }

DCH-Delete-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-DeleteItem-RL-ReconfPrepFDD   CRITICALITY ignore  TYPE DCH-DeleteItem-RL-ReconfPrepFDD   PRESENCE mandatory },
  ...
}

DCH-DeleteItem-RL-ReconfPrepFDD ::= SEQUENCE {
  dCH-ID                DCH-ID,
  iE-Extensions       ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationList-RL-ReconfPrepFDD ::= RL-IE-ContainerList { {RL-Information-RL-ReconfPrepFDD-IEs} }

RL-Information-RL-ReconfPrepFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-RL-Information-RL-ReconfPrepFDD    CRITICALITY ignore  TYPE RL-Information-RL-ReconfPrepFDD    PRESENCE mandatory },
  ...
}

```

```

}
RL-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    sSDT-Indication      SSdT-Indication    OPTIONAL,
    sSDT-CellIdentity    SSdT-CellID       OPTIONAL
    -- The IE may be present if the sSDT-Indication is set to 'sSDT-active-in-the-UE' --,
    iE-Extensions        ProtocolExtensionContainer { {RL-Information-RL-ReconfPrepFDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-ReconfPrepFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationPrepareFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE TDD
--
-- *****

RadioLinkReconfigurationPrepareTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationPrepareTDD-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{RadioLinkReconfigurationPrepareTDD-Extensions}}      OPTIONAL,
    ...
}

RadioLinkReconfigurationPrepareTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime    CRITICALITY ignore TYPE AllowedQueuingTime          PRESENCE optional } |
    { ID id-UL-MeanBitRate         CRITICALITY ignore TYPE MeanBitRate              PRESENCE optional } |
    { ID id-DL-MeanBitRate         CRITICALITY ignore TYPE MeanBitRate              PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationList-RL-ReconfPrepTDD
      CRITICALITY ignore TYPE UL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE mandatory } |
    { ID id-DL-CCTrCH-InformationList-RL-ReconfPrepTDD
      CRITICALITY ignore TYPE DL-CCTrCH-InformationList-RL-ReconfPrepTDD PRESENCE mandatory } |
    { ID id-DCH-ModifyList-RL-ReconfPrepTDD    CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfPrepTDD    PRESENCE mandatory } |
    { ID id-DCH-AddList-RL-ReconfPrepTDD       CRITICALITY ignore TYPE DCH-AddList-RL-ReconfPrepTDD       PRESENCE mandatory } |
    { ID id-DCH-DeleteList-RL-ReconfPrepTDD    CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfPrepTDD    PRESENCE mandatory } ,
    ...
}

UL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs} }

UL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-Information-RL-ReconfPrepTDD CRITICALITY ignore TYPE UL-CCTrCH-Information-RL-ReconfPrepTDD PRESENCE mandatory } ,
    ...
}

UL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    tFCS               TransportFormatCombinationSet    OPTIONAL,

```

```

    tFCI-Coding          OPTIONAL,
    punctureLimit       PunctureLimit      OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {UL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-ReconfPrepTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs} }

DL-CCTrCH-Information-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-Information-RL-ReconfPrepTDD CRITICALITY ignore TYPE DL-CCTrCH-Information-RL-ReconfPrepTDDPRESENCE mandatory },
    ...
}

DL-CCTrCH-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    cCtRch-ID           CCTrCH-ID,
    tFCS                TransportFormatCombinationSet OPTIONAL,
    tFCI-Coding         TFCI-Coding      OPTIONAL,
    punctureLimit       PunctureLimit      OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-Information-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfPrepTDD-IEs} }

DCH-Modify-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfPrepTDD PRESENCE mandatory },
    ...
}

DCH-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dch-ID              DCH-ID,
    ul-CCTrCH-ID        CCTrCH-ID      OPTIONAL,
    dl-CCTrCH-ID        CCTrCH-ID      OPTIONAL,
    ul-TransportformatSet TransportFormatSet OPTIONAL,
    dl-TransportformatSet TransportFormatSet OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority FrameHandlingPriority OPTIONAL,
    ul-FP-Mode          UL-FP-Mode      OPTIONAL,
    toAWS                ToAWS          OPTIONAL,
    toAWE                ToAWE          OPTIONAL,
    iE-Extensions       ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

DCH-AddList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfPrepTDD-IEs} }

DCH-Add-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-AddItem-RL-ReconfPrepTDD PRESENCE mandatory },
  ...
}

DCH-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  rLC-Mode RLC-Mode,
  ul-CCH-ID CCH-ID,
  dl-CCH-ID CCH-ID,
  dCH-CombinationInd DCH-CombinationInd OPTIONAL,
  ul-TransportformatSet TransportFormatSet,
  dl-TransportformatSet TransportFormatSet,
  ul-BLER BLER,
  dl-BLER BLER,
  allocationRetentionPriority AllocationRetentionPriority,
  frameHandlingPriority FrameHandlingPriority,
  payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
  ul-FP-Mode UL-FP-Mode,
  qE-Selector QE-Selector,
  toAWS ToAWS,
  toAWE ToAWE,
  iE-Extensions ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-AddItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-DeleteList-RL-ReconfPrepTDD ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfPrepTDD-IEs} }

DCH-Delete-RL-ReconfPrepTDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-DeleteItem-RL-ReconfPrepTDD CRITICALITY ignore TYPE DCH-DeleteItem-RL-ReconfPrepTDD PRESENCE mandatory },
  ...
}

DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dCH-ID DCH-ID,
  iE-Extensions ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

RadioLinkReconfigurationPrepareTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

•

```

•
•
Several Messages Skipped
•
•
•
-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

RadioLinkReconfigurationRequestFDD ::= SEQUENCE {
    protocolIEs                ProtocolIE-Container    {{RadioLinkReconfigurationRequestFDD-IEs}},
    protocolExtensions          ProtocolExtensionContainer {{RadioLinkReconfigurationRequestFDD-Extensions}}
    ...
}

RadioLinkReconfigurationRequestFDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore TYPE AllowedQueuingTime          PRESENCE mandatory } |
    { ID id-UL-DPCH-Information          CRITICALITY ignore TYPE UL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DL-DPCH-Information          CRITICALITY ignore TYPE DL-DPCH-Information-RL-ReconfRqstFDD PRESENCE optional } |
    { ID id-DCH-ModifyList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-ModifyList-RL-ReconfRqstFDD PRESENCE mandatory } |
    { ID id-DCH-AddList-RL-ReconfRqstFDD   CRITICALITY ignore TYPE DCH-AddList-RL-ReconfRqstFDD PRESENCE mandatory } |
    { ID id-DCH-DeleteList-RL-ReconfRqstFDD CRITICALITY ignore TYPE DCH-DeleteList-RL-ReconfRqstFDD PRESENCE mandatory },
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS                TransportFormatCombinationSet    OPTIONAL,
    meanBitRate          MeanBitRate    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    tFCS                TransportFormatCombinationSet    OPTIONAL,
    tFCI-SignallingMode TFCI-SignallingMode OPTIONAL,
    meanBitRate          MeanBitRate    OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { {DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfRqstFDD-IEs} }

```



```

DCH-Modify-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-ModifyItem-RL-ReconfRqstFDD    CRITICALITY ignore  TYPE DCH-ModifyItem-RL-ReconfRqstFDD    PRESENCE mandatory  },
  ...
}

DCH-ModifyItem-RL-ReconfRqstFDD ::= SEQUENCE {
  dCH-ID                DCH-ID,
  ul-TransportformatSet TransportFormatSet OPTIONAL,
  dl-TransportformatSet TransportFormatSet OPTIONAL,
  allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
  frameHandlingPriority  FrameHandlingPriority  OPTIONAL,
  ul-FP-Mode             UL-FP-Mode             OPTIONAL,
  toAWS                  ToAWS                  OPTIONAL,
  toAWE                  ToAWE                  OPTIONAL,
  iE-Extensions         ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-ModifyItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-AddList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfRqstFDD-IEs} }

DCH-Add-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-AddItem-RL-ReconfRqstFDD    CRITICALITY ignore  TYPE DCH-AddItem-RL-ReconfRqstFDD    PRESENCE mandatory  },
  ...
}

DCH-AddItem-RL-ReconfRqstFDD ::= SEQUENCE {
  dCH-ID                DCH-ID,
  rLC-Mode              RLC-Mode,
  dCH-CombinationInd    DCH-CombinationInd OPTIONAL,
  ul-TransportformatSet TransportFormatSet,
  dl-TransportformatSet TransportFormatSet,
  allocationRetentionPriority AllocationRetentionPriority,
  frameHandlingPriority  FrameHandlingPriority,
  payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
  ul-FP-Mode            UL-FP-Mode,
  qE-Selector          QE-Selector,
  toAWS                 ToAWS,
  toAWE                 ToAWE,
  iE-Extensions         ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
  ...
}

DCH-AddItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
  ...
}

DCH-DeleteList-RL-ReconfRqstFDD ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfRqstFDD-IEs} }

DCH-Delete-RL-ReconfRqstFDD-IEs RNSAP-PROTOCOL-IES ::= {
  { ID id-DCH-DeleteItem-RL-ReconfRqstFDD    CRITICALITY ignore  TYPE DCH-DeleteItem-RL-ReconfRqstFDD    PRESENCE mandatory  },
  ...
}

```

```

}
DCH-DeleteItem-RL-ReconfRqstFDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    iE-Extensions         ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}
DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
RadioLinkReconfigurationRequestFDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST TDD
--
-- *****

RadioLinkReconfigurationRequestTDD ::= SEQUENCE {
    protocolIEs           ProtocolIE-Container    {{RadioLinkReconfigurationRequestTDD-IEs}},
    protocolExtensions    ProtocolExtensionContainer {{RadioLinkReconfigurationRequestTDD-Extensions}}
    ...
}
RadioLinkReconfigurationRequestTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-AllowedQueuingTime          CRITICALITY ignore  TYPE AllowedQueuingTime          PRESENCE optional } |
    { ID id-UL-MeanBitRate               CRITICALITY ignore  TYPE MeanBitRate                PRESENCE optional } |
    { ID id-DL-MeanBitRate               CRITICALITY ignore  TYPE MeanBitRate                PRESENCE optional } |
    { ID id-UL-CCTrCH-InformationList-RL-ReconfRqstTDD
      CRITICALITY ignore  TYPE UL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE mandatory } |
    { ID id-DL-CCTrCH-InformationList-RL-ReconfRqstTDD
      CRITICALITY ignore  TYPE DL-CCTrCH-InformationList-RL-ReconfRqstTDD PRESENCE mandatory } |
    { ID id-DCH-ModifyList-RL-ReconfRqstTDD CRITICALITY ignore  TYPE DCH-ModifyList-RL-ReconfRqstTDD PRESENCE mandatory } |
    { ID id-DCH-AddList-RL-ReconfRqstTDD   CRITICALITY ignore  TYPE DCH-AddList-RL-ReconfRqstTDD PRESENCE mandatory } |
    { ID id-DCH-DeleteList-RL-ReconfRqstTDD CRITICALITY ignore  TYPE DCH-DeleteList-RL-ReconfRqstTDD PRESENCE mandatory } |
    ...
}
UL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList { {UL-CCTrCH-Information-RL-ReconfRqstTDD-IEs} }
UL-CCTrCH-Information-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-UL-CCTrCH-Information-RL-ReconfRqstTDD CRITICALITY ignore  TYPE UL-CCTrCH-Information-RL-ReconfRqstTDDPRESENCE mandatory } |
    ...
}
UL-CCTrCH-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID            CCTrCH-ID,
    tFCS                 TransportFormatCombinationSet,
    iE-Extensions        ProtocolExtensionContainer { {UL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

```

```

UL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationList-RL-ReconfRqstTDD ::= CCTrCH-IE-ContainerList { {DL-CCTrCH-Information-RL-ReconfRqstTDD-IEs} }

DL-CCTrCH-Information-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DL-CCTrCH-Information-RL-ReconfRqstTDD CRITICALITY ignore TYPE DL-CCTrCH-Information-RL-ReconfRqstTDDPRESENCE mandatory },
    ...
}

DL-CCTrCH-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    cCTrCH-ID CCTrCH-ID,
    tFCS TransportFormatCombinationSet,
    iE-Extensions ProtocolExtensionContainer { {DL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DL-CCTrCH-Information-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-ModifyList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList { {DCH-Modify-RL-ReconfRqstTDD-IEs} }

DCH-Modify-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-ModifyItem-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-ModifyItem-RL-ReconfRqstTDD PRESENCE mandatory },
    ...
}

DCH-ModifyItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID DCH-ID,
    ul-CCTrCH-ID CCTrCH-ID OPTIONAL,
    dl-CCTrCH-ID CCTrCH-ID OPTIONAL,
    ul-TransportformatSet TransportFormatSet OPTIONAL,
    dl-TransportformatSet TransportFormatSet OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority FrameHandlingPriority OPTIONAL,
    ul-FP-Mode UL-FP-Mode OPTIONAL,
    toAWS ToAWS OPTIONAL,
    toAWE ToAWE OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { {DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-ModifyItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-AddList-RL-ReconfRqstTDD ::= DCH-IE-ContainerList { {DCH-Add-RL-ReconfRqstTDD-IEs} }

DCH-Add-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-AddItem-RL-ReconfRqstTDD CRITICALITY ignore TYPE DCH-AddItem-RL-ReconfRqstTDD PRESENCE mandatory },
    ...
}

```

```

DCH-AddItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    rLC-Mode              RLC-Mode,
    ul-CCTrCH-ID          CCTrCH-ID,
    dl-CCTrCH-ID          CCTrCH-ID,
    dCH-CombinationInd    DCH-CombinationInd OPTIONAL,
    ul-TransportformatSet TransportFormatSet,
    dl-TransportformatSet TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority,
    ul-FP-Mode            UL-FP-Mode,
    qE-Selector           QE-Selector,
    toAWS                 ToAWS,
    toAWE                 ToAWE,
    iE-Extensions         ProtocolExtensionContainer { {DCH-AddItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-AddItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfRqstTDD      ::= DCH-IE-ContainerList { {DCH-Delete-RL-ReconfRqstTDD-IEs} }

DCH-Delete-RL-ReconfRqstTDD-IEs RNSAP-PROTOCOL-IES ::= {
    { ID id-DCH-DeleteItem-RL-ReconfRqstTDD    CRITICALITY ignore    TYPE DCH-DeleteItem-RL-ReconfRqstTDD    PRESENCE mandatory    },
    ...
}

DCH-DeleteItem-RL-ReconfRqstTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    iE-Extensions         ProtocolExtensionContainer { {DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

DCH-DeleteItem-RL-ReconfRqstTDD-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

RadioLinkReconfigurationRequestTDD-Extensions RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

•
•
•
Several Messages Skipped
•
•
•

```

## 9.3.4 Information Element Definitions

```

-- *****
--
-- Information Element Definitions
--
-- *****

RNSAP-IEs -- { object identifier to be allocated }--
DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    maxNrOfErrors,
    maxRateMatching,
    maxNrOfTFCs,
    maxNrOfTFs,
    maxTTI-Count
FROM RNSAP-Constants

    Criticality,
    ProcedureCode,
    ProtocolIE-ID,
    TransactionID,
    TriggeringMessage
FROM RNSAP-CommonDataTypes

    ProtocolExtensionContainer{},
    RNSAP-PROTOCOL-EXTENSION
FROM RNSAP-Containers;

•
•
•
Several IEs Skipped
•
•
•

-- Q
QE-Selector ::= ENUMERATED {
    selected-DCH,
    non-selected-DCH,
}

-- R

```