

# ETSI TS 125 433 V3.4.1 (2000-12)

---

*Technical Specification*

## **Universal Mobile Telecommunications System (UMTS); UTRAN I<sub>ub</sub> Interface NBAP Signalling (3GPP TS 25.433 version 3.4.1 Release 1999)**

---



---

**Reference**

RTS/TSGR-0325433UR4

---

**Keywords**

UMTS

**ETSI**

---

650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° 7803/88

---

**Important notice**

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at <http://www.etsi.org/tb/status/>

If you find errors in the present document, send your comment to:  
editor@etsi.fr

---

**Copyright Notification**

No part may be reproduced except as authorized by written permission.  
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2000.

All rights reserved.

---

## Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://www.etsi.org/ipr>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

---

## Foreword

This Technical Specification (TS) has been produced by the ETSI 3<sup>rd</sup> Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under [www.etsi.org/key](http://www.etsi.org/key).

# Contents

|  |    |
|--|----|
| Foreword.....  | 13 |
| 1 Scope .....  | 14 |
| 2 References .....                                   | 14 |
| 3 Definitions, symbols and abbreviations .....       | 15 |
| 3.1 Definitions .....                                | 15 |
| 3.2 Symbols.....                                     | 16 |
| 3.3 Abbreviations .....                              | 16 |
| 4 General .....                                      | 17 |
| 4.1 Procedure Specification Principles.....          | 17 |
| 4.2 Forwards and Backwards Compatibility .....       | 17 |
| 4.3 Specification Notations .....                    | 17 |
| 5 NBAP Services.....                                 | 18 |
| 5.1 Parallel Transactions .....                      | 18 |
| 6 Services Expected from Signalling Transport.....   | 18 |
| 7 Functions of NBAP .....                            | 18 |
| 8 NBAP Procedures.....                               | 20 |
| 8.1 Elementary Procedures.....                       | 20 |
| 8.2 NBAP Common Procedures.....                      | 22 |
| 8.2.1 Common Transport Channel Setup.....            | 22 |
| 8.2.1.1 General .....                                | 22 |
| 8.2.1.2 Successful Operation.....                    | 22 |
| 8.2.1.3 Unsuccessful Operation.....                  | 24 |
| 8.2.1.4 Abnormal Conditions .....                    | 25 |
| 8.2.2 Common Transport Channel Reconfiguration ..... | 25 |
| 8.2.2.1 General .....                                | 25 |
| 8.2.2.2 Successful Operation.....                    | 25 |
| 8.2.2.3 Unsuccessful Operation.....                  | 27 |
| 8.2.2.4 Abnormal Conditions .....                    | 28 |
| 8.2.3 Common Transport Channel Deletion .....        | 28 |
| 8.2.3.1 General .....                                | 28 |
| 8.2.3.2 Successful Operation.....                    | 28 |
| 8.2.3.3 Unsuccessful Operation.....                  | 28 |
| 8.2.3.4 Abnormal Conditions .....                    | 28 |
| 8.2.4 Block Resource .....                           | 29 |
| 8.2.4.1 General .....                                | 29 |
| 8.2.4.2 Successful Operation.....                    | 29 |
| 8.2.4.3 Unsuccessful Operation.....                  | 30 |
| 8.2.4.4 Abnormal Conditions .....                    | 30 |
| 8.2.5 Unblock Resource.....                          | 30 |
| 8.2.5.1 General .....                                | 30 |
| 8.2.5.2 Successful Operation.....                    | 30 |
| 8.2.5.3 Abnormal Conditions .....                    | 31 |
| 8.2.6 Audit Required.....                            | 31 |
| 8.2.6.1 General .....                                | 31 |
| 8.2.6.2 Successful Operation.....                    | 31 |
| 8.2.6.3 Abnormal Conditions .....                    | 31 |
| 8.2.7 Audit .....                                    | 31 |
| 8.2.7.1 General .....                                | 31 |
| 8.2.7.2 Successful Operation.....                    | 32 |
| 8.2.7.3 Unsuccessful Operation.....                  | 33 |
| 8.2.7.4 Abnormal Conditions .....                    | 33 |
| 8.2.8 Common Measurement Initiation .....            | 33 |
| 8.2.8.1 General .....                                | 33 |

|            |  |    |
|------------|--|----|
| 8.2.8.2    | Successful Operation.....                          | 33 |
| 8.2.8.3    | Unsuccessful Operation.....                        | 35 |
| 8.2.8.4    | Abnormal Conditions .....                          | 35 |
| 8.2.9      | Common Measurement Reporting .....                 | 36 |
| 8.2.9.1    | General .....                                      | 36 |
| 8.2.9.2    | Successful Operation.....                          | 36 |
| 8.2.9.3    | Abnormal Conditions .....                          | 36 |
| 8.2.10     | Common Measurement Termination .....               | 36 |
| 8.2.10.1   | General .....                                      | 36 |
| 8.2.10.2   | Successful Operation.....                          | 36 |
| 8.2.10.3   | Abnormal Conditions .....                          | 37 |
| 8.2.11     | Common Measurement Failure.....                    | 37 |
| 8.2.11.1   | General .....                                      | 37 |
| 8.2.11.2   | Successful Operation.....                          | 37 |
| 8.2.11.3   | Abnormal Conditions .....                          | 37 |
| 8.2.12     | Cell Setup.....                                    | 37 |
| 8.2.12.1   | General .....                                      | 37 |
| 8.2.12.2   | Successful Operation.....                          | 37 |
| 8.2.12.3   | Unsuccessful Operation.....                        | 38 |
| 8.2.12.4   | Abnormal Conditions .....                          | 39 |
| 8.2.13     | Cell Reconfiguration .....                         | 39 |
| 8.2.13.1   | General .....                                      | 39 |
| 8.2.13.2   | Successful Operation.....                          | 39 |
| 8.2.13.3   | Unsuccessful Operation.....                        | 40 |
| 8.2.13.4   | Abnormal Conditions .....                          | 41 |
| 8.2.14     | Cell Deletion .....                                | 41 |
| 8.2.14.1   | General .....                                      | 41 |
| 8.2.14.2   | Successful Operation.....                          | 41 |
| 8.2.14.3   | Unsuccessful Operation.....                        | 41 |
| 8.2.14.4   | Abnormal Conditions .....                          | 41 |
| 8.2.15     | Resource Status Indication.....                    | 41 |
| 8.2.15.1   | General .....                                      | 41 |
| 8.2.15.2   | Successful Operation.....                          | 42 |
| 8.2.15.3   | Abnormal Conditions .....                          | 43 |
| 8.2.16     | System Information Update .....                    | 43 |
| 8.2.16.1   | General .....                                      | 43 |
| 8.2.16.2   | Successful Operation.....                          | 44 |
| 8.2.16.3   | Unsuccessful Operation.....                        | 45 |
| 8.2.16.4   | Abnormal Conditions .....                          | 46 |
| 8.2.17     | Radio Link Setup .....                             | 46 |
| 8.2.17.1   | General .....                                      | 46 |
| 8.2.17.2   | Successful Operation.....                          | 46 |
| 8.2.17.3   | Unsuccessful Operation.....                        | 49 |
| 8.2.17.4   | Abnormal Conditions .....                          | 50 |
| 8.2.18     | Physical Shared Channel Reconfiguration [TDD]..... | 50 |
| 8.2.18.1   | General .....                                      | 50 |
| 8.2.18.2   | Successful Operation.....                          | 50 |
| 8.2.18.3   | Unsuccessful Operation.....                        | 51 |
| 8.2.18.4   | Abnormal Conditions .....                          | 52 |
| 8.2.19     | Reset .....  | 52 |
| 8.2.19.1   | General .....                                      | 52 |
| 8.2.19.2   | Successful Operation.....                          | 52 |
| 8.2.19.2.1 | Reset Initiated by the CRNC .....                  | 52 |
| 8.2.19.2.2 | Reset Initiated by the Node B .....                | 52 |
| 8.2.19.3   | Unsuccessful Operation.....                        | 53 |
| 8.2.19.4   | Abnormal Conditions .....                          | 53 |
| 8.3        | NBAP Dedicated Procedures.....                     | 53 |
| 8.3.1      | Radio Link Addition .....                          | 53 |
| 8.3.1.1    | General .....                                      | 53 |
| 8.3.1.2    | Successful Operation.....                          | 53 |
| 8.3.1.3    | Unsuccessful Operation.....                        | 55 |
| 8.3.1.4    | Abnormal conditions .....                          | 56 |

|          |   |    |
|----------|---|----|
| 8.3.2    | Synchronised Radio Link Reconfiguration Preparation.....  | 56 |
| 8.3.2.1  | General .....   | 56 |
| 8.3.2.2  | Successful Operation.....                                 | 56 |
| 8.3.2.3  | Unsuccessful Operation.....                               | 61 |
| 8.3.2.4  | Abnormal Conditions .....                                 | 62 |
| 8.3.3    | Synchronised Radio Link Reconfiguration Commit.....       | 62 |
| 8.3.3.1  | General .....   | 62 |
| 8.3.3.2  | Successful Operation.....                                 | 62 |
| 8.3.3.3  | Abnormal Conditions .....                                 | 63 |
| 8.3.4    | Synchronised Radio Link Reconfiguration Cancellation..... | 63 |
| 8.3.4.1  | General .....   | 63 |
| 8.3.4.2  | Successful Operation.....                                 | 63 |
| 8.3.4.3  | Abnormal Conditions .....                                 | 63 |
| 8.3.5    | Unsynchronised Radio Link Reconfiguration.....            | 63 |
| 8.3.5.1  | General .....   | 63 |
| 8.3.5.2  | Successful Operation.....                                 | 64 |
| 8.3.5.3  | Unsuccessful Operation.....                               | 67 |
| 8.3.5.4  | Abnormal Conditions .....                                 | 68 |
| 8.3.6    | Radio Link Deletion.....                                  | 68 |
| 8.3.6.1  | General .....   | 68 |
| 8.3.6.2  | Successful Operation.....                                 | 68 |
| 8.3.6.3  | Unsuccessful Operation.....                               | 68 |
| 8.3.6.4  | Abnormal Conditions .....                                 | 68 |
| 8.3.7    | Downlink Power Control [FDD].....                         | 68 |
| 8.3.7.1  | General .....   | 68 |
| 8.3.7.2  | Successful Operation.....                                 | 69 |
| 8.3.7.3  | Abnormal Conditions .....                                 | 69 |
| 8.3.8    | Dedicated Measurement Initiation .....                    | 69 |
| 8.3.8.1  | General .....   | 69 |
| 8.3.8.2  | Successful Operation.....                                 | 70 |
| 8.3.8.3  | Unsuccessful Operation.....                               | 72 |
| 8.3.8.4  | Abnormal Conditions .....                                 | 72 |
| 8.3.9    | Dedicated Measurement Reporting.....                      | 72 |
| 8.3.9.1  | General .....   | 72 |
| 8.3.9.2  | Successful Operation.....                                 | 73 |
| 8.3.9.3  | Abnormal Conditions .....                                 | 73 |
| 8.3.10   | Dedicated Measurement Termination .....                   | 73 |
| 8.3.10.1 | General .....   | 73 |
| 8.3.10.2 | Successful Operation.....                                 | 73 |
| 8.3.10.3 | Abnormal Conditions .....                                 | 73 |
| 8.3.11   | Dedicated Measurement Failure .....                       | 74 |
| 8.3.11.1 | General .....   | 74 |
| 8.3.11.2 | Successful Operation.....                                 | 74 |
| 8.3.11.3 | Abnormal Conditions .....                                 | 74 |
| 8.3.12   | Radio Link Failure .....                                  | 74 |
| 8.3.12.1 | General .....   | 74 |
| 8.3.12.2 | Successful Operation.....                                 | 74 |
| 8.3.12.3 | Abnormal Conditions .....                                 | 75 |
| 8.3.13   | Radio Link Restoration .....                              | 75 |
| 8.3.13.1 | General .....   | 75 |
| 8.3.13.2 | Successful Operation.....                                 | 76 |
| 8.3.13.3 | Abnormal Condition.....                                   | 76 |
| 8.3.14   | Compressed Mode Command [FDD] .....                       | 76 |
| 8.3.14.1 | General .....   | 76 |
| 8.3.14.2 | Successful Operation.....                                 | 76 |
| 8.3.14.3 | Abnormal Conditions .....                                 | 76 |
| 8.3.15   | Downlink Power Timeslot Control [TDD] .....               | 77 |
| 8.3.15.1 | General .....   | 77 |
| 8.3.15.2 | Successful Operation.....                                 | 77 |
| 8.3.15.3 | Abnormal Conditions .....                                 | 77 |
| 8.3.16   | Radio Link Pre-emption.....                               | 77 |
| 8.3.16.1 | General .....   | 77 |

|          |   |     |
|----------|---|-----|
| 8.3.16.2 | Successful Operation.....                               | 77  |
| 8.3.16.3 | Abnormal Conditions .....                               | 78  |
| 8.4      | Error Handling Procedures .....                         | 78  |
| 8.4.1    | Error Indication.....                                   | 78  |
| 8.4.1.1  | General .....   | 78  |
| 8.4.1.2  | Successful Operation.....                               | 78  |
| 8.4.1.3  | Abnormal Conditions .....                               | 79  |
| 9        | Elements for NBAP communication .....                   | 80  |
| 9.1      | Message Functional Definition and Content .....         | 80  |
| 9.1.1    | General.....  | 80  |
| 9.1.2    | Message Contents .....                                  | 80  |
| 9.1.2.1  | Presence .....  | 80  |
| 9.1.2.2  | Criticality .....                                       | 80  |
| 9.1.2.3  | Range .....   | 80  |
| 9.1.2.4  | Assigned Criticality.....                               | 80  |
| 9.1.3    | COMMON TRANSPORT CHANNEL SETUP REQUEST .....            | 81  |
| 9.1.3.1  | FDD Message.....  | 81  |
| 9.1.3.2  | TDD Message.....  | 86  |
| 9.1.4    | COMMON TRANSPORT CHANNEL SETUP RESPONSE.....            | 88  |
| 9.1.5    | COMMON TRANSPORT CHANNEL SETUP FAILURE .....            | 89  |
| 9.1.6    | COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST .....  | 90  |
| 9.1.6.1  | FDD Message.....  | 90  |
| 9.1.6.2  | TDD Message.....  | 91  |
| 9.1.7    | COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE ..... | 92  |
| 9.1.8    | COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE .....  | 93  |
| 9.1.9    | COMMON TRANSPORT CHANNEL DELETION REQUEST .....         | 93  |
| 9.1.10   | COMMON TRANSPORT CHANNEL DELETION RESPONSE .....        | 93  |
| 9.1.11   | BLOCK RESOURCE REQUEST .....                            | 94  |
| 9.1.12   | BLOCK RESOURCE RESPONSE .....                           | 94  |
| 9.1.13   | BLOCK RESOURCE FAILURE .....                            | 94  |
| 9.1.14   | UNBLOCK RESOURCE INDICATION.....                        | 94  |
| 9.1.15   | AUDIT REQUIRED INDICATION .....                         | 94  |
| 9.1.16   | AUDIT REQUEST .....                                     | 95  |
| 9.1.17   | AUDIT RESPONSE .....                                    | 96  |
| 9.1.17A  | AUDIT FAILURE .....                                     | 99  |
| 9.1.18   | COMMON MEASUREMENT INITIATION REQUEST .....             | 100 |
| 9.1.19   | COMMON MEASUREMENT INITIATION RESPONSE .....            | 101 |
| 9.1.20   | COMMON MEASUREMENT INITIATION FAILURE .....             | 101 |
| 9.1.21   | COMMON MEASUREMENT REPORT.....                          | 102 |
| 9.1.22   | COMMON MEASUREMENT TERMINATION REQUEST .....            | 102 |
| 9.1.23   | COMMON MEASUREMENT FAILURE INDICATION.....              | 102 |
| 9.1.24   | CELL SETUP REQUEST .....                                | 103 |
| 9.1.24.1 | FDD Message.....  | 103 |
| 9.1.24.2 | TDD Message.....  | 105 |
| 9.1.25   | CELL SETUP RESPONSE .....                               | 106 |
| 9.1.26   | CELL SETUP FAILURE .....                                | 106 |
| 9.1.27   | CELL RECONFIGURATION REQUEST.....                       | 107 |
| 9.1.27.1 | FDD Message.....  | 107 |
| 9.1.27.2 | TDD Message.....  | 108 |
| 9.1.28   | CELL RECONFIGURATION RESPONSE.....                      | 108 |
| 9.1.29   | CELL RECONFIGURATION FAILURE.....                       | 108 |
| 9.1.30   | CELL DELETION REQUEST.....                              | 109 |
| 9.1.31   | CELL DELETION RESPONSE.....                             | 109 |
| 9.1.32   | RESOURCE STATUS INDICATION .....                        | 110 |
| 9.1.33   | SYSTEM INFORMATION UPDATE REQUEST .....                 | 114 |
| 9.1.34   | SYSTEM INFORMATION UPDATE RESPONSE .....                | 115 |
| 9.1.35   | SYSTEM INFORMATION UPDATE FAILURE .....                 | 115 |
| 9.1.36   | RADIO LINK SETUP REQUEST .....                          | 116 |
| 9.1.36.1 | FDD message .....                                       | 116 |
| 9.1.36.2 | TDD message .....                                       | 118 |
| 9.1.37   | RADIO LINK SETUP RESPONSE .....                         | 120 |

|          |   |     |
|----------|---|-----|
| 9.1.37.1 | FDD message .....   | 120 |
| 9.1.37.2 | TDD Message.....  | 121 |
| 9.1.38   | RADIO LINK SETUP FAILURE .....                              | 122 |
| 9.1.38.1 | FDD Message.....  | 122 |
| 9.1.38.2 | TDD Message.....  | 123 |
| 9.1.39   | RADIO LINK ADDITION REQUEST .....                           | 124 |
| 9.1.39.1 | FDD Message.....  | 124 |
| 9.1.39.2 | TDD Message.....  | 125 |
| 9.1.40   | RADIO LINK ADDITION RESPONSE.....                           | 126 |
| 9.1.40.1 | FDD message .....   | 126 |
| 9.1.40.2 | TDD Message.....  | 127 |
| 9.1.41   | RADIO LINK ADDITION FAILURE .....                           | 128 |
| 9.1.41.1 | FDD Message.....  | 128 |
| 9.1.41.2 | TDD Message.....  | 129 |
| 9.1.42   | RADIO LINK RECONFIGURATION PREPARE .....                    | 130 |
| 9.1.42.1 | FDD Message.....  | 130 |
| 9.1.42.2 | TDD Message.....  | 133 |
| 9.1.43   | RADIO LINK RECONFIGURATION READY .....                      | 137 |
| 9.1.44   | RADIO LINK RECONFIGURATION FAILURE.....                     | 137 |
| 9.1.45   | RADIO LINK RECONFIGURATION COMMIT .....                     | 138 |
| 9.1.46   | RADIO LINK RECONFIGURATION CANCEL.....                      | 138 |
| 9.1.47   | RADIO LINK RECONFIGURATION REQUEST.....                     | 139 |
| 9.1.47.1 | FDD Message.....  | 139 |
| 9.1.47.2 | TDD Message.....  | 140 |
| 9.1.48   | RADIO LINK RECONFIGURATION RESPONSE.....                    | 141 |
| 9.1.49   | RADIO LINK DELETION REQUEST.....                            | 141 |
| 9.1.50   | RADIO LINK DELETION RESPONSE.....                           | 142 |
| 9.1.51   | DL POWER CONTROL REQUEST [FDD].....                         | 142 |
| 9.1.52   | DEDICATED MEASUREMENT INITIATION REQUEST .....              | 143 |
| 9.1.53   | DEDICATED MEASUREMENT INITIATION RESPONSE.....              | 144 |
| 9.1.54   | DEDICATED MEASUREMENT INITIATION FAILURE .....              | 145 |
| 9.1.55   | DEDICATED MEASUREMENT REPORT .....                          | 145 |
| 9.1.56   | DEDICATED MEASUREMENT TERMINATION REQUEST .....             | 146 |
| 9.1.57   | DEDICATED MEASUREMENT FAILURE INDICATION .....              | 146 |
| 9.1.58   | RADIO LINK FAILURE INDICATION .....                         | 147 |
| 9.1.59   | RADIO LINK RESTORE INDICATION .....                         | 148 |
| 9.1.60   | COMPRESSED MODE COMMAND [FDD].....                          | 148 |
| 9.1.61   | ERROR INDICATION.....                                       | 149 |
| 9.1.62   | PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST [TDD].....  | 149 |
| 9.1.63   | PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE [TDD]..... | 151 |
| 9.1.64   | PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE [TDD].....  | 152 |
| 9.1.65   | RESET REQUEST .....   | 152 |
| 9.1.66   | RESET RESPONSE .....  | 153 |
| 9.1.67   | DL POWER TIMESLOT CONTROL REQUEST [TDD] .....               | 154 |
| 9.1.68   | RADIO LINK PREEMPTION REQUIRED INDICATION.....              | 154 |
| 9.2      | Information Element Functional Definition and Contents..... | 154 |
| 9.2.0    | General.....  | 154 |
| 9.2.1    | Common parameters .....                                     | 154 |
| 9.2.1.1  | Add/Delete Indicator .....                                  | 154 |
| 9.2.1.1A | Allocation/Retention Priority .....                         | 155 |
| 9.2.1.2  | Availability Status .....                                   | 155 |
| 9.2.1.3  | BCCH Modification Time.....                                 | 155 |
| 9.2.1.4  | Binding ID.....   | 156 |
| 9.2.1.5  | Blocking Priority Indicator.....                            | 156 |
| 9.2.1.6  | Cause.....  | 157 |
| 9.2.1.7  | CFN.....  | 159 |
| 9.2.1.8  | CFN Offset.....   | 159 |
| 9.2.1.9  | C-ID .....  | 159 |
| 9.2.1.9A | Common Channels Capacity Consumption Law.....               | 160 |
| 9.2.1.10 | Common Measurement Object Type .....                        | 160 |
| 9.2.1.11 | Common Measurement Type .....                               | 160 |
| 9.2.1.12 | Common Measurement Value.....                               | 161 |



|           |   |     |
|-----------|---|-----|
| 9.2.1.12A | Common Measurement Value Information.....           | 161 |
| 9.2.1.13  | Common Physical Channel ID .....                    | 162 |
| 9.2.1.13A | Common Physical Channel Status Information.....     | 162 |
| 9.2.1.14  | Common Transport Channel ID .....                   | 162 |
| 9.2.1.14A | Common Transport Channel Information Response ..... | 162 |
| 9.2.1.14B | Common Transport Channel Status Information.....    | 163 |
| 9.2.1.15  | Communication Control Port ID .....                 | 163 |
| 9.2.1.16  | Configuration Generation ID.....                    | 163 |
| 9.2.1.17  | Criticality Diagnostics.....                        | 163 |
| 9.2.1.18  | CRNC Communication Context ID .....                 | 164 |
| 9.2.1.19  | DCH Combination Indicator .....                     | 165 |
| 9.2.1.20  | DCH ID .....  | 165 |
| 9.2.1.20A | Dedicated Channels Capacity Consumption Law .....   | 165 |
| 9.2.1.20B | DL or Global Capacity Credit .....                  | 165 |
| 9.2.1.20C | DCH Information Response .....                      | 166 |
| 9.2.1.21  | DL Power .....                                      | 166 |
| 9.2.1.22  | Dedicated Measurement Object Type .....             | 166 |
| 9.2.1.23  | Dedicated Measurement Type.....                     | 166 |
| 9.2.1.24  | Dedicated Measurement Value .....                   | 167 |
| 9.2.1.24A | Dedicated Measurement Value Information .....       | 167 |
| 9.2.1.25  | Diversity Control Field.....                        | 168 |
| 9.2.1.26  | Diversity Indication.....                           | 168 |
| 9.2.1.27  | DSCH ID .....                                       | 168 |
| 9.2.1.27A | DSCH Information Response .....                     | 168 |
| 9.2.1.28  | DSCH Transport Format Set .....                     | 169 |
| 9.2.1.29  | DSCH Transport Format Combination Set .....         | 169 |
| 9.2.1.29A | End Of Audit Sequence Indicator .....               | 169 |
| 9.2.1.29B | FN reporting indicator.....                         | 169 |
| 9.2.1.30  | Frame Handling Priority.....                        | 169 |
| 9.2.1.31  | Frame Offset.....                                   | 170 |
| 9.2.1.31A | IB_OC_ID.....                                       | 170 |
| 9.2.1.32  | IB_SG_DATA.....                                     | 170 |
| 9.2.1.33  | IB_SG_POS .....                                     | 170 |
| 9.2.1.34  | IB_SG_REP .....                                     | 170 |
| 9.2.1.35  | IB Type .....                                       | 171 |
| 9.2.1.36  | Indication Type .....                               | 171 |
| 9.2.1.37  | Limited Power Increase.....                         | 171 |
| 9.2.1.37A | Local Cell Group ID.....                            | 171 |
| 9.2.1.38  | Local Cell ID.....                                  | 172 |
| 9.2.1.39  | Maximum DL Power Capability .....                   | 172 |
| 9.2.1.40  | Maximum Transmission Power.....                     | 172 |
| 9.2.1.40A | Measurement Availability Indicator.....             | 172 |
| 9.2.1.41  | Measurement Filter Coefficient.....                 | 173 |
| 9.2.1.42  | Measurement ID .....                                | 173 |
| 9.2.1.43  | Measurement Increase/Decrease Threshold .....       | 173 |
| 9.2.1.44  | Measurement Threshold.....                          | 174 |
| 9.2.1.45  | Message Discriminator.....                          | 175 |
| 9.2.1.46  | Message Type.....                                   | 175 |
| 9.2.1.46A | Minimum DL Power Capability.....                    | 176 |
| 9.2.1.47  | Minimum Spreading Factor .....                      | 177 |
| 9.2.1.47A | N_INSYNC_IND.....                                   | 177 |
| 9.2.1.47B | N_OUTSYNC_IND.....                                  | 177 |
| 9.2.1.48  | Node B Communication Context ID .....               | 177 |
| 9.2.1.49  | Payload CRC Presence Indicator .....                | 177 |
| 9.2.1.49A | PICH Power .....                                    | 178 |
| 9.2.1.50  | Puncture Limit.....                                 | 178 |
| 9.2.1.50A | QE-Selector .....                                   | 178 |
| 9.2.1.51  | Report Characteristics .....                        | 178 |
| 9.2.1.52  | Resource Operational State .....                    | 180 |
| 9.2.1.52A | Retention Priority .....                            | 181 |
| 9.2.1.53  | RL ID .....   | 181 |
| 9.2.1.53A | SFN .....   | 181 |

|           |   |     |
|-----------|---|-----|
| 9.2.1.53B | Segment type.....                                 | 181 |
| 9.2.1.54  | SIB Deletion Indicator .....                      | 181 |
| 9.2.1.55  | SIB Originator.....                               | 182 |
| 9.2.1.56  | Shutdown Timer.....                               | 182 |
| 9.2.1.56A | T_RLFAILURE .....                                 | 182 |
| 9.2.1.56B | Start Of Audit Sequence Indicator .....           | 182 |
| 9.2.1.57  | TFCI Presence.....                                | 182 |
| 9.2.1.58  | TFCS (Transport Format Combination Set).....      | 183 |
| 9.2.1.59  | Transport Format Set.....                         | 185 |
| 9.2.1.60  | ToAWE .....                                       | 186 |
| 9.2.1.61  | ToAWS .....                                       | 187 |
| 9.2.1.62  | Transaction ID.....                               | 187 |
| 9.2.1.62A | Transport Bearer Request Indicator .....          | 187 |
| 9.2.1.63  | Transport Layer Address .....                     | 187 |
| 9.2.1.64  | TSTD Indicator .....                              | 188 |
| 9.2.1.65  | UARFCN .....                                      | 188 |
| 9.2.1.65A | UL Capacity Credit .....                          | 188 |
| 9.2.1.66  | UL FP Mode.....                                   | 188 |
| 9.2.1.67  | UL interference level.....                        | 188 |
| 9.2.2     | FDD specific parameters.....                      | 188 |
| 9.2.2.A   | Active Pattern Sequence Information.....          | 188 |
| 9.2.2.B   | Adjustment Period.....                            | 189 |
| 9.2.2.C   | Adjustment Ratio .....                            | 189 |
| 9.2.2.D   | AICH Power.....                                   | 189 |
| 9.2.2.1   | AICH Transmission Timing.....                     | 190 |
| 9.2.2.1A  | AP Preamble Signature .....                       | 190 |
| 9.2.2.1B  | AP Sub Channel Number .....                       | 190 |
| 9.2.2.1C  | CD Sub Channel Numbers .....                      | 190 |
| 9.2.2.1D  | Channel Assignment Indication .....               | 190 |
| 9.2.2.2   | Chip Offset.....                                  | 190 |
| 9.2.2.2A  | Closed Loop Timing Adjustment Mode.....           | 191 |
| 9.2.2.3   | Common Channels Capacity Consumption Law.....     | 191 |
| 9.2.2.3A  | Compressed Mode Deactivation Flag .....           | 191 |
| 9.2.2.4   | Compressed Mode Method .....                      | 191 |
| 9.2.2.4A  | CPCH Allowed Total Rate.....                      | 191 |
| 9.2.2.4B  | CPCH Scrambling Code Number.....                  | 191 |
| 9.2.2.4C  | CPCH UL DPCH Slot Format.....                     | 191 |
| 9.2.2.4D  | DCH FDD Information .....                         | 192 |
| 9.2.2.4E  | DCHs FDD to Modify.....                           | 192 |
| 9.2.2.5   | D-Field Length.....                               | 193 |
| 9.2.2.6   | Dedicated Channels Capacity Consumption Law ..... | 193 |
| 9.2.2.7   | Diversity Control Field.....                      | 193 |
| 9.2.2.8   | Diversity Indication.....                         | 193 |
| 9.2.2.9   | Diversity mode .....                              | 193 |
| 9.2.2.10  | DL DPCH Slot Format.....                          | 193 |
| 9.2.2.11  | DL frame type .....                               | 194 |
| 9.2.2.12  | DL or Global Capacity Credit .....                | 194 |
| 9.2.2.12A | DL_power_averaging_window_size.....               | 194 |
| 9.2.2.13  | DL Scrambling Code.....                           | 194 |
| 9.2.2.13A | DL TPC pattern 01 count .....                     | 194 |
| 9.2.2.13B | DSCH FDD Information .....                        | 194 |
| 9.2.2.14  | FDD DL Channelisation Code Number .....           | 195 |
| 9.2.2.14A | FDD DL Code Information.....                      | 195 |
| 9.2.2.15  | FDD S-CCPCH Offset .....                          | 195 |
| 9.2.2.16  | FDD TPC DL step size.....                         | 196 |
| 9.2.2.16A | First RLS Indicator.....                          | 196 |
| 9.2.2.17  | Gap Period.....                                   | 196 |
| 9.2.2.18  | Gap Position Mode.....                            | 196 |
| 9.2.2.18A | Limited Power Increase.....                       | 196 |
| 9.2.2.18B | Inner Loop DL PC Status .....                     | 196 |
| 9.2.2.19  | Max Adjustment Period .....                       | 197 |
| 9.2.2.20  | Max Adjustment Step.....                          | 197 |

|           |  |     |
|-----------|--|-----|
| 9.2.2.20A | Max Number of PCPCHes .....                              | 197 |
| 9.2.2.21  | Maximum Number of UL DPDCHs .....                        | 197 |
| 9.2.2.22  | Minimum UL Channelisation Code Length .....              | 197 |
| 9.2.2.23  | Multiplexing Position .....                              | 197 |
| 9.2.2.23A | N_EOT .....  | 198 |
| 9.2.2.23B | NF_max .....   | 198 |
| 9.2.2.23C | N_Start_Message .....                                    | 198 |
| 9.2.2.24  | Pattern Duration (PD) .....                              | 198 |
| 9.2.2.24A | PCP Length .....   | 198 |
| 9.2.2.25  | PDSCH code mapping .....                                 | 198 |
| 9.2.2.26  | PICH Mode .....  | 201 |
| 9.2.2.27  | Power Adjustment Type .....                              | 201 |
| 9.2.2.28  | Power Control Mode .....                                 | 201 |
| 9.2.2.29  | Power Offset .....                                       | 201 |
| 9.2.2.29A | Power_Raise_Limit .....                                  | 201 |
| 9.2.2.30  | Power Resume Mode .....                                  | 202 |
| 9.2.2.31  | Preamble Signature .....                                 | 202 |
| 9.2.2.32  | Preamble Threshold .....                                 | 202 |
| 9.2.2.33  | Primary CPICH Power .....                                | 202 |
| 9.2.2.34  | Primary Scrambling code .....                            | 202 |
| 9.2.2.35  | Propagation Delay .....                                  | 202 |
| 9.2.2.36  | QE-Selector .....  | 203 |
| 9.2.2.37  | RACH Slot Format .....                                   | 203 |
| 9.2.2.38  | RACH sub Channel numbers .....                           | 203 |
| 9.2.2.39  | RL Set ID .....  | 203 |
| 9.2.2.39A | Received total wide band power .....                     | 203 |
| 9.2.2.40  | S-Field Length .....                                     | 203 |
| 9.2.2.41  | Scrambling Code Change .....                             | 203 |
| 9.2.2.42  | Scrambling Code Number .....                             | 204 |
| 9.2.2.43  | Secondary CCPCH Slot Format .....                        | 204 |
| 9.2.2.44  | SSDT Cell Identity .....                                 | 204 |
| 9.2.2.45  | SSDT Cell ID Length .....                                | 204 |
| 9.2.2.46  | SSDT Support Indicator .....                             | 204 |
| 9.2.2.47  | SSDT Indication .....                                    | 204 |
| 9.2.2.48  | STTD Indicator .....                                     | 205 |
| 9.2.2.49  | T_Cell .....   | 205 |
| 9.2.2.49A | TFCl2 Bearer Information Response .....                  | 205 |
| 9.2.2.50  | TFCl signalling mode .....                               | 205 |
| 9.2.2.51  | TGD .....  | 206 |
| 9.2.2.52  | TGL .....  | 206 |
| 9.2.2.53  | Transmit Diversity Indicator .....                       | 206 |
| 9.2.2.53A | Transmission Gap Pattern Sequence Information .....      | 206 |
| 9.2.2.53B | Transmission Gap Pattern Sequence Code Information ..... | 208 |
| 9.2.2.54  | UL/DL compressed mode selection: .....                   | 208 |
| 9.2.2.55  | UL delta SIR .....                                       | 208 |
| 9.2.2.56  | UL delta SIR after .....                                 | 209 |
| 9.2.2.57  | UL DPCCH Slot Format .....                               | 209 |
| 9.2.2.58  | UL SIR .....   | 209 |
| 9.2.2.59  | UL Scrambling Code .....                                 | 209 |
| 9.2.2.60  | UL Capacity Credit .....                                 | 209 |
| 9.2.3     | TDD specific Parameters .....                            | 209 |
| 9.2.3.1   | Block STTD Indicator .....                               | 209 |
| 9.2.3.2   | Burst Type .....   | 209 |
| 9.2.3.3   | CCTrCH ID .....  | 210 |
| 9.2.3.4   | Cell Parameter ID .....                                  | 210 |
| 9.2.3.4A  | Constant Value .....                                     | 210 |
| 9.2.3.4B  | DL Timeslot ISCP .....                                   | 210 |
| 9.2.3.4C  | DCH TDD Information .....                                | 210 |
| 9.2.3.4D  | DCHs TDD to Modify .....                                 | 211 |
| 9.2.3.4E  | DL Timeslot Information .....                            | 212 |
| 9.2.3.4F  | DL Time Slot ISCP Info .....                             | 212 |
| 9.2.3.5   | DPCH ID .....  | 213 |

|   |   |            |
|---|---|------------|
| 9.2.3.5A  | DSCH TDD Information .....  | 213        |
| 9.2.3.6   | Max PRACH Midamble shift .....  | 213        |
| 9.2.3.7   | Midamble shift and burst type .....   | 214        |
| 9.2.3.8   | Paging Indicator Length .....   | 214        |
| 9.2.3.9   | PCCPCH Power .....  | 215        |
| 9.2.3.10  | PDSCH ID .....  | 215        |
| 9.2.3.11  | PDSCH Set ID .....  | 215        |
| 9.2.3.12  | PUSCH ID .....  | 215        |
| 9.2.3.13  | PUSCH Set ID .....  | 215        |
| 9.2.3.14  | PRACH Midamble .....  | 215        |
| 9.2.3.15  | Repetition Length .....   | 216        |
| 9.2.3.16  | Repetition Period .....   | 216        |
| 9.2.3.17  | SCH Time Slot .....   | 216        |
| 9.2.3.18  | Sync case .....   | 216        |
| 9.2.3.19  | TDD Channelisation Code .....   | 216        |
| 9.2.3.19A   | TDD DPCH Offset .....   | 217        |
| 9.2.3.19B   | TDD DL Code Information .....   | 217        |
| 9.2.3.20  | TDD Physical Channel Offset .....   | 217        |
| 9.2.3.21  | TDD TPC DL step size .....  | 217        |
| 9.2.3.21A   | TDD UL Code Information .....   | 218        |
| 9.2.3.22  | TFCI Coding .....   | 218        |
| 9.2.3.22A   | Timing Advance Applied .....  | 218        |
| 9.2.3.23  | Time Slot .....   | 218        |
| 9.2.3.24  | Time Slot Direction .....   | 218        |
| 9.2.3.25  | Time Slot Status .....  | 219        |
| 9.2.3.26  | Transmission Diversity Applied .....  | 219        |
| 9.2.3.26A   | UL Timeslot ISCP .....  | 219        |
| 9.2.3.26B   | UL PhysCH SF Variation .....  | 219        |
| 9.2.3.26C   | UL Timeslot Information .....   | 219        |
| 9.2.3.26D   | UL Time Slot ISCP Info .....  | 220        |
| 9.2.3.27  | USCH ID .....   | 220        |
| 9.2.3.28  | USCH Information .....  | 220        |
| 9.2.3.29  | USCH Information Response .....   | 221        |
| 9.3   | Message and Information element abstract syntax (with ASN.1) .....          | 222        |
| 9.3.0   | General .....   | 222        |
| 9.3.1   | Usage of Private Message mechanism for non-standard use .....               | 222        |
| 9.3.2   | Elementary Procedure Definitions .....                                      | 222        |
| 9.3.3   | PDU Definitions .....   | 236        |
| 9.3.4   | Information Elements Definitions .....                                      | 368        |
| 9.3.5   | Common Definitions .....  | 408        |
| 9.3.6   | Constant Definitions .....  | 409        |
| 9.3.7   | Container Definitions .....   | 417        |
| 9.4   | Message Transfer Syntax .....   | 422        |
| 9.5   | Timers .....  | 422        |
| 10  | Handling of unknown, unforeseen and erroneous protocol data .....           | 422        |
| 10.1  | General .....   | 422        |
| 10.2  | Transfer Syntax Error .....   | 422        |
| 10.3  | Abstract Syntax Error .....   | 423        |
| 10.3.1  | General .....   | 423        |
| 10.3.2  | Criticality Information .....   | 423        |
| 10.3.3  | Presence Information .....  | 424        |
| 10.3.4  | Not comprehended IE/IE group .....  | 424        |
| 10.3.4.1  | Procedure ID .....  | 424        |
| 10.3.4.2  | IEs other than the Procedure ID .....                                       | 424        |
| 10.3.5  | Missing IE or IE group .....  | 425        |
| 10.3.6  | IEs or IE groups received in wrong order or with too many occurrences ..... | 426        |
| 10.4  | Logical Error .....   | 426        |
| <b>Annex A (normative): Allocation and Pre-emption of Radio Links in the Node B .....</b> |   | <b>428</b> |
| A.1   | Deriving Allocation Information for a Radio Link .....                      | 428        |
| A.1.1   | Establishment of a New Radio Link .....                                     | 428        |

A.1.2 Modification of an Existing Radio Link.....428

A.2 Deriving Retention Information for a Radio Link..... 429

A.3 The Allocation/Retention Process ..... 429

A.4 The Pre-emption Process..... 430

**Annex B (informative): Change history..... 431**

---

# Foreword

This Technical Specification has been produced by the 3GPP.

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of this TS, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 Indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

---

# 1 Scope

The present document specifies the standards for NBAP specification to be used over Iub Interface.

---

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

- [1] 3GPP TS 25.401: "UTRAN Overall Description".
- [2] 3GPP TS 25.426: "UTRAN I<sub>ur</sub> and I<sub>ub</sub> Interface Data Transport & Transport Signalling for DCH Data Streams".
- [3] CCITT Recommendation X.731 (01/92): "Information Technology – Open Systems Interconnection – Systems Management: State Management function".
- [4] 3GPP TS 25.215: "Physical layer – Measurements (FDD)".
- [5] 3GPP TS 25.225: "Physical layer – Measurements (TDD)".
- [6] 3GPP TS 25.430: "UTRAN Iub General Aspect and Principle".
- [7] 3GPP TS 25.211: "Physical channels and mapping of transport channels onto physical channels (FDD)".
- [8] 3GPP TS 25.212: "Multiplexing and channel coding (FDD)".
- [9] 3GPP TS 25.213: "Spreading and modulation (FDD)".
- [10] 3GPP TS 25.214: "Physical layer procedures (FDD)".
- [11] X.691, (12/97) "Information technology - ASN.1 encoding rules - Specification of Packed Encoding Rules (PER)".
- [12] X.680, (12/97) "Information Technology - Abstract Syntax Notation One (ASN.1):Specification of basic notation".
- [13] X.681, (12/97) "Information Technology - Abstract Syntax Notation One (ASN.1): Information object specification"
- [14] 3GPP TS 25.104: "UTRA (BS) FDD; Radio Transmission and Reception".
- [15] 3GPP TS 25.105: "UTRA (BS) TDD; Radio Transmission and Reception".
- [16] 3GPP TS25.427: "UTRAN Iur/Iub Interface User Plane Protocol for DCH Data Stream"
- [17] 3GPP TS25.402: "Synchronisation in UTRAN Stage2"
- [18] 3GPP TS25.331: "RRC Protocol Specification"
- [19] 3GPP TS25.221: "Physical channels and mapping of transport channels onto physical channels[TDD]"
- [20] 3GPP TS25.223: "Spreading and modulation (TDD)"

- [21] 3GPP TS25.224: "Physical Layer Procedures (TDD)"
- [22] 3GPP TS 25.133 (V3.3): "Requirements for support of Radio Resource management (FDD)"
- [23] 3GPP TS 25.123 (V3.3): " Requirements for support of Radio Resource management (TDD)"
- [24] 3GPP TS 25.435: "UTRAN Iub Interface: User Plane Protocols for Common Transport Channel Data Streams".
- [25] 3GPP TS 25.302: "Services Provided by the Physical Layer".
- [26] 3GPP TR 25.921: "Guidelines and Principles for Protocol Description and Error Handling".

---

## 3 Definitions, symbols and abbreviations

### 3.1 Definitions

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

**CRNC Communication Context:** The CRNC Communication Context contains the necessary information for the CRNC for communication with a specific UE. The CRNC Communication Context is identified by the CRNC Communication Context ID.

**Elementary Procedure:** The NBAP protocol consists of Elementary Procedures (EPs). An Elementary Procedure is a unit of interaction between the CRNC and the Node B.

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 NBAP is FFS. To be sorted out when discussing the details of the error cases.

**Class 2** EPs are considered always successful.

**Node B Communication Context:** The Node B Communication Context contains the necessary information for the Node B for communication with a specific UE. The Node B Communication Context is created by the Radio Link Setup procedure and deleted by the Radio Link Deletion procedure when deleting the last Radio Link within the Node B Communication Context. The Node B Communication Context is identified by the Node B Communication Context ID.

**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.



## 3.2 Symbols

Void.

## 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                    |
| CCPCH  | Common Control Physical Channel              |
| CFN    | Connection Frame Number                      |
| CM     | Compressed Mode                              |
| CPCH   | Common Packet Channel                        |
| CRNC   | Controlling Radio Network Controller         |
| DCH    | Dedicated Channel                            |
| DL     | Downlink                                     |
| DPCCH  | Dedicated Physical Control Channel           |
| DPCH   | Dedicated Physical Channel                   |
| DPDCH  | Dedicated Physical Data Channel              |
| DSCH   | Downlink Shared Channel                      |
| FDD    | Frequency Division Duplex                    |
| FP     | Frame Protocol                               |
| L1     | Layer 1                                      |
| MIB    | Master Information Block                     |
| L2     | Layer 2                                      |
| NBAP   | Node B Application Part                      |
| O&M    | Operation and Management                     |
| PCPCH  | Physical Common Packet Channel               |
| PDSCH  | Physical Downlink Shared Channel             |
| PUSCH  | Physical Uplink Shared Channel               |
| RL     | Radio Link                                   |
| RLS    | Radio Link Set                               |
| RNC    | Radio Network Controller                     |
| RRC    | Radio Resource Control                       |
| SB     | Scheduling Block                             |
| SIB    | System Information Block                     |
| SRNC   | Serving Radio Network Controller             |
| TDD    | Time Division Duplex                         |
| TFC    | Transport Format Combination                 |
| TFCI   | Transport Format Combination Indicator       |
| TFCS   | Transport Format Combination Set             |
| TFS    | Transport Format Set                         |
| TPC    | Transmit Power Control                       |
| UARFCN | UTRA Absolute Radio Frequency Channel Number |
| UE     | User Equipment                               |
| UL     | Uplink                                       |
| USCH   | Uplink Shared Channel                        |
| UTRAN  | UMTS Terrestrial Radio Access Network        |

## 4 General

### 4.1 Procedure Specification Principles

The principle for specifying the procedure logic is to specify the functional behaviour of the Node B exactly and completely. The CRNC functional behaviour is left unspecified. The Reset procedure is an exception from this principle.

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

- The procedure text discriminates between:

1) Functionality which "shall" be executed

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

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

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

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

### 4.2 Forwards and Backwards Compatibility

The forwards and backwards compatibility of the protocol is assured by a mechanism where all current and future the messages, and IEs or groups of related IEs, include Id and criticality fields that are coded in a standard format that will not be changed in the future. These parts can always be decoded regardless of the standard version.

### 4.3 Specification Notations

For the purposes of the present document, the following notations apply:

|             |  |
|-------------|--|
| [FDD]       | This tagging of a word indicates that the word preceding the tag "[FDD]" applies only to FDD. This tagging of a heading indicates that the heading preceding the tag "[FDD]" and the section following the heading applies only to FDD.                                |
| [TDD]       | This tagging of a word indicates that the word preceding the tag "[TDD]" applies only to TDD. This tagging of a heading indicates that the heading preceding the tag "[TDD]" and the section following the heading applies only to TDD.                                |
| [FDD - ...] | This tagging indicates that the enclosed text following the "[FDD - " applies only to FDD. Multiple sequential paragraphs applying only to FDD are enclosed separately to enable insertion of TDD specific (or common) paragraphs between the FDD specific paragraphs. |
| [TDD - ...] | This tagging indicates that the enclosed text following the "[TDD - " applies only to TDD. Multiple sequential paragraphs applying only to TDD are enclosed separately to enable insertion of FDD specific (or common) paragraphs between the TDD specific paragraphs. |
| Procedure   | When referring to an elementary procedure in the specification the Procedure Name is written with the first letters in each word in upper case characters followed by the word "procedure", e.g. Radio Link Setup procedure.   |

|                |  |
|----------------|--|
| Message        | When referring to a message in the specification the MESSAGE NAME is written with all letters in upper case characters followed by the word "message", e.g. RADIO LINK SETUP REQUEST message.  |
| IE             | When referring to an information element (IE) in the specification the <i>Information Element Name</i> is written with the first letters in each word in upper case characters and all letters in Italic font followed by the abbreviation "IE", e.g. <i>Transport Format Set IE</i> . |
| Value of an IE | When referring to the value of an information element (IE) in the specification the "Value" is written as it is specified in subclause 9.2 enclosed by quotation marks, e.g. "Abstract Syntax Error (Reject)" or "SSDT Active in the UE".  |

---

## 5 NBAP Services

The NBAP offers the following services:

### 5.1 Parallel Transactions

Unless explicitly indicated in the procedure description, at any instance in time one protocol peer shall have initiated maximum one ongoing dedicated NBAP procedure related to a certain Node B communication context.

## 6 Services Expected from Signalling Transport

(void)

---

## 7 Functions of NBAP

The NBAP protocol has the following functions:

- Cell Configuration Management. This function gives the CRNC the possibility to manage the cell configuration information in a Node B.
- Common Transport Channel Management. This function gives the CRNC the possibility to manage the configuration of Common Transport Channels in a Node B.
- System Information Management. This function gives the CRNC the ability to manage the scheduling of System Information to be broadcast in a cell.
- Resource Event Management. This function gives the Node B the ability to inform the CRNC about the status of Node B resources.
- Configuration Alignment. This function gives the CRNC and the Node B the possibility to verify and enforce that both nodes has the same information on the configuration of the radio resources.
- Measurements on Common Resources. This function allows the CRNC to initiate measurements in the Node B. The function also allows the Node B to report the result of the measurements.
- Radio Link Management. This function allows the CRNC to manage radio links using dedicated resources in a Node B.
- Radio Link Supervision. This function allows the CRNC to report failures and restorations of a Radio Link.
- Compressed Mode Control [FDD]. This function allows the CRNC to control the usage of compressed mode in a Node B.
- Measurements on Dedicated Resources. This function allows the CRNC to initiate measurements in the Node B. The function also allows the Node B to report the result of the measurements.

- DL Power Drifting Correction [FDD]. This function allows the CRNC to adjust the DL power level of one or more Radio Links in order to avoid DL power drifting between the Radio Links.
- Reporting of General Error Situations. This function allows reporting of general error situations, for which function specific error messages have not been defined.
- Physical Shared Channel Management [TDD]. This function allows the CRNC to manage physical resources in the Node B belonging to Shared Channels (USCH/DSCH).
- DL Power Timeslot Correction [TDD]. This function enables the Node B to apply an individual offset to the transmission power in each timeslot according to the downlink interference level at the UE.

The mapping between the above functions and NBAP elementary procedures is shown in the table below.

**Table 1: Mapping between functions and NBAP elementary procedures**

| Function                                 | Elementary Procedure(s)   |
|--|---|
| Cell Configuration Management            | a) Cell Setup<br>b) Cell Reconfiguration<br>c) Cell Deletion  |
| Common Transport Channel Management      | a) Common Transport Channel Setup<br>b) Common Transport Channel Reconfiguration<br>c) Common Transport Channel Deletion  |
| System Information Management            | System Information Update   |
| Resource Event Management                | a) Block Resource<br>b) Unblock Resource<br>c) Resource Status Indication   |
| Configuration Alignment                  | a) Audit Required<br>b) Audit<br>c) Reset   |
| Measurements on Common Resources         | a) Common Measurement Initiation<br>b) Common Measurement Reporting<br>c) Common Measurement Termination<br>d) Common Measurement Failure   |
| Radio Link Management.                   | a) RL Setup<br>b) RL Addition<br>c) RL Deletion<br>d) Unsynchronised RL Reconfiguration<br>e) Synchronised RL Reconfiguration Preparation<br>f) Synchronised RL Reconfiguration Commit<br>g) Synchronised RL Reconfiguration Cancellation<br>h) Radio Link Pre-emption                                |
| Radio Link Supervision.                  | a) RL Failure<br>b) RL Restoration  |
| Compressed Mode Control [FDD]            | a) Radio Link Setup<br>b) Radio Link Addition<br>c) Compressed Mode Command<br>d) Unsynchronised Radio Link Reconfiguration<br>e) Synchronised Radio Link Reconfiguration Preparation<br>f) Synchronised Radio Link Reconfiguration Commit<br>g) Synchronised Radio Link Reconfiguration Cancellation |
| Measurements on Dedicated Resources      | a) Dedicated Measurement Initiation<br>b) Dedicated Measurement Reporting<br>c) Dedicated Measurement Termination<br>d) Dedicated Measurement Failure   |
| DL Power Drifting Correction [FDD]       | Downlink Power Control  |
| Reporting of General Error Situations    | Error Indication  |
| Physical Shared Channel Management [TDD] | Physical Shared Channel Reconfiguration   |
| DL Power Timeslot Correction [TDD]       | Downlink Power Timeslot Control   |

---

## 8 NBAP Procedures

### 8.1 Elementary Procedures

NBAP procedures are divided into common procedures and dedicated procedures.

- NBAP common procedures are procedures that request initiation of a UE context for a specific UE in Node B or are not related to a specific UE. NBAP common procedures also incorporate logical O&M [1] procedures.
- NBAP dedicated procedures are procedures that are related to a specific UE context in Node B. This UE context is identified by a UE context identity.

The two types of procedures may be carried on separate signalling links.

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

Table 1: Class 1

| Elementary Procedure                                | Message  | Successful Outcome                                | Unsuccessful Outcome                             |       |
|---|--|---|--|-------|
|   |  | Response message                                  | Response message                                 | Timer |
| Cell Setup  | CELL SETUP REQUEST                               | CELL SETUP RESPONSE                               | CELL SETUP FAILURE                               |       |
| Cell Reconfiguration                                | CELL RECONFIGURATION REQUEST                     | CELL RECONFIGURATION RESPONSE                     | CELL RECONFIGURATION FAILURE                     |       |
| Cell Deletion                                       | CELL DELETION REQUEST                            | CELL DELETION RESPONSE                            |  |       |
| Common Transport Channel Setup                      | COMMON TRANSPORT CHANNEL SETUP REQUEST           | COMMON TRANSPORT CHANNEL SETUP RESPONSE           | COMMON TRANSPORT CHANNEL SETUP FAILURE           |       |
| Common Transport Channel Reconfiguration            | COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST | COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE | COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE |       |
| Common Transport Channel Deletion                   | COMMON TRANSPORT CHANNEL DELETION REQUEST        | COMMON TRANSPORT CHANNEL DELETION RESPONSE        |  |       |
| Physical Shared Channel Reconfigure [TDD]           | PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST  | PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE  | PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE  |       |
| Audit   | AUDIT REQUEST                                    | AUDIT RESPONSE                                    | AUDIT FAILURE                                    |       |
| Block Resource                                      | BLOCK RESOURCE REQUEST                           | BLOCK RESOURCE RESPONSE                           | BLOCK RESOURCE FAILURE                           |       |
| Radio Link Setup                                    | RADIO LINK SETUP REQUEST                         | RADIO LINK SETUP RESPONSE                         | RADIO LINK SETUP FAILURE                         |       |
| System Information Update                           | SYSTEM INFORMATION UPDATE REQUEST                | SYSTEM INFORMATION UPDATE RESPONSE                | SYSTEM INFORMATION UPDATE FAILURE                |       |
| Common Measurement Initiation                       | COMMON MEASUREMENT INITIATION REQUEST            | COMMON MEASUREMENT INITIATION RESPONSE            | COMMON MEASUREMENT INITIATION FAILURE            |       |
| Radio Link Addition                                 | RADIO LINK ADDITION REQUEST                      | RADIO LINK ADDITION RESPONSE                      | RADIO LINK ADDITION FAILURE                      |       |
| Radio Link Deletion                                 | RADIO LINK DELETION REQUEST                      | RADIO LINK DELETION RESPONSE                      |  |       |
| Synchronised Radio Link Reconfiguration Preparation | RADIO LINK RECONFIGURATION PREPARE               | RADIO LINK RECONFIGURATION READY                  | RADIO LINK RECONFIGURATION FAILURE               |       |
| Unsynchronised Radio Link Reconfiguration           | RADIO LINK RECONFIGURATION REQUEST               | RADIO LINK RECONFIGURATION RESPONSE               | RADIO LINK RECONFIGURATION FAILURE               |       |
| Dedicated Measurement Initiation                    | DEDICATED MEASUREMENT INITIATION REQUEST         | DEDICATED MEASUREMENT INITIATION RESPONSE         | DEDICATED MEASUREMENT INITIATION FAILURE         |       |
| Reset   | RESET REQUEST                                    | RESET RESPONSE                                    |  |       |

**Table 2: Class 2**

| Elementary Procedure                                 | Message                                   |
|--|---|
| Resource Status Indication                           | RESOURCE STATUS INDICATION                |
| Audit Required                                       | AUDIT REQUIRED INDICATION                 |
| Common Measurement Reporting                         | COMMON MEASUREMENT REPORT                 |
| Common Measurement Termination                       | COMMON MEASUREMENT TERMINATION REQUEST    |
| Common Measurement Failure                           | COMMON MEASUREMENT FAILURE INDICATION     |
| Synchronised Radio Link Reconfiguration Commit       | RADIO LINK RECONFIGURATION COMMIT         |
| Synchronised Radio Link Reconfiguration Cancellation | RADIO LINK RECONFIGURATION CANCELLATION   |
| Radio Link Failure                                   | RADIO LINK FAILURE INDICATION             |
| Radio Link Restoration                               | RADIO LINK RESTORE INDICATION             |
| Dedicated Measurement Reporting                      | DEDICATED MEASUREMENT REPORT              |
| Dedicated Measurement Termination                    | DEDICATED MEASUREMENT TERMINATION REQUEST |
| Dedicated Measurement Failure                        | DEDICATED MEASUREMENT FAILURE INDICATION  |
| Downlink Power Control [FDD]                         | DL POWER CONTROL REQUEST                  |
| Compressed Mode Command [FDD]                        | COMPRESSED MODE COMMAND                   |
| Unblock Resource                                     | UNBLOCK RESOURCE INDICATION               |
| Error Indication                                     | ERROR INDICATION                          |
| Downlink Power Timeslot Control [TDD]                | DL POWER TIMESLOT CONTROL REQUEST         |
| Radio Link Pre-emption                               | RADIO LINK PREEMPTION REQUIRED INDICATION |

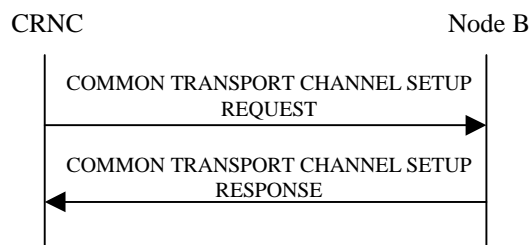
## 8.2 NBAP Common Procedures

### 8.2.1 Common Transport Channel Setup

#### 8.2.1.1 General

This procedure is used for establishing the necessary resources in Node B, regarding Secondary CCPCH, PICH, PRACH, PCPCH[FDD], AICH [FDD], AP\_AICH[FDD], CD/CA-ICH[FDD], FACH, PCH, RACH and CPCH[FDD].

#### 8.2.1.2 Successful Operation



**Figure 1: Common Transport Channel Setup procedure, Successful Operation**

The procedure is initiated with a COMMON TRANSPORT CHANNEL SETUP REQUEST message sent from the CRNC to the Node B.

One message can configure only one of the following combinations:

- [FDD-one Secondary CCPCH, and FACHes, PCH and PICH related to that Secondary CCPCH], or
- [TDD- Secondary CCPCHes and FACHes, PCH with the corresponding PICH related to that group of Secondary CCPCHes], or
- one PRACH, and one RACH and one AICH(FDD) related to that PRACH at the time.
- [FDD-PCPCHes, one CPCH, one AP\_AICH and one CD/CA-ICH related to that group of PCPCHes at the time.]

**Secondary CCPCH:**

[FDD - When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a Secondary CCPCH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message. The handling of the optional *STTD* IE is FFS.]

[TDD - When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains one or more Secondary CCPCHs, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.]

[TDD- FACHs and PCH may be mapped onto a CCTrCH which may consist of several Secondary CCPCHs]

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains one or several FACHs, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a PCH and a PICH, the Node B shall configure and activate them according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message. [FDD- The handling of the optional *STTD* IE for PICH is FFS.]

**PRACH:**

When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains a PRACH, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

**[FDD-PCPCHes]:**

When the COMMON TRANSPORT CHANNEL SETUP REQUEST message contains PCPCHes, the Node B shall configure and activate it according to the COMMON TRANSPORT CHANNEL SETUP REQUEST message.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *CD Signatures* IE, the Node B may use only the given CD signatures on CD/CA-ICH.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes Channel Request Parameters IE group, the Node B shall use the parameters to distinguish the PCPCHs.

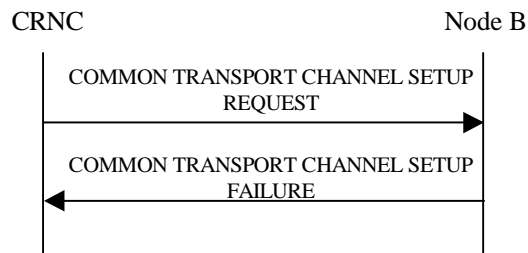
If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *AP Sub Channel Number* IE in Channel Request Parameters IE group, the Node B shall use AP sub channel number to distinguish the PCPCHs.

If the COMMON TRANSPORT CHANNEL SETUP REQUEST message includes *AP Sub Channel Number* IE in SF Request Parameters IE group, the Node B shall use AP sub channel number to distinguish the requested Spreading Factors.

After a successful procedure, the defined common transport channels and the common physical channels shall adopt the state Enabled [6] in Node B and the common transport channels exist on the Uu interface. The Node B shall store the value of *Configuration Generation ID* IE and it shall respond with the COMMON TRANSPORT CHANNEL SETUP RESPONSE message with the *Common Transport Channel ID* IE, the *Binding ID* IE and the *Transport Layer address* IE for the configured common transport channels.



### 8.2.1.3 Unsuccessful Operation



**Figure 2: Common Transport Channel Setup procedure, Unsuccessful Operation**

If the state already is Enabled or Disabled [6] for at least one channel in the COMMON TRANSPORT CHANNEL SETUP REQUEST message is received, the Node B shall reject the configuration of all channels with the *Cause* IE set to "Message not compatible with receiver state".

If the Node B is not able to support all part of the configuration, it shall reject the configuration of all the channels in the COMMON TRANSPORT CHANNEL SETUP REQUEST message. The channels in the COMMON TRANSPORT CHANNEL SETUP REQUEST message shall remain in the same state as prior to the procedure. The *Cause* IE shall be set to an appropriate value. The value of *Configuration Generation ID* IE from the COMMON TRANSPORT CHANNEL SETUP REQUEST message shall not be stored.

If the configuration was unsuccessful, the Node B shall respond with a COMMON TRANSPORT CHANNEL SETUP FAILURE message.

Typical cause values are as follows:

#### Radio Network Layer Cause

- Cell not available
- Unknown C-ID
- Power level not supported
- Node B Resources unavailable
- Requested Tx Diversity Mode not supported
- UL SF not supported
- DL SF not supported
- Common Transport Channel Type not supported

#### Transport Layer Cause

- Transport Resources Unavailable

#### Protocol Cause

- Semantic error
- Message not compatible with receiver state

#### Miscellaneous Cause

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

### 8.2.1.4 Abnormal Conditions

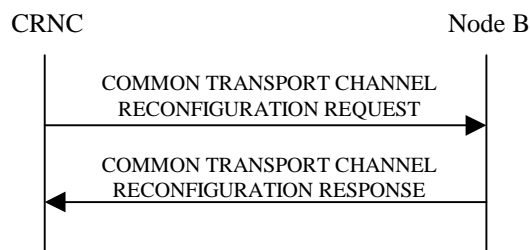
-

## 8.2.2 Common Transport Channel Reconfiguration

### 8.2.2.1 General

This procedure is used for reconfiguring common transport channels and/or common physical channels, while they still might be in operation.

### 8.2.2.2 Successful Operation



**Figure 3: Common Transport Channel Reconfiguration, Successful Operation**

The procedure is initiated with a COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message sent from the CRNC to the Node B.

One message can configure only one of the following combinations:

- [FDD- FACHes, one PCH and/or one PICH related to one Secondary CCPCH], or
- [TDD- Secondary CCPCHes and FACHes, PCH with the corresponding PICH related to that group of Secondary CCPCHes], or
- one RACH and/or one AICH(FDD) related to one PRACH, or
- [FDD- one CPCH and/or one AP-AICH and/or one CD/CA-ICH related to one CPCH

at the time.

**[TDD S-CCPCH:** If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *S-CCPCH Power* IE, the Node B shall reconfigure the power that the indicated S-CCPCH shall use.]

**FACH:** When one or several FACHs are present Node B reconfigures the indicated FACHs.

[FDD - If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *Max FACH Power* IE, the Node B shall reconfigure the maximum power that the FACH may use.]

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWS* IE, the Node B shall reconfigure the time of arrival window startpoint that the FACH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWE* IE, the Node B shall reconfigure the time of arrival window endpoint that the FACH shall use.

**PCH:** When the PCH is present Node B reconfigures the indicated PCH.

[FDD - If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *PCH Power* IE, the Node B shall reconfigure the power that the PCH shall use.]

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWS* IE, the Node B shall reconfigure the time of arrival window startpoint that the PCH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *ToAWE* IE, the Node B shall reconfigure the time of arrival window endpoint that the PCH shall use.

**PICH:** When a PICH is present Node B reconfigures the indicated PICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *PICH Power* IE, the Node B shall reconfigure the power that the PICH shall use.

**[FDD- PRACH]:** When a PRACH is present Node B reconfigures the indicated PRACH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the Allowed Preamble Signatures Information, the Node B shall reconfigure the preamble signatures that the PRACH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the Allowed Slot Format Information, the Node B shall reconfigure the slot formats that the PRACH shall use.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the Allowed Sub Channel Information, the Node B shall reconfigure the sub channel numbers that the PRACH shall use.

**[FDD- AICH]:** When a AICH is present Node B reconfigures the indicated AICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *AICH Power* IE, the Node B shall reconfigure the power that the AICH shall use.

**[FDD- CPCH]:** When a CPCH is present Node B reconfigures the indicated CPCH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes UL SIR Information, the Node B shall reconfigure the UL SIR for the UL power control for the CPCH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes Initial DL transmission Power Information, the Node B shall reconfigure the Initial DL transmission Power for the CPCH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes Maximum DL Power Information, the Node B shall apply this value to the new configuration and never transmit with a higher power on any DL PCPCHes once the new configuration is being used.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes Minimum DL Power Information, the Node B shall apply this value to the new configuration and never transmit with a lower power on any DL PCPCHes once the new configuration is being used.

**[FDD- AP-AICH]:** When a AP-AICH is present Node B reconfigures the indicated AP-AICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *AP-AICH Power* IE, the Node B shall reconfigure the power that the AP-AICH shall use.

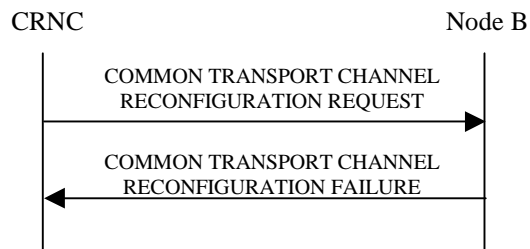
If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *CSICH Power* IE, the Node B shall reconfigure the power that the CSICH shall use.

**[FDD-CD/CA-ICH]:**When a CD/CA-ICH is present Node B reconfigures the indicated CD/CA-ICH.

If the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message includes the *CD/CA-AICH Power* IE, the Node B shall reconfigure the power that the CD/CA-AICH shall use.

After a successful procedure, the channels have adopted the new configuration in Node B. The channels in the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message shall remain in the same state as prior to the procedure. Node B shall store the value of *Configuration Generation ID* IE, and the Node B shall respond with the COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE message.

### 8.2.2.3 Unsuccessful Operation



**Figure 4: Common Transport Channel Reconfiguration procedure, Unsuccessful Operation**

If the Node B is not able to support all parts of the configuration, it shall reject the configuration of all the channels in the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message. The channels in the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message shall remain in the same state as prior to the procedure. The *Cause* IE shall be set to an appropriate value. The value of *Configuration Generation ID* IE from the COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST message shall not be stored.

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

Typical cause values are as follows:

#### Radio Network Layer Cause

- Cell not available
- Unknown C-ID
- Power level not supported
- Node B Resources unavailable

#### Transport Layer Cause

- Transport Resources Unavailable

#### Protocol Cause

- Semantic error

#### Miscellaneous Cause

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

### 8.2.2.4 Abnormal Conditions

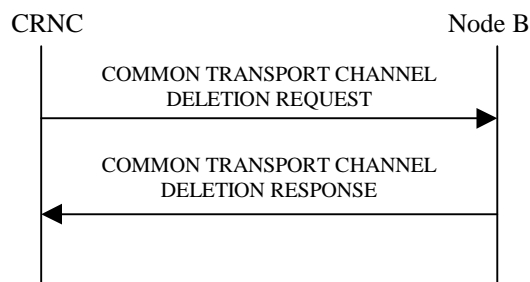
-

## 8.2.3 Common Transport Channel Deletion

### 8.2.3.1 General

This procedure is used for deleting common physical channels and common transport channels setup by the Common Transport Channel Setup procedure in a cell.

### 8.2.3.2 Successful Operation



**Figure 5: Common Transport Channel Deletion procedure, Successful Operation**

The procedure is initiated with a COMMON TRANSPORT CHANNEL DELETION REQUEST message sent from the CRNC to the Node B.

- Secondary CCPCH:** When the COMMON TRANSPORT CHANNEL DELETION REQUEST message contains a Secondary CCPCH, Node B shall delete the indicated channel and the FACHes and PCH supported by that Secondary CCPCH. If there is a PCH that is deleted, the PICH associated with that PCH shall also be deleted.
- PRACH:** When the COMMON TRANSPORT CHANNEL DELETION REQUEST message contains a PRACH, Node B shall delete the indicated channel and the RACH supported by the PRACH. [FDD- The AICH associated with the PCH shall also be deleted.]
- [FDD – PCPCHes]:** When the COMMON TRANSPORT CHANNEL DELETION REQUEST message contains one of PCPCHes for a CPCH, Node B shall delete all PCPCHes associated with the indicated channel and the CPCH supported by the PCPCHes. The AP-AICH and CD/CA-ICH associated with the PCH shall also be deleted.]
- [TDD- If the requested common physical channel is a part of a CCTrCH, all common transport channels and all common physical channels associated with this CCTrCH shall be deleted.]

After a successful procedure, the channels are deleted in Node B. The channels in the COMMON TRANSPORT CHANNEL DELETION REQUEST message shall be set to state Not Existing [6]. Node B shall store the new value of the *Configuration Generation ID* IE, and respond with the COMMON TRANSPORT CHANNEL DELETION RESPONSE message.

### 8.2.3.3 Unsuccessful Operation

-

### 8.2.3.4 Abnormal Conditions

If the C-ID in the COMMON TRANSPORT CHANNEL DELETION REQUEST message is not existing in the Node B or the Common Physical Channel ID does not exist in the Cell, the Node B shall respond with the COMMON TRANSPORT CHANNEL DELETION RESPONSE message.

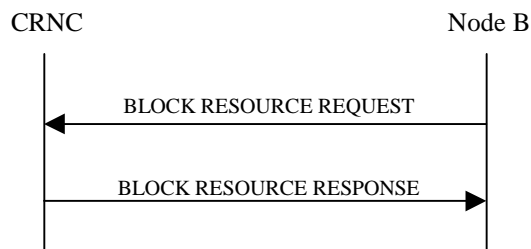
## 8.2.4 Block Resource

### 8.2.4.1 General

The Node B initiates this procedure to request the CRNC to prohibit the usage of the specified logical resources.

The logical resource that can be blocked is cell.

### 8.2.4.2 Successful Operation



**Figure 6: Block Resource procedure, Successful Operation**

The procedure is initiated with a BLOCK RESOURCE REQUEST message sent from the Node B to the CRNC.

Upon reception of the BLOCK RESOURCE REQUEST message, the CRNC shall prohibit the use of the indicated logical resources according to the *Blocking Priority Indicator IE*.

If the *Blocking Priority Indicator IE* in the BLOCK RESOURCE REQUEST message indicates 'High Priority', the CRNC shall prohibit the use of the logical resources immediately.

The BLOCK RESOURCE REQUEST message shall include the *Shutdown Timer IE* when the *Blocking Priority Indicator IE* indicates 'Normal Priority'. The CRNC shall prohibit the use of the logical resources if the resources are idle or immediately upon expiry of the shutdown timer specified in the message. New traffic shall not be allowed to use the logical resources while the CRNC waits for the resources to become idle and once the resources are blocked.

If the *Blocking Priority Indicator IE* in the BLOCK RESOURCE REQUEST message indicates 'Low Priority', the CRNC shall prohibit the use of the logical resources when the resources become idle. New traffic shall not be allowed to use the logical resources while the CRNC waits for the resources to become idle and once the resources are blocked.

If the resources are successfully blocked, the CRNC shall respond with a BLOCK RESOURCE RESPONSE message. Upon reception of the BLOCK RESOURCE RESPONSE message, the Node B may disable [TDD - SCH], [FDD - the Primary SCH, the Secondary SCH, the Primary CPICH, if present the Secondary CPICH(s)] and the Primary CCPCH. The other logical resources in the cell shall be considered as blocked.

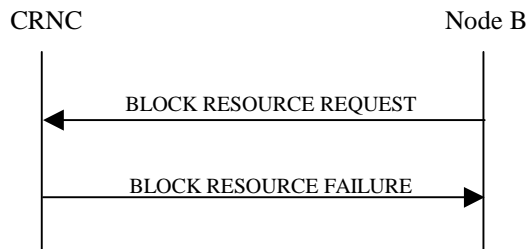
Reconfiguration of logical resources and change of System Information can be done, even when the logical resources are blocked.

#### **Interactions with the Unblock Resource procedure:**

If the UNBLOCK RESOURCE INDICATION message is received by the CRNC while a Block Resource procedure on the same logical resources is in progress, the CRNC shall cancel the Block Resource procedure and proceed with the Unblock Resource procedure.

If the BLOCK RESOURCE RESPONSE message or the BLOCK RESOURCE FAILURE message is received by the Node B after the Node B has initiated an Unblock Resource procedure on the same logical resources as the ongoing Block Resource procedure, the Node B shall ignore the response to the Block Resource procedure.

### 8.2.4.3 Unsuccessful Operation



**Figure 7: Block Resource procedure, Unsuccessful Operation**

The CRNC may reject the request to block the logical resources, in which case the logical resources will remain unaffected and the CRNC shall respond to the Node B with the BLOCK RESOURCE FAILURE message. Upon reception of the BLOCK RESOURCE FAILURE message, the Node B shall leave the logical resources in the state that they were in prior to the start of the Block Resource procedure.

Typical cause values are as follows:

#### Protocol Cause

- Semantic error

#### Miscellaneous Cause

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

#### Radio Network Layer Cause

- Priority transport channel established

### 8.2.4.4 Abnormal Conditions

-

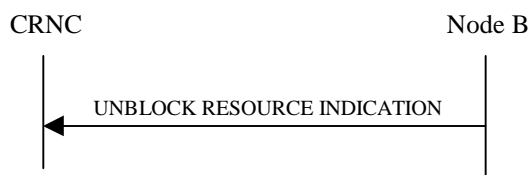
## 8.2.5 Unblock Resource

### 8.2.5.1 General

The Node B initiates this procedure to indicate to the CRNC that logical resources are now unblocked.

The logical resource that can be unblocked is cell.

### 8.2.5.2 Successful Operation



**Figure 8: Unblock Resource procedure, Successful Operation**

The procedure is initiated with an UNBLOCK RESOURCE INDICATION message sent from the Node B to the CRNC. Node B shall enable [TDD - SCH], [FDD - the Primary SCH, the Secondary SCH, the Primary CPICH, the Secondary CPICH(s) (if present)] and the Primary CCPCH that had been disabled due to the preceding Block Resource procedure before sending the UNBLOCK RESOURCE INDICATION message. Upon reception of the UNBLOCK RESOURCE INDICATION message, the CRNC may permit the use of the logical resources.

When the logical resource indicated is a cell, all associated physical channels and transport channels are unblocked.

### 8.2.5.3 Abnormal Conditions

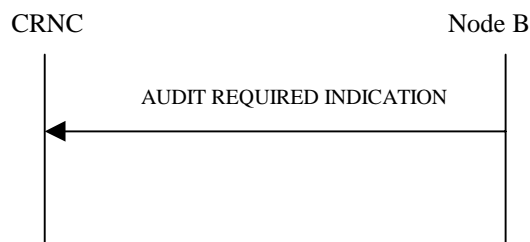
-

## 8.2.6 Audit Required

### 8.2.6.1 General

The Node B initiates this procedure to request the CRNC to perform an audit of the logical resources at the Node B. This procedure is used to indicate a possible misalignment of state or configuration information

### 8.2.6.2 Successful Operation



**Figure 9: Audit Required procedure, Successful Operation**

The procedure is initiated with an AUDIT REQUIRED INDICATION message sent from the Node B to the CRNC.

If the Node B cannot ensure alignment of the state or configuration information, it should initiate the Audit required indication procedure.

Upon receipt of the AUDIT REQUIRED INDICATION message, the CRNC should initiate the Audit procedure.

### 8.2.6.3 Abnormal Conditions

-

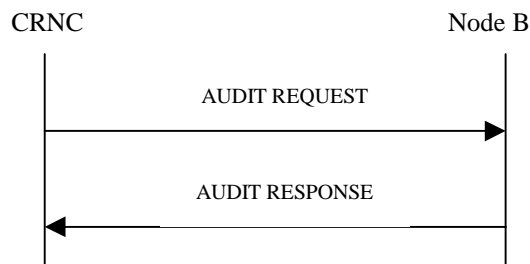
## 8.2.7 Audit

### 8.2.7.1 General

This procedure is executed by the CRNC to perform an audit of the configuration and status of the logical resources in the Node B. A complete audit of a Node B is performed by one or more Audit procedures, together performing an audit sequence. The audit may cause the CRNC to re-sync the Node B to the status of logical resources known by the CRNC, that the Node B can support.



### 8.2.7.2 Successful Operation



**Figure 10: Audit procedure, Successful Operation**

The procedure is initiated with an AUDIT REQUEST message sent from the CRNC to the Node B.

If the *Start of Audit Sequence* IE in the AUDIT REQUEST message is set to "start of audit sequence" a new audit sequence is started, any ongoing audit sequence shall be aborted and the Node B shall provide (part of the) audit information. If the *Start of Audit Sequence* IE is set to "not start of audit sequence", the Node B shall provide (part of) the remaining audit information not already provided during this audit sequence.

If the information provided in the AUDIT RESPONSE message completes the audit sequence, the Node B shall set the *End Of AuditSequence Indicator* IE in the AUDIT RESPONSE message to "End of Audit Sequence". If not all audit information has been provided yet as part of the ongoing audit sequence, the Node B shall set the *End Of AuditSequence Indicator* IE in the AUDIT RESPONSE message to "Not End of Audit Sequence".

#### Information Provided In One Audit Sequence.

The Node B shall include one *Local Cell Information* IE group for each local cell present in the Node B. The Node B shall include the *Maximum DL Power Capability* IE and the *Minimum DL Power Capability* IE when any of those values are known by the Node B.

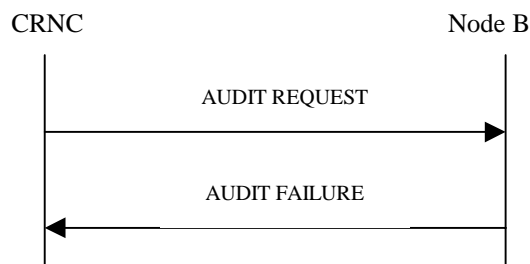
If Node B internal resources are pooled for a group of cells, the Node B shall include one *Local Cell Group Information* IE containing Node B internal resource capacity and consumption laws per group of cells. If the "UL Capacity Credit" IE is not present, then the internal resource capabilities of the Node B are modelled as shared resources between Uplink and Downlink.

The Node B shall include for each local cell present in the node B the Node B internal resource capability and consumption laws within the "Local Cell Information IE group". If the "UL Capacity Credit" IE is not present, then the internal resource capabilities of the local cell are modelled as shared resources between Uplink and Downlink. If the Local Cell utilises Node B internal resource capabilities that are pooled for several Local Cell(s), the *Local Cell Group ID* IE shall contain the identity of the used Local Cell Group.

The Node B shall include one *Cell Information* IE group for each cell in the Node B and information about all common transport channels and all common physical channels for each cell. If a *Configuration Generation ID* IE for a cell can not be trusted, the Node B shall set this *Configuration Generation ID* IE = '0'.

The Node B shall also include one *Communication Control Port Information* IE group for each communication control port in the Node B.

### 8.2.7.3 Unsuccessful Operation



**Figure 10A: Audit procedure, Unsuccessful Operation**

If the Node B receives the AUDIT REQUEST message with the *Start of Audit Sequence* IE set to "not start of audit sequence" and there is no ongoing audit sequence, the Node B shall send the AUDIT FAILURE message with the appropriate cause value.

Typical cause values for the AUDIT FAILURE message are:

**Protocol Causes:**

- Message not Compatible with Receiver State

### 8.2.7.4 Abnormal Conditions

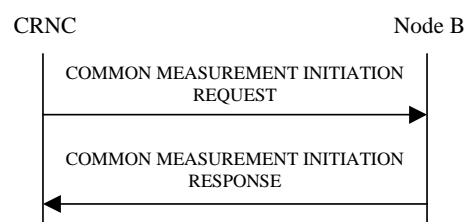
-

## 8.2.8 Common Measurement Initiation

### 8.2.8.1 General

This procedure is used by a CRNC to request the initiation of measurements on common resources in a Node B.

### 8.2.8.2 Successful Operation



**Figure 11: Common Measurement Initiation procedure: Successful Operation**

The procedure is initiated with a COMMON MEASUREMENT INITIATION REQUEST message sent from the CRNC to the Node B using the Node B control port.

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

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

[FDD- If the Spreading Factor Information is provided in the *Common Measurement Object Type* IE, measurement request shall apply to the PCPCHes whose minimum allowed spreading factor (Min UL Channelisation Code Length) is equal to the value of Spreading Factor Information.

If the *SFN Reporting Indicator* IE is set to "FN Reporting Required", the *SFN* IE shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. The reported SFN shall be the SFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [25].

If the *SFN* IE is provided, it indicates the frame for which the first measurement shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25].

#### **Report characteristics**

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

If the *Report Characteristics* IE is set to 'On-Demand', the Node B shall report the result of the requested measurement immediately.

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

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

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

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

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

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

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

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

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 Node B shall initiate a Measurement Reporting procedure immediately, and then continue with the measurements as specified in the COMMON MEASUREMENT INITIATION REQUEST message.

#### **Higher layer filtering**

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

The averaging shall be performed according to the following formula.

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

The variables in the formula are defined as follows

$F_n$  is the updated filtered measurement result

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

$M_n$  is the latest received measurement result from physical layer measurements

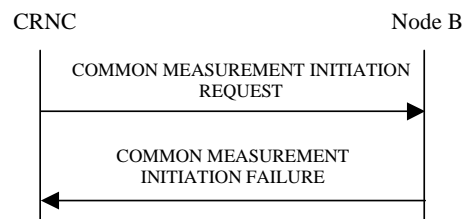
$a = 1/2^{(k/2)}$  -, where k is the parameter received in the *Measurement Filter Coefficient* IE. If the *Measurement Filter Coefficient* IE is not present, a shall be set to 1 (no filtering)

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

### Response message

If the Node B was able to initiate the measurement requested by the CRNC it shall respond with the COMMON MEASUREMENT INITIATION RESPONSE message sent over the Node B control port. The message shall include the same Measurement ID that was used in the measurement request. Only in the case when the *Report Characteristics* IE is set to "On-Demand", the COMMON MEASUREMENT INITIATION RESPONSE message shall contain the measurement result.

### 8.2.8.3 Unsuccessful Operation



**Figure 12: Common Measurement Initiation procedure: Unsuccessful Operation**

If the Common Measurement Type received in the *Common Measurement Type* IE is not defined in ref. [4] or [5] to be measured on the Common Measurement Object Type received in the *Common Measurement Object Type* IE in the COMMON MEASUREMENT INITIATION REQUEST message the Node B shall regard the Common Measurement Initiation procedure as failed.

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

Typical cause values are as follows:

#### Radio Network Layer Cause

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

### 8.2.8.4 Abnormal Conditions

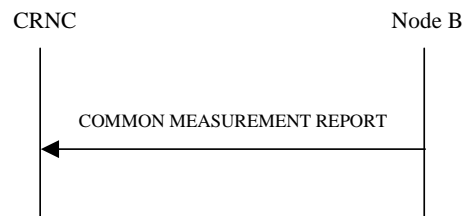
-

## 8.2.9 Common Measurement Reporting

### 8.2.9.1 General

This procedure is used by a Node B to report the result of measurements requested by the CRNC with the Common Measurement Initiation procedure.

### 8.2.9.2 Successful Operation



**Figure 13: Common Measurement Reporting procedure: Successful Operation**

If the requested measurement reporting criteria are met, the Node B shall initiate a Measurement Reporting procedure. The COMMON MEASUREMENT REPORT message shall use the Node B control port. Unless specified below, the meaning of the parameters are given in other specifications.

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

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

### 8.2.9.3 Abnormal Conditions

-

## 8.2.10 Common Measurement Termination

### 8.2.10.1 General

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

### 8.2.10.2 Successful Operation



**Figure 14: Common Measurement Termination procedure: Successful Operation**

This procedure is initiated with a COMMON MEASUREMENT TERMINATION REQUEST message, sent from the CRNC to the Node B using the Node B control port.

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

### 8.2.10.3 Abnormal Conditions

-

## 8.2.11 Common Measurement Failure

### 8.2.11.1 General

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

### 8.2.11.2 Successful Operation



**Figure 15: Common Measurement Failure procedure: Successful Operation**

This procedure is initiated with a COMMON MEASUREMENT FAILURE INDICATION message, sent from the Node B to the CRNC using the Node B control port, to inform the CRNC that a previously requested measurement can no longer be reported. The Node B has locally terminated the indicated measurement.

### 8.2.11.3 Abnormal Conditions

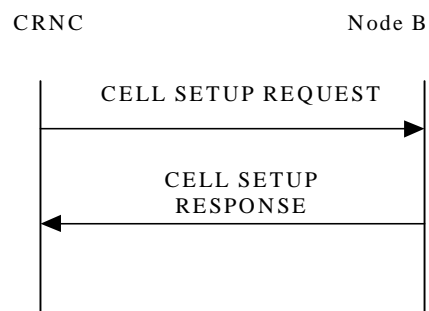
-

## 8.2.12 Cell Setup

### 8.2.12.1 General

This procedure is used to set up a cell in Node B. The CRNC takes the cell, identified via the *C-ID* IE, into service and uses the resources in Node B identified via the *Local Cell ID* IE.

### 8.2.12.2 Successful Operation



**Figure 16: Cell Setup procedure: Successful Operation**

The procedure is initiated with a CELL SETUP REQUEST message sent from CRNC to Node B. Upon Reception, the Node B shall reserve the necessary resources and configure the new cell according to the parameters given in the message.

[FDD - If the CELL SETUP REQUEST message includes one or more *Secondary CPICH Information* IE group the Node B shall configure and activate the Secondary CPICH(s) in the cell according to received configuration data.]

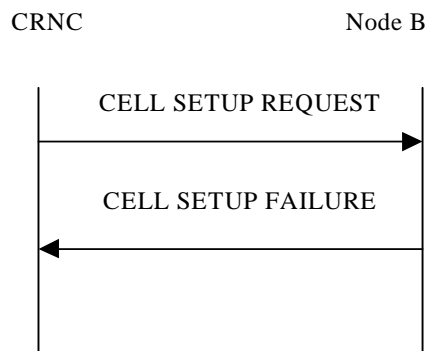
The *Maximum Transmission Power* IE value shall be stored in the Node B and at any instance of time the total maximum output power in the cell shall not be above this value.

[FDD - If the *Closed Loop Timing Adjustment Mode* IE is included in the CELL SETUP REQUEST message, the value shall be stored in the Node B and applied when closed loop Feed-Back mode diversity is used on DPCH.]

When the cell is successfully configured the Node B shall store the *Configuration Generation ID* IE value and send a CELL SETUP RESPONSE message as a response.

[FDD- When the cell is successfully configured CPICH(s), Primary SCH, Secondary SCH, Primary CCPCH and BCH exist.][TDD- When the cell is successfully configured SCH, Primary CCPCH and BCH exist and the switching-points for the TDD frame structure are defined.] The cell and the channels shall be set to state Enabled [6].

### 8.2.12.3 Unsuccessful Operation



**Figure 17: Cell Setup procedure: Unsuccessful Operation**

If the state of the cell already is Enabled or Disabled [6] when the CELL SETUP REQUEST message is received in Node B, it shall reject the configuration of the cell and all channels in the CELL SETUP REQUEST message with the *Cause* IE set to "Message not compatible with receiver state".

If the Node B cannot set up the cell according to the information given in CELL SETUP REQUEST message the CELL SETUP FAILURE message shall be sent to CRNC.

In this case the cell is Non Existing in Node B. The Configuration Generation ID shall not be changed in Node B.

The *Cause* IE shall be set to an appropriate value.

Typical cause values are as follows:

#### Radio Network Layer Cause

- S-CPICH not supported
- Requested Tx Diversity Mode not supported
- Unknown Local Cell ID
- Power level not supported
- Node B Resources unavailable

#### Protocol Cause

- Semantic error

#### Miscellaneous Cause

- O&M Intervention
- Unspecified

- Control processing overload
- HW failure

#### 8.2.12.4 Abnormal Conditions

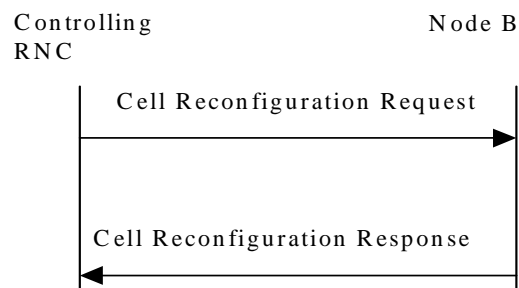
-

### 8.2.13 Cell Reconfiguration

#### 8.2.13.1 General

This procedure is used to reconfigure a cell in Node B.

#### 8.2.13.2 Successful Operation



**Figure 18: Cell Reconfiguration procedure: Successful Operation**

The procedure is initiated with a CELL RECONFIGURATION REQUEST message sent from CRNC to Node B. Upon Reception, the Node B shall reconfigure the cell according to the parameters given in the message.

[FDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary SCH Information* IE group the Node B shall reconfigure Primary SCH power in the cell according to *Primary SCH Power* IE value.]

[FDD - If the CELL RECONFIGURATION REQUEST message includes the *Secondary SCH Information* IE group the Node B shall reconfigure Secondary SCH power in the cell according to the *Secondary SCH Power* IE value.]

[FDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary CPICH Information* IE group the Node B shall reconfigure Primary CPICH power in the cell according to the *Primary CPICH Power* IE value. Node B shall adjust all the transmitted power levels relative to the Primary CPICH power according to the new value]

[FDD - If the CELL RECONFIGURATION REQUEST message includes one or more *Secondary CPICH Information* IE groups the Node B shall reconfigure the power for each Secondary CPICH in the cell according to their *Secondary CPICH Power* IE value.]

[TDD - If the CELL RECONFIGURATION REQUEST message includes the *SCH Information* IE group the Node B shall reconfigure SCH power in the cell according to the *SCH Power* IE value.]

[TDD - If the CELL RECONFIGURATION REQUEST message includes the *Timing Advance Applied* IE the Node B shall apply the necessary functions for Timing Advance in that cell including reporting of the Rx Timing Deviation measurement, according to the *Timing Advance Applied* IE value.]

[FDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary CCPCH Information* IE group the Node B shall reconfigure BCH power in the cell according to the *BCH Power* IE value.]

[TDD - If the CELL RECONFIGURATION REQUEST message includes the *Primary CCPCH Information* IE group the Node B shall reconfigure P-CCPCH power in the cell according to the *P-CCPCH Power* IE value. Node B shall adjust all the transmitted power levels relative to the Primary CPPCH power according to the new value.]



If the CELL RECONFIGURATION REQUEST message includes the *Maximum Transmission Power* IE the value shall be stored in the Node B and at any instance of time the total maximum output power in the cell shall not be above this value.

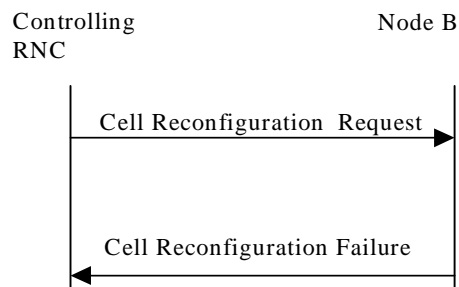
[TDD - If the CELL RECONFIGURATION REQUEST message includes the *Timeslot Information* IE group the Node B shall reconfigure switching-point structure in the cell according to the *Timeslot* IE value.]

[TDD - If the CELL RECONFIGURATION REQUEST message includes any of the *Constant Value* IE's, the Node B shall use these values when generating the appropriate SIB.]

When the cell is successfully reconfigured the Node B shall store the new *Configuration Generation ID* IE value and send a CELL RECONFIGURATION RESPONSE message as a response.

If the CELL RECONFIGURATION REQUEST message includes the *Synchronisation Configuration IE* the Node B shall reconfigure the indicated parameters in the cell according to the IE value. When the parameters in the *Synchronisation Configuration IE* group affect the thresholds applied to a RL set, the Node B shall immediately apply the new thresholds. When applying the new thresholds the Node B shall not change the state or value of any of the timers and counters for which the new thresholds apply.

### 8.2.13.3 Unsuccessful Operation



**Figure 19: Cell Reconfiguration procedure: Unsuccessful Operation**

If the Node B cannot reconfigure the cell according to the information given in CELL RECONFIGURATION REQUEST message the CELL RECONFIGURATION FAILURE message shall be sent to CRNC.

In this case, the Node B shall keep the old configuration of the cell and the Configuration Generation ID shall not be changed in Node B.

The Cause IE shall be set to an appropriate value.

Typical cause values are as follows:

#### Radio Network Layer Cause

- Unknown C-ID
- Power level not supported
- Node B Resources unavailable

#### Protocol Cause

- Semantic error

#### Miscellaneous Cause

- O&M Intervention
- Unspecified

- Control processing overload
- HW failure

#### 8.2.13.4 Abnormal Conditions

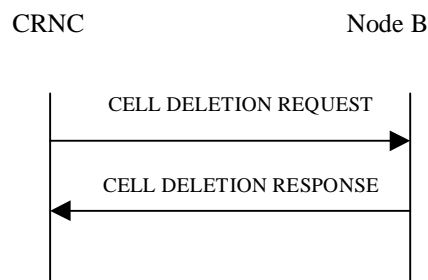
-

### 8.2.14 Cell Deletion

#### 8.2.14.1 General

This procedure is used to delete a cell in Node B.

#### 8.2.14.2 Successful Operation



**Figure 10: Cell Deletion procedure: Successful Operation**

The procedure is initiated with a CELL DELETION REQUEST message sent from CRNC to Node B. Upon Reception, the Node B shall remove the cell and any remaining common and dedicated channels within the cell. The states for the cell and the deleted common channels shall be set to Not Existing [6]. The Node B shall remove all Radio Links from the Cell and all Node B Communication Contexts that as a result do not have a Radio Link. The Node B shall also initiate release of the user plane transport bearers for the removed common and dedicated channels.

When the cell is deleted, the Node B shall send a CELL DELETION RESPONSE message as a response.

#### 8.2.14.3 Unsuccessful Operation

-

#### 8.2.14.4 Abnormal Conditions

If the CELL DELETION REQUEST message includes a *C-ID* IE value that is not existing in Node B the Node B shall respond with the CELL DELETION RESPONSE message.

### 8.2.15 Resource Status Indication

#### 8.2.15.1 General

This procedure is used in the following cases:

1. When a Local Cell becomes Existing at the Node B, it shall be made available to the RNC
2. When a Local Cell is to be deleted in Node B, i.e. become Not Existing, the Local Cell shall be withdrawn from the CRNC
3. When the capabilities of the Local Cell change at the Node B
4. When a cell has changed its capability and/or its resource operational state at Node B

5. When common physical channels and/or common transport channels have changed their capabilities at a Node B
6. When a communication control port changed its resource operational state at the Node B
7. When a Local Cell Group has changed its resource capability at the Node B

Each of the above cases shall trigger a Resource Status Indication procedure and the RESOURCE STATUS INDICATION message shall contain the logical resources affected for that case and the cause value when applicable.

### 8.2.15.2 Successful Operation



**Figure 21: Resource Status Indication procedure: Successful Operation**

The procedure is initiated with a RESOURCE STATUS INDICATION message sent from the Node B to CRNC.

#### Local Cell Becomes Existing:

When a Local Cell becomes Existing at the Node B, the Node B shall make it available to the CRNC by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "No Failure", the *Local Cell ID* IE and the *Add/Delete Indicator* IE set equal to 'Add'.

When the capacity credits and consumption laws are shared between several Local Cells, the Node B includes the *Local Cell Group ID* IE for the Local Cell. If the Local Cell Group is not already reported in a previous RESOURCE STATUS INDICATION message, the Node B shall include the capacity credits and the consumption laws in the *Local Cell Group Information* IE.

If the *Local Cell* IE contains both the "DL or Global Capacity Credit" and the "UL Capacity Credit" then the internal resource capabilities of the Local Cell are modelled independently in the Uplink and Downlink direction. If the "UL Capacity Credit" IE is not present, then the internal resource capabilities of the Local Cell are modelled as shared resources between Uplink and Downlink. If the *Local Cell Group Information* IE contains both the "DL or Global Capacity Credit" and the "UL Capacity Credit" then the internal resource capabilities of the Local Cell Group are modelled independently in the Uplink and Downlink direction. If the "UL Capacity Credit" IE is not present, then the internal resource capabilities of the Local Cell Group are modelled as shared resources between Uplink and Downlink.

#### Local Cell Deletion:

When a Local Cell is to be deleted in Node B, i.e. become Not Existing, the Node B shall withdraw the Local Cell from the CRNC by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "No Failure", the *Local Cell ID* IE and the *Add/Delete Indicator* IE set equal to 'Delete'. The Node B shall not withdraw a previously configured cell at the Node B that the CRNC had configured using the Cell Setup procedure, until the CRNC has deleted that cell at the Node B using the Cell Delete procedure.

#### Capability Change of a Local Cell:

When the capabilities of a Local Cell changes at the Node B, the Node B shall report the new capability by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting" and the Local Cell ID. The Node B shall include the *Minimum DL Power Capability* IE when it is known by the Node B. If the DL power capability has changed, the new capability shall be indicated in the *DL Power Capability* IE. If the DL capability for supporting the minimum spreading factor has changed, the new capability shall be indicated in the *Minimum Spreading Factor* IE. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value. If the internal resource capabilities of the Local Cell are affected, it shall be reported in the following way: If the internal resource capabilities of the Local Cell are modelled as shared resources between Uplink and Downlink, the new capacity shall be reported in the DL or Global Capacity Credit IE. If the internal resource capabilities of the Local Cell are modelled independently in the Uplink and Downlink direction, then the DL or Global Capacity Credit IE and the UL Capacity Credit IE shall be present in the RESOURCE STATUS INDICATION. If the

maximum DL power capability of the Local Cell is affected, this shall be reported using the *Maximum DL Power Capability* IE.

#### **Capability Change of a Cell:**

When the capabilities and/or resource operational state of a cell changes at the Node B, the Node B shall report the new capability and/or resource operational state by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting", the *C-ID* IE, the *Resource Operational State* IE and the *Availability Status* IE. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

#### **Capability Change of a Common Physical Channel and/or Common Transport Channel:**

The Node B shall not delete any common or dedicated channels, due to the cell being "Disabled". For all affected common and dedicated channels, the Node B shall report the impact to the CRNC with the relevant procedures.

When the capabilities and/or resource operational state of common physical channels and/or common transport channels have changed, the Node B shall report the new capability and/or resource operational state by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting", the *Resource Operational State* IE and the *Availability Status* IE set to appropriate values for the affected channel(s). The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

When a power value for a common physical channel and/or a common transport channel becomes beyond the supported power value range due to a change in capability in Node Bs, it shall be reported to the CRNC in the RESOURCE STATUS INDICATION message, with the *Resource Operational State* IE set to "Enabled", the *Availability Status* IE set to "Degraded" and the *Cause* IE set to "Power level not supported". Affected channels shall use the nearest power value that is supported.

#### **Capability Change of a Communication Control Port:**

When the resource operational state of a communication control port has changed, the Node B shall report the new resource operational state by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting" and the *Communication Control Port ID* IE. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to the appropriate value.

#### **Capability Change of a Local Cell Group:**

When the resource capabilities of a Local Cell Group change at the Node B, the Node B shall report the new capability by sending a RESOURCE STATUS INDICATION message with the *Indication Type* IE set equal to "Service Impacting" and the *Local Cell Group Information* IE reporting the change. The *Cause* IE in the RESOURCE STATUS INDICATION message shall be set to an appropriate value. If the RESOURCE STATUS INDICATION message contains both the "DL or Global Capacity Credit" and the "UL Capacity Credit" then the internal resource capabilities of the Node B are modelled independently in the Uplink and Downlink direction. If the "UL Capacity Credit" IE is not present, then the internal resource capabilities of the Node B are modelled as shared resources between Uplink and Downlink.

#### **General:**

When the RESOURCE STATUS INDICATION is used to report an error, only one cause value for all reported objects can be sent in one message. When the RESOURCE STATUS INDICATION is used to clear errors, only all errors for one object can be cleared per message. It is not possible to clear one out of several errors for one object.

### **8.2.15.3 Abnormal Conditions**

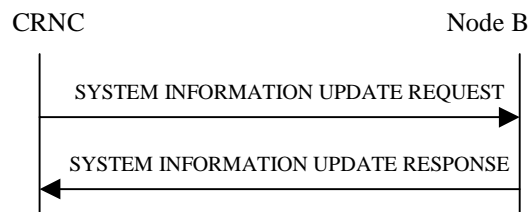
-

## **8.2.16 System Information Update**

### **8.2.16.1 General**

The System Information Update procedure performs the scheduling and provision of system information segments broadcast on the BCCH, to the Node B.

## 8.2.16.2 Successful Operation



**Figure 22: System Information Update procedure: Successful Operation**

The procedure is initiated with a SYSTEM INFORMATION UPDATE REQUEST message sent from the CRNC to the Node B.

The Node B shall consider the requested updates to the BCCH schedule in the same order as the MIB/SB/SIB information is included in the SYSTEM INFORMATION UPDATE REQUEST message.

If the SYSTEM INFORMATION UPDATE message includes the *BCCH Modification Time IE*, the updates to the BCCH schedule (possibly consisting of IB occurrence additions, IB occurrence deletions and IB occurrence content updates) indicated in the SYSTEM INFORMATION UPDATE REQUEST message shall be applied by Node B at the first time instance starting from the SFN value set by the *BCCH Modification Time IE*. If no *BCCH Modification Time IE* is included, the updates to the BCCH schedule shall be applied as soon as possible.

### Information Block addition

If the SYSTEM INFORMATION UPDATE REQUEST message includes segments of a certain MIB/SB/SIB, the Node-B shall assume that all segments for that Information Block are included in the message and ordered with increasing Segment Index (starting from 0). For each included segment, segment type information is also given in the SYSTEM INFORMATION UPDATE REQUEST message.

The Node B shall determine the correct cell system frame number(s) (SFN) for transmission of the segments of system information, from the scheduling parameters provided in the SYSTEM INFORMATION UPDATE REQUEST message. The SFN for transmitting the segments shall be determined by the *SIB SG REP IE* and *SIB SG POS IE* such that:

$$- \text{SFN mod IB\_SG\_REP} = \text{IB\_SG\_POS}$$

If the SYSTEM INFORMATION UPDATE REQUEST message contains Master Information Block (MIB) segments in addition to SIB or SB segments, the MIB segments shall first be sent in the physical channel by the Node B. Once these MIB segments have been sent in the physical channel, the updated SB/SIB segments shall then be sent in the physical channel.

Only if the inclusion of each new IB segment in the BCCH schedule leads to a valid segment combination according to [18], the Node B shall accept the system information update.

If the *SIB Originator IE* value is set to 'Node B' the Node B shall create the SIB segment of the SIB type given by the *IB Type IE* and autonomously update the SIB segment and apply the scheduling and repetition as given by the *IB SG REP IE* and *IB SG POS IE*.

SIBs originating from the Node B can only be SIBs containing information that the Node B can obtain on its own.

### Information Block deletion

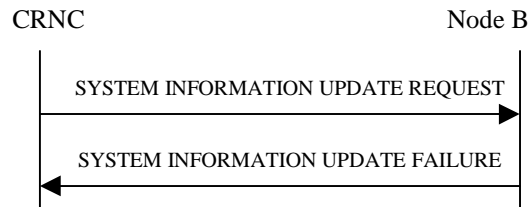
If the *IB Deletion Indicator IE* value is set to 'Deletion' the Node B shall delete the IB indicated by the *IB Type IE* and *IB OC ID IE* from the transmission schedule on BCCH.

### Information Block update

If the SYSTEM INFORMATION UPDATE REQUEST message contains segments for an IB without *IB SG REP IE* and *IB SG POS IE* and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID which is not requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information IE* group repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB segments are included, then the Node B shall only update the contents of the IB segments without any modification in segment scheduling.

If the Node B successfully completes the updating of the physical channel scheduling cycle according to the parameters given in the SYSTEM INFORMATION UPDATE REQUEST message, it shall respond to the CRNC with a SYSTEM INFORMATION UPDATE RESPONSE message.

### 8.2.16.3 Unsuccessful Operation



**Figure 23: System Information Update procedure: Unsuccessful Operation**

If the Node B is unable to update the physical channel scheduling cycle according to all the parameters given in the SYSTEM INFORMATION UPDATE REQUEST message, it shall respond with a SYSTEM INFORMATION UPDATE FAILURE message with an appropriate cause value. No changes to the BCCH schedule are made in this case.

Node B shall reject, with cause value ‘SIB origination in Node B not supported’, requests for Node B originated system information blocks that make use of a value tag.

Node B shall reject the requested update with cause value “BCCH scheduling error” if:

- after having handled a certain *MIB/SB/SIB information* IE group repetition, an illegal BCCH schedule results;
- if a *MIB/SB/SIB information* IE group repetition includes an *IB SG REP* IE or an *IB SG POS* IE and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID which is not requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information* IE group repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB addition is indicated. This rule shall apply even if the scheduling instructions in *IB SG REP* IE and *IB SG POS* IE were the same as the current scheduling instructions for the concerned IB;
- if a *MIB/SB/SIB information* IE group repetition includes no *IB SG REP* IE and *IB SG POS* IE and there is no IB in the BCCH schedule with the same IB Type and IB OC ID;
- if a *MIB/SB/SIB information* IE group repetition includes no *IB SG REP* IE and *IB SG POS* IE and there is already an IB in the BCCH schedule with the same IB Type and IB OC ID but it is requested to be deleted from the BCCH schedule by an IB deletion indicated in a *MIB/SB/SIB information* IE group repetition present in the SYSTEM INFORMATION UPDATE REQUEST message before the IB addition is indicated;

Possible cause values are:

#### Radio Network Layer Cause

- Unknown C-ID
- SIB Origination in Node B not Supported
- BCCH scheduling error

#### Miscellaneous Cause

- Hardware failure
- Control Processing overload
- O&M Intervention
- Unspecified

In the case of failure, the Node B shall not incorporate any of the requested changes into the physical channel scheduling cycle, and the previous system information configuration shall remain intact.

## 8.2.16.4 Abnormal Conditions

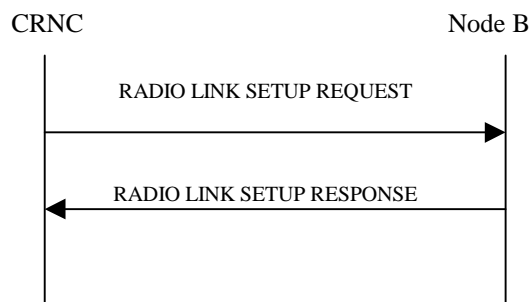
-

## 8.2.17 Radio Link Setup

### 8.2.17.1 General

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

### 8.2.17.2 Successful Operation



**Figure 24: Radio Link Setup procedure: Successful Operation**

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

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

[FDD – The RL Setup procedure can be used to setup one or more radio links. The procedure shall include the establishment of one or more DCHs on all radio links, and in addition, it can include the establishment of one or more DSCHs on one radio link.]

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

[FDD - The *First RLS Indicator* IE indicates if the concerning RL shall be considered part of the first RLS established towards this UE. If the *First RLS indicator* IE is set to "first RLS", the Node B shall use a TPC pattern of  $n \cdot "01" + "1"$  in the DL of the concerning RL and all RLs which are part of the same RLS, until UL synchronisation is achieved on the Uu. The parameter  $n$  shall be set equal to the value received in the *DL TPC pattern 01 count* IE in the Cell Setup procedure. The TPC pattern shall continuously be repeated but shall be restarted at the beginning of every frame with  $CFN \bmod 4 = 0$ . For all other RLs, the Node B shall use a TPC pattern of all "1"s in the DL until UL synchronisation is achieved on the Uu.]

[FDD - The *Diversity Control Field* IE indicates for each RL (except the first RL in the message) whether the Node B shall combine the concerned RL or not. If the *Diversity Control Field* IE indicates, "may be combined with already existing RLs", then Node B shall decide for either of the alternatives. If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL. Diversity combining is applied to Dedicated Transport Channels (DCH), i.e. it is not applied to the DSCHs. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.]

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

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

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

If the RADIO LINK SETUP REQUEST message includes a *DCH Info* IE with multiple *DCH Specific Info* IEs then, the Node B shall treat the DCHs in the *DCH Info* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.

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

[FDD - For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to “selected”, the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If the *QE-Selector* is set to “non-selected”, the Physical channel BER shall be used for the QE in the UL data frames, ref. [16].]

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

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

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

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

The Node B shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

The Node B shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.

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

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

[FDD - The Node B shall start the DL transmission using the initial DL power specified in the message on each DL channelisation code of the RL until either UL synchronisation is achieved for the RLS or a DL POWER CONTROL REQUEST message is received. No inner loop power control or balancing shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10] , chapter 5.2.1.2) with DPC MODE=0 and the power control procedure (see 8.3.7), but shall always be kept within the maximum and minimum limit specified in the RL SETUP REQUEST message.]

[TDD - The Node B shall start the DL transmission using the initial DL power specified in the message on each DL channelisation code and on each Time Slot of the RL until the UL synchronisation is achieved for the RL. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], chapter 4.2.3.3), but shall always be kept within the maximum and minimum limit specified in the RL SETUP REQUEST message.]

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

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

[FDD – If the RADIO LINK SETUP REQUEST message includes the *TFCI2 Bearer Information* IE then the Node B shall support the setup of a transport bearer on which the DSCH TFCI Signaling control frames shall be received. The Node B shall manage the time of arrival of these frames according to the values of *ToAWS* and *ToAWE* specified in



the IE's. The *Binding ID* IE and *Transport Layer Address* IE for the new bearer to be set up for this purpose shall be returned in the RADIO LINK SETUP RESPONSE message.]

[FDD - If the *TFCI Signaling Mode* IE within the RADIO LINK SETUP message indicates that there shall be a hard split on the TFCI field but the *TFCI2 Bearer Information* IE is not included in the message then the Node B shall transmit the TFCI2 field with zero power.]

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

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

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

[FDD- If the *Downlink compressed mode method* in one or more Transmission Gap Pattern Sequence is set to 'SF/2' in the RADIO LINK SETUP REQUEST message, the Node B shall use or not the alternate scrambling code as indicated for each DL Channelisation Code in the *Transmission Gap Pattern Sequence Code Information* IE.]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE and the *Active Pattern Sequence Information* IE, the Node B shall immediately activate the indicated Transmission Gap Pattern Sequences. For each sequence the *TGCFN* refers to the latest passed CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the Node B shall behave as specified in subclause 8.3.12.]

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

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

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

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

If the RLs are successfully setup, the Node B shall start reception on the new RL(s) and respond with a RADIO LINK SETUP RESPONSE message.

[FDD - The Node B shall indicate with the *Diversity Indication* IE whether the RL is combined or not. In case of combining, only the *Reference RL ID* IE shall be included to indicate one of the existing RLs that the concerned RL is combined with. In case of not combining the Node B shall include in the RL SETUP RESPONSE the *Binding ID* IE and *Transport Layer Address* IE for the transport bearer to be established for each DCH of this RL.]

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

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

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

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

After sending of the RADIO LINK SETUP RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The Node B shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in [16].

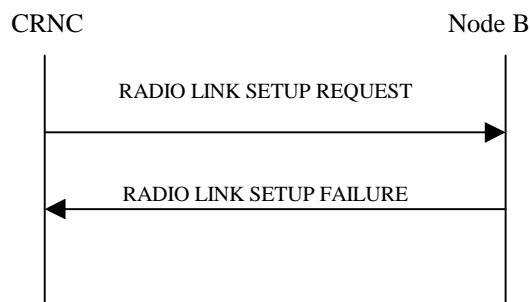
[FDD – When *Diversity Mode* IE is “*STTD*”, “*Closedloop mode1*”, or “*Closedloop mode2*”, the DRNC shall activate/deactivate the Transmit Diversity to each Radio Link in accordance with *Transmit Diversity Indication* IE]

[FDD - If the RADIO LINK SETUP REQUEST message includes the *SSDT Cell Identity* IE, the Node B may activate SSDT using the *SSDT Cell Identity* IE and *SSDT Cell Identity Length* IE.]

[FDD - Irrespective of SSDT activation, the Node B shall include in the RADIO LINK SETUP RESPONSE message an indication concerning the capability to support SSDT on this RL. Only if the RADIO LINK SETUP REQUEST message requested SSDT activation and the RADIO LINK SETUP RESPONSE message indicates that the SSDT capability is supported for this RL, SSDT is activated in the Node B.]

[FDD –The UL out-of-sync algorithm defined in [10] shall for each of the established RL Set(s) use the maximum value of the parameters *N\_OUTSYNC\_IND* and *T\_RLFAILURE*, and the minimum value of the parameters *N\_INSYNC\_IND*, that are configured in the cells supporting the radio links of the RL Set].

### 8.2.17.3 Unsuccessful Operation



**Figure 25: Radio Link Setup procedure: Unsuccessful Operation**

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

[FDD - If some radio links were established successfully, the Node B shall indicate this in the RADIO LINK SETUP FAILURE message in the same way as in the RADIO LINK SETUP RESPONSE message.]

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

Typical cause values are as follows:

#### Radio Network Layer Cause

- RL Already Activated/allocated
- Combining not supported
- Combining Resources not available
- Requested Tx Diversity Mode not supported
- Invalid CM Settings
- Number of DL codes not supported
- UL SF not supported

- DL SF not supported
- Dedicated Transport Channel Type not supported
- Downlink Shared Channel Type not supported
- Uplink Shared Channel Type not supported
- CM not supported

#### Transport Layer Cause

- Transport Resources Unavailable

#### Protocol Cause

- Semantic error

#### Miscellaneous Cause

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

### 8.2.17.4 Abnormal Conditions

-

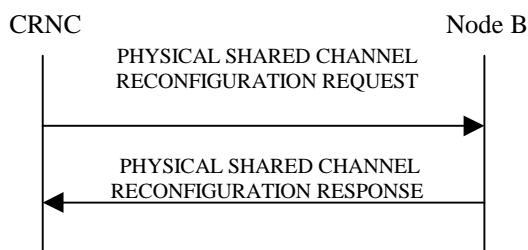
## 8.2.18 Physical Shared Channel Reconfiguration [TDD]

### 8.2.18.1 General

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

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

### 8.2.18.2 Successful Operation



**Figure 26: Physical Shared Channel Reconfiguration: Successful Operation**

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

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

### PDSCH/PUSCH Addition

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

### PDSCH/PUSCH Modification

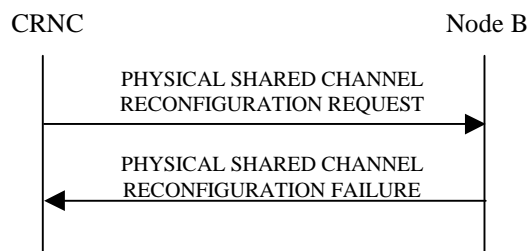
If the PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST message includes any PDSCH sets or PUSCH sets to be modified, and includes any of *TDD Channelisation Code IE*, *Burst Type IE*, *Midamble shift IE*, *Time Slot IE*, *TDD Physical Channel Offset IE*, *Repetition Period IE*, *Repetition Length IE*,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

### PDSCH/PUSCH Deletion

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

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

### 8.2.18.3 Unsuccessful Operation



**Figure 27: Physical Shared Channel Reconfiguration procedure: Unsuccessful Operation**

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

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

Typical cause values are as follows:

#### Radio Network Layer Cause

- Cell not available
- Node B Resources unavailable

#### Transport Layer Cause

- Transport Resources Unavailable

#### Protocol Cause

- Semantic error

#### Miscellaneous Cause

- O&M Intervention
- Unspecified Failure
- Control processing overload

- HW failure

## 8.2.18.4 Abnormal Conditions

-

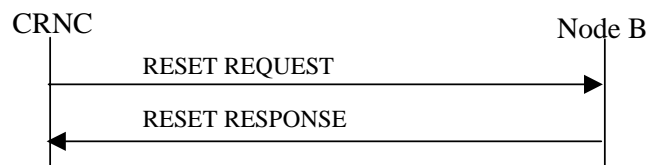
## 8.2.19 Reset

### 8.2.19.1 General

The purpose of the reset procedure is to align the resources in the CRNC and Node B in the event of an abnormal failure. The CRNC or Node B may initiate the procedure.

### 8.2.19.2 Successful Operation

#### 8.2.19.2.1 Reset Initiated by the CRNC



**Figure 27A Reset procedure (CRNC to Node B), Successful Operation**

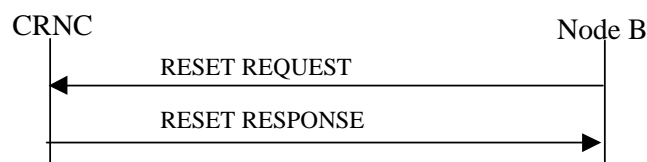
The procedure is initiated with a RESET REQUEST message sent from the CRNC to the Node B.

If the *Reset Indicator* IE is set to 'CommunicationContext', the Node B shall remove all the indicated Node B Communication Contexts (typically identified by a *Node B Communication Context ID* IE) and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also initiate release of the user plane transport bearers that were involved in these Contexts. After clearing all related resources, the Node B shall return the RESET RESPONSE message to the CRNC.

If the *Reset Indicator* IE is set to 'CommunicationControlPort', the Node B shall remove all the Node B Communication Contexts controlled via the indicated Communication Control Port(s) and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also initiate release of the user plane transport bearers that were involved in these Contexts. After clearing all related resources, the Node B shall return the RESET RESPONSE message to the CRNC.

If the *Reset Indicator* IE is set to the 'Node B', the Node B shall remove all the Node B Communication Contexts within the Node B and all the radio resources allocated for these Node B Communication Contexts. The Node B shall also initiate release of the user plane transport bearers that were involved in these Contexts. After clearing all related resources, the Node B shall return the RESET RESPONSE message to the CRNC.

#### 8.2.19.2.2 Reset Initiated by the Node B



**Figure 27B Reset procedure (Node B to CRNC), Successful Operation**

The procedure is initiated with a RESET REQUEST message sent from the Node B to the CRNC.

If the *Reset Indicator* IE is set to 'CommunicationContext', for all indicated CRNC Communication Contexts (indicated by a *CRNC Communication Context ID* IE) the CRNC shall remove the information related to this Node B and all the radio resources allocated in the CRNC. The CRNC shall also initiate release of the user plane transport bearers towards

the Node B involved in the indicated CRNC Communication Contexts. After clearing all related resources, the CRNC shall return the RESET RESPONSE message to the Node B.

If the *Reset Indicator* IE is set to 'CommunicationControlPort', for all the CRNC Communication Contexts controlled via the indicated Communication Control Port(s) the CRNC shall remove the information related to this Node B and all the radio resources allocated in the CRNC. The CRNC shall also initiate release of the user plane transport bearers towards the Node B involved in the CRNC Communication Contexts controlled via the indicated Communication Control Port(s). After clearing all related resources, the CRNC shall return the RESET RESPONSE message to Node B.

If the *Reset Indicator* IE is set to the 'Node B', for all the CRNC Communication Contexts related to this Node B the CRNC shall remove the information related to this Node B and all the radio resources allocated in the CRNC. The CRNC shall also initiate release of the user plane transport bearers towards the Node B involved in the CRNC Communication Contexts related to this Node B. After clearing all related resources, the CRNC shall return the RESET RESPONSE message to Node B.

### 8.2.19.3 Unsuccessful Operation

-

### 8.2.19.4 Abnormal Conditions

If the RESET message is received any ongoing procedure related to a CRNC Communication Context in the CRNC or Node B Communication Context in the Node B indicated (explicitly or implicitly) in the message shall be aborted.

## 8.3 NBAP Dedicated Procedures

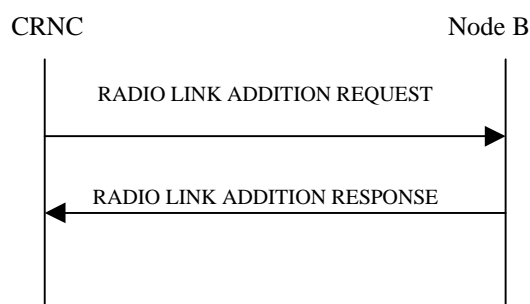
### 8.3.1 Radio Link Addition

#### 8.3.1.1 General

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

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

#### 8.3.1.2 Successful Operation



**Figure: 28 Radio Link Addition procedure: Successful Operation**

The procedure is initiated with a RADIO LINK ADDITION REQUEST message sent from the CRNC to the Node B.

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

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

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

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

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

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

The *Diversity Control Field* IE indicates for each RL whether the Node B shall combine the new RL with existing RL(s) or not. If the *Diversity Control Field* IE indicates, "may be combined with already existing RLs", then Node B shall decide for any of the alternatives. If the *Diversity Control Field* IE is set to "Must", the Node B shall combine the RL with one of the other RL. When a new RL is to be combined, the Node B shall choose which RL(s) to combine it with.

[FDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall apply the given power to the transmission on each DL Channelisation Code of the RL when starting transmission until either UL synchronisation is achieved for the RLS or a DL POWER REQUEST message is received. If no *Initial DL Transmission power* IE is included, the Node B shall use any transmission power level currently used on already existing RL's for this UE. No inner loop power control or balancing] shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[10], chapter 5.2.1.2) with DPC MODE=0 and the downlink power control procedure (see 8.3.7).]

[TDD – If the RADIO LINK ADDITION REQUEST message includes the *Initial DL Transmission Power* IE, the Node B shall apply the given power to the transmission on each DL Channelisation Code and on each Time Slot of the RL when starting transmission until the UL synchronisation is achieved for the RL. If no *Initial DL Transmission power* IE is included, the Node B shall use any transmission power level currently used on already existing RL's for this UE. No inner loop power control shall be performed during this period. The DL power shall then vary according to the inner loop power control (see ref.[22], chapter 4.2.3.3).]

If the RADIO LINK ADDITION REQUEST message includes the *Maximum DL power* IE, the Node B shall store this value and never transmit with a higher power on any DL Channelisation Code of the RL. If no *Maximum DL power* IE is included, any Maximum DL power stored for already existing RLs for this UE shall be applied.

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

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

[FDD – If the RADIO LINK ADDITION REQUEST includes the *Compressed Mode Deactivation Flag* IE with value "On", the Node B shall not activate any CM pattern sequence in the new RLs. In all the other cases (Flag set to "Off" or not present), the on going CM measurement (if existing) shall be applied also to the added RLs.]

[FDD- If the RADIO LINK ADDITION REQUEST contains the *Transmission Gap Pattern Sequence Code Information* IE Node B shall use or not the alternate scrambling code as indicated for each DL Channelisation Code.]

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

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

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

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

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

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

In case of coordinated DCH, the binding ID and the transport address shall be included for only one of the coordinated DCHs.

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

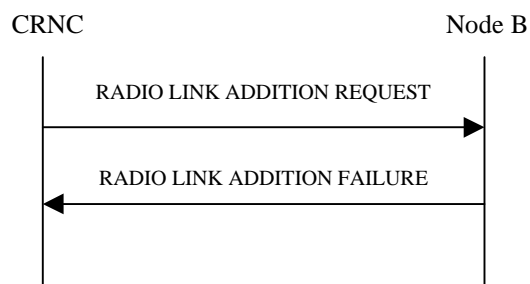
After sending of the RADIO LINK ADDITION RESPONSE message the Node B shall continuously attempt to obtain UL synchronisation and start reception on the new RL. The Node B shall start transmission on the new RL after synchronisation is achieved in the DL user plane as specified in 25.427.

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

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

[FDD – After addition of the new RL(s), the UL out-of-sync algorithm defined in [10] shall for each of the previously existing and newly established RL Set(s) use the maximum value of the parameters *N\_OUTSYNC\_IND* and *T\_RLFAILURE*, and the minimum value of the parameters *N\_INSYNC\_IND*, that are configured in the cells supporting the radio links of the RL Set].

### 8.3.1.3 Unsuccessful Operation



**Figure 29: Radio Link Addition procedure: Unsuccessful Operation**

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

[FDD - If the RADIO LINK ADDITION REQUEST contains the *CM Deactivation Flag* IE with the value "On", and at least one of the new RL is added in one cell that has the same UARCFN of at least one cell with an already existing RL, the Node B shall regard the Radio Link Addition procedure as failed and shall respond with a RADIO LINK ADDITION FAILURE message with the cause value "Invalid CM settings".]

Typical cause values are as follows:

#### Radio Network Layer Cause

- RL Already Activated/allocated
- Combining not supported



- Combining Resources not available
- Requested Tx Diversity Mode not supported
- UL SF not supported
- DL SF not supported
- Invalid CM Settings
- Reconfiguration CFN not elapsed
- CM not supported

#### Transport Layer Cause

- Transport Resources Unavailable

#### Protocol Cause

- Semantic error

#### Miscellaneous Cause

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

#### 8.3.1.4 Abnormal conditions

-

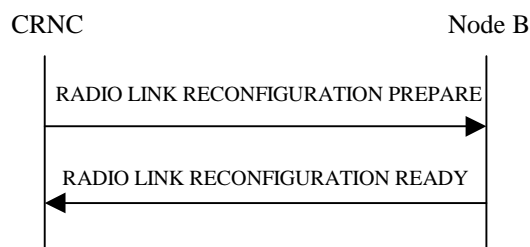
### 8.3.2 Synchronised Radio Link Reconfiguration Preparation

#### 8.3.2.1 General

The Synchronised Radio Link Reconfiguration Preparation procedure is used to prepare a new configuration of all Radio Links related to one UE-UTRAN connection within a Node B.

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

#### 8.3.2.2 Successful Operation



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

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

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

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

#### **DCH Modification:**

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

- If the *DCHs to Modify* IE includes the *Frame Handling Priority* IE, the Node B should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.
- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the UL of a DCH, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the DL of a DCH, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs then the Node B shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs to Modify* IE includes the *UL FP Mode* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWS* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWE* IE for a DCH or a DCH which belongs to a set of co-ordinated DCHs, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD – If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]
- [TDD - If the *DCHs to Modify* IE includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

#### **DCH Addition:**

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

- If the *DCHs to Add* IE multiple *DCH specific Info* IEs then, the Node B shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- [FDD - For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to “selected”, the Transport channel BER from that DCH shall be the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If the *QE-Selector* is set to “non-selected”, the Physical channel BER shall be used for the QE in the UL data frames, ref. [16]].
- For a set of co-ordinated DCHs the Transport channel BER from the DCH with the *QE-Selector* IE set to “selected” shall be used for the QE in the UL data frames, ref. [16]. [FDD - If no Transport channel BER is available for the selected DCH the Physical channel BER shall be used for the QE, ref. [16]. If all DCHs have *QE-Selector* IE set to “non-selected” the Physical channel BER shall be used for the QE, ref. [16]].
- The Node B 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 Node B once the new configuration has been activated.

- The Node B shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD – The Node B shall apply the *CCTrCH ID* IE (for the DL) in the Downlink of this DCH in the new configuration.]
- [TDD – The Node B shall apply the *CCTrCH ID* IE (for the UL) in the Uplink of this DCH in the new configuration.]

#### **DCH Deletion:**

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

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

#### **Physical Channel Modification:**

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

- [FDD - If the *UL DPCH Information* IE includes the *Uplink Scrambling Code* IE, the Node B shall apply this Uplink Scrambling Code to the new configuration.]
- [FDD – If the *UL DPCH Information* IE includes the *Min UL Channelisation Code Length* IE, the Node B shall apply the value in the new configuration. The Node B shall apply the contents of the *Max Number of UL DPDCCHs* IE (if it is included) in the new configuration.]
- [FDD – If the *UL DPCH Information* IE includes the *UL SIR Target* IE, the Node B shall use the value for the UL inner loop power control when the new configuration is being used.]
- [FDD – If the *UL DPCH Information* IE includes the *Puncture Limit* IE, the Node B shall apply the value in the uplink of the new configuration]
- [FDD - The Node B shall use the *TFCS* IE for the UL (if present) when reserving resources for the uplink of the new configuration. The Node B shall apply the new TFCS in the Uplink of the new configuration.]
- [FDD - If the *UL DPCH Information* IE includes the *UL DPCCCH Slot Format* IE, the Node B shall set the new Uplink DPCCCH Structure to the new configuration.]
- [FDD - If the *UL DPCH Information* IE includes the *Diversity Mode* IE, the Node B shall apply diversity according to the given value.]
- [FDD – If the *UL DPCH Information* IE includes an *SSDT Cell Identity Length* IE and/or an *S-Field Length* IE, the Node B shall apply the values in the new configuration.]

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

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

- [FDD – If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE or the *TFCI Presence* IE, the Node B shall use the information when building TFCIs in the new configuration.]
- [FDD - If the *DL DPCH Information* IE includes the *DL DPCCCH Slot Format* IE, group the Node B shall set the new Downlink DPCCCH Structure to the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *Multiplexing Position* IE, the Node B shall apply the indicated multiplexing type in the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Used', the Node B shall use Limited Power Increase ref. [10] section 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Not Used', the Node B shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]
- [FDD - If the *DL DPCH Information* IE includes the *PDSCH code mapping* IE then the Node B shall apply the defined mapping between TFCI values and PDSCH channelisation codes.]
- [FDD - If the *DL DPCH Information* IE includes the *PDSCH RL ID* IE then the Node B shall infer that the PDSCH for the specified user will be transmitted on the defined radio link.]

[FDD - If the RADIO LINK RECONFIGURATION PREPARE message includes the *Transmission Gap Pattern Sequence Information* IE the Node B shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration. This new Compressed Mode Configuration shall be valid in the Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

#### [TDD - UL/DL CCTrCH Modification]

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

- [TDD - If the IE includes any of *TFCS* IE, *TFCI coding* IE or *Puncture Limit* IE the Node B shall apply these as the new values, otherwise the old values specified for this CCTrCH are still applicable.]
- [TDD – If the IE includes any *UL DPCH to add* or *DL DPCH to add* IEs, the Node B shall include this DPCH in the new configuration.]
- [TDD – If the IE includes any *UL DPCH to delete* or *DL DPCH to delete* IEs, the Node B shall remove this DPCH in the new configuration.]
- [TDD – If the IE includes any *UL DPCH to modify* or *DL DPCH to modify* IEs, and includes any of *Repetition Period* IE, *Repetition Length* IE, or *TDD DPCH Offset* IE or the message includes UL/DL Timeslot Information and includes any of *Midamble shift and Burst Type* IE, *Time Slot* IE, or *TFCI presence* IE or the message includes UL/DL Code information and includes *TDD Channelisation Code* IE, the Node B shall apply these specified information elements as the new values, otherwise the old values specified for this DPCH configuration are still applicable.]

#### [TDD – UL/DL CCTrCH Addition]

[TDD -If the RADIO LINK RECONFIGURATION PREPARE message includes any *UL CCTrCH to Add* IE or *DL CCTrCH to Add* IE, the Node B shall include this CCTrCH in the new configuration.]

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

#### [TDD – UL/DL CCTrCH Deletion]

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

#### DSCH Addition/Modification/Deletion:

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

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

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

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

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

#### [TDD - USCH Addition/Modification/Deletion:]

- [TDD - If the RADIO LINK RECONFIGURATION PREPARE message includes USCH information for the USCHs to be added/modified/deleted then the NodeB shall use this information to add/modify/delete the indicated USCH channels to/from the radio link, in the same way as the DCH info is used to add/modify/release DCHs.]
- [TDD - The Node B shall include in the RADIO LINK RECONFIGURATION READY message both the *Transport Layer Address IE* and the *Binding ID IE* for the transport bearer to be established for each USCH.]

#### RL Information:

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

- [FDD – When more than one DL DPDCH are assigned per RL, the segmented physical channel shall be mapped on to DL DPDCHs according to [8]. When  $p$  number of DL DPDCHs are assigned to each RL, the first pair of DL Scrambling Code and FDD DL Channelisation Code Number corresponds to “*PhCH number 1*”, the second to “*PhCH number 2*”, and so on until the  $p$ th to “*PhCH number p*”.]
- [FDD - If the *RL Information IE* includes the *SSDT Indication IE* set to "SSDT Active in the UE", the Node B may activate SSDT using the *SSDT Cell Identity IE* in the new configuration.]
- [FDD - If the *RL Information IE* includes the *SSDT Indication IE* set to "SSDT not Active in the UE", the Node B shall deactivate SSDT in the new configuration.]
- [FDD – If the *RL Information IE* includes a *DL Code Information IE* containing a *DL Scrambling Code IE*, the Node B shall apply the scrambling code in the new configuration.]
- [FDD – If the *RL Information IE* includes the *DL Code Information IE* containing a *DL Channelisation Code Number IE*, the Node B shall apply the channelisation code in the new configuration.]
- [FDD- If the *RL Information IE* contains the *Transmission Gap Pattern Sequence Code Information IE* for any of the allocated DL Channelisation code, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]
- If the *RL Information IE* includes the *Maximum DL Power* and/or the *Minimum DL Power* IEs, the Node B shall apply the values in the new configuration.

## General

If the requested modifications are allowed by the Node B and the Node B has successfully reserved the required resources for the new configuration of the Radio Link(s), it shall respond to the CRNC with the RADIO LINK RECONFIGURATION READY message. When this procedure has been completed successfully there exist a Prepared Reconfiguration, as defined in chapter 3.1.

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

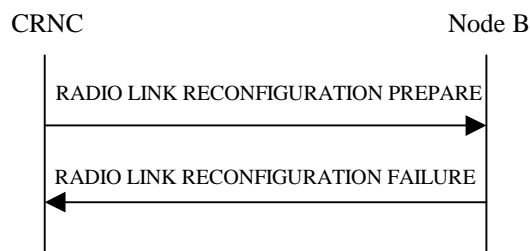
The Node B shall include in the RADIO LINK RECONFIGURATION READY message the Transport Layer Address and the Binding ID for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator* IE.

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

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

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

### 8.3.2.3 Unsuccessful Operation



**Figure 31: Synchronised Radio Link Reconfiguration Preparation procedure, Unsuccessful Operation**

If the Node B cannot reserve the necessary resources for all the new DCHs of one set of coordinated DCHs requested to be added, it shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed.

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

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

[FDD - If the *RL Information* IE includes the *SSDT Indication* IE set to "SSDT Active in the UE" and SSDT is not active in the current configuration, the Node B shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as failed if the *UL DPCH Information* IE does not include the *SSDT Cell Identity Length* IE. In this case, it shall respond with a RADIO LINK RECONFIGURATION FAILURE message.]

Typical cause values are as follows:

#### Radio Network Layer Cause

- UL SF not supported
- DL SF not supported
- Invalid CM Settings

- Downlink Shared Channel Type not supported
- Uplink Shared Channel Type not supported
- CM not supported
- Number of DL codes not supported

#### Transport Layer Cause

- Transport Resources Unavailable

#### Protocol Cause

- Semantic error

#### Miscellaneous Cause

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

### 8.3.2.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of coordinated DCHs is requested to be deleted, the Node B shall regard the Synchronised Radio Link Reconfiguration Preparation procedure as having failed and the Node B shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC.

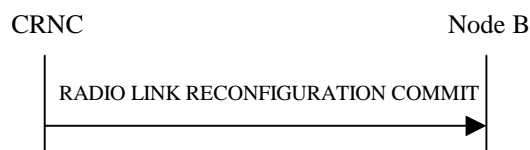
## 8.3.3 Synchronised Radio Link Reconfiguration Commit

### 8.3.3.1 General

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

The message shall use the Communication Control Port assigned for this Node B Communication Context.

### 8.3.3.2 Successful Operation



**Figure 32: Synchronised Radio Link Reconfiguration Commit procedure, Successful Operation**

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

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

[FDD - If the RADIO LINK RECONFIGURATION COMMIT includes the *Active Pattern Sequence Information IE*, the Node B shall deactivate all the ongoing Transmission Gap Pattern Sequences at the CM Configuration Change CFN. From that moment on all Transmission Gap Pattern Sequences included in *Transmission Gap Pattern Sequence*

*Status* IE group repetitions shall be started when the indicated TGCFN elapses. The *CM Configuration Change CFN* in the *Active Pattern Sequence Information* IE and *TGCFN* for each sequence refers to the next coming CFN with that value. If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the Node B shall behave as specified in subclause 8.3.12.]

### 8.3.3.3 Abnormal Conditions

If a new transport bearer is required for the new reconfiguration and it is not available at the requested CFN, the Node B shall initiate the Radio Link Failure procedure.

## 8.3.4 Synchronised Radio Link Reconfiguration Cancellation

### 8.3.4.1 General

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

The message shall use the Communication Control Port assigned for this Node B Communication Context.

### 8.3.4.2 Successful Operation



**Figure 33: Synchronised Radio Link Reconfiguration Cancellation procedure, Successful Operation**

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

### 8.3.4.3 Abnormal Conditions

-

## 8.3.5 Unsynchronised Radio Link Reconfiguration

### 8.3.5.1 General

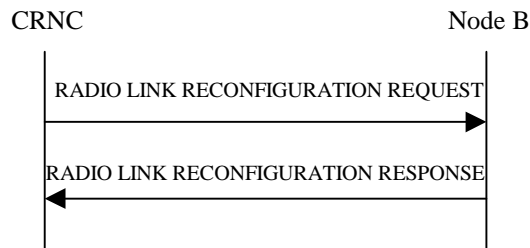
The Unsynchronised Radio Link Reconfiguration procedure is used to reconfigure Radio Link(s) related to one UE-UTRAN connection within a Node B.

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

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



### 8.3.5.2 Successful Operation



**Figure 34: Unsynchronised Radio Link Reconfiguration Procedure, Successful Operation**

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

Upon reception, the Node B shall modify the configuration of the Radio Link(s) according to the parameters given in the message. Unless specified below, the meaning of parameters is specified in other specifications.

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

#### **DCH Modification:**

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

- If the *DCHs to Modify* IE includes on the *Frame Handling Priority* IE, the Node B should store this information for this DCH in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.
- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the UL, the Node B shall apply the new Transport Format Set in the Uplink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes the *Transport Format Set* IE for the DL, the Node B shall apply the new Transport Format Set in the Downlink of this DCH in the new configuration.
- If the *DCHs to Modify* IE includes multiple *DCH Specific Info* IEs then the Node B shall treat the DCHs in the *DCHs to Modify* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- If the *DCHs to Modify* IE includes the *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs, the Node B shall apply the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWS* IE for a DCH or a set of co-ordinated DCHs, the Node B shall apply the new ToAWS in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- If the *DCHs to Modify* IE includes the *ToAWE* IE for a DCH or a set of co-ordinated DCHs, the Node B shall apply the new ToAWE in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]
- [TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

#### **DCH Addition:**

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

- If a *DCHs to Add* IE includes multiple *DCH Specific Info* IEs for a DCH to be added, the Node B shall treat the DCHs in the *DCHs to Add* IE as a set of co-ordinated DCHs. The Node B shall include these DCHs in the new configuration only if it can include all of them in the new configuration.
- [FDD - For DCHs which do not belong to a set of co-ordinated DCHs with the *QE-Selector* IE set to "selected", the Node B shall use the Transport channel BER from that DCH as the base for the QE in the UL data frames. If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE [16]. If the QE-Selector is set to "non-selected", the Physical channel BER shall be used for the QE in the UL data frames, ref. [16]].
- For a set of co-ordinated DCHs, the Node B shall use the Transport channel BER from the DCH with the *QE-Selector* IE set to "selected" as the QE in the UL data frames [16]. [FDD - If no Transport channel BER is available for the selected DCH, the Physical channel BER shall be used for the QE [16]. If all DCHs have *QE-Selector* IE set to "non-selected" the Physical channel BER shall be used for the QE [16]].
- The Node B should store the *Frame Handling Priority* IE received for a DCH to be added in the new configuration. The received Frame Handling Priority should be used when prioritising between different frames in the downlink on the radio interface in congestion situations within the Node B once the new configuration has been activated.
- The Node B shall use the included *UL FP Mode* IE for a DCH or a set of co-ordinated DCHs to be added as the new FP Mode in the Uplink of the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWS* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window Start Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- The Node B shall use the included *ToAWE* IE for a DCH or a set of co-ordinated DCHs to be added as the new Time of Arrival Window End Point in the user plane for the DCH or the set of co-ordinated DCHs in the new configuration.
- [TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the DL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Downlink of this DCH in the new configuration.]
- [TDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *CCTrCH ID* IE for the UL of a DCH to be modified, the Node B shall apply the new CCTrCH ID in the Uplink of this DCH in the new configuration.]

#### **DCH Deletion:**

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

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

#### **[FDD - Physical Channel Modification:]**

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

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

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

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

- [FDD – If the *DL DPCH Information* IE includes the *TFCI Signalling Mode* IE, the Node B shall use the use the information when building TFCIs in the new configuration.
- [FDD – If the *DL DPCH Information* IE includes the *Limited Power Increase* IE and the IE is set to 'Used', the Node B shall, if supported, use Limited Power Increase according to ref. [10] section 5.2.1 for the inner loop DL power control in the new configuration.]
- [FDD – If the *DL DPCH Information* IE message includes the *Limited Power Increase* IE and the IE is set to 'Not Used', the Node B shall not use Limited Power Increase for the inner loop DL power control in the new configuration.]
- [FDD - If the *DL DPCH Information* IE includes the *PDSCH code mapping* IE then the Node B shall apply the defined mapping between TFCI values and PDSCH channelisation codes.]
- [FDD - If the *DL DPCH Information* IE includes the *PDSCH RL ID* IE then the Node B shall infer that the PDSCH for the specified user will be transmitted on the defined radio link.]

[FDD - If the RADIO LINK RECONFIGURATION REQUEST message includes the *Transmission Gap Pattern Sequence Information* IE the Node B shall store the new information about the Transmission Gap Pattern Sequences to be used in the new Compressed Mode Configuration. This new Compressed Mode Configuration shall be valid in the Node B until the next Compressed Mode Configuration is configured in the Node B or Node B Communication Context is deleted.]

#### [TDD - UL/DL CCTrCH Modification]

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

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

#### [TDD – UL/DL CCTrCH Deletion]

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

#### RL Information:

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

- If the *RL Information* IE includes the *Maximum DL Power* IE, the Node B shall apply this value to the new configuration and never transmit with a higher power on any Downlink Channelisation Code of the Radio Link once the new configuration is being used.
- If the *RL Information* IE includes the *Minimum DL Power* IE, the Node B shall apply this value to the new configuration and never transmit with a lower power on any Downlink Channelisation Code of the Radio Link once the new configuration is being used.
- [FDD- If the *RL Information* IE contains the *DL Code Information* IE group for any of the allocated DL Channelisation code, the Node B shall apply the new setting when new compressed mode measurement are activated.]
- [FDD- If the *RL Information* IE contains the *Transmission Gap Pattern Sequence Code Information* IE for any of the allocated DL Channelisation code, the Node B shall apply the alternate scrambling code as indicated whenever the downlink compressed mode method SF/2 is active in the new configuration.]

#### General

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

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

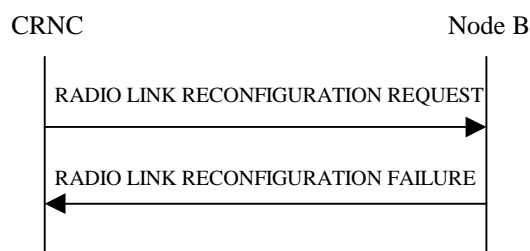
The Node B shall include in the RADIO LINK RECONFIGURATION RESPONSE message the *Transport Layer Address IE* and the *Binding ID IE* for any Transport Channel being added, or any Transport Channel being modified for which a new transport bearer was requested with the *Transport Bearer Request Indicator IE*.

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

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

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

### 8.3.5.3 Unsuccessful Operation



**Figure 35: Unsynchronised Radio Link Reconfiguration procedure, Unsuccessful Operation**

If the Node B cannot allocate the necessary resources for all the new DCHs of one set of coordinated, DCHs requested to be set-up it shall regard the Unsynchronised Radio Link Reconfiguration procedure as having failed.

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

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

Typical cause values are as follows:

#### Radio Network Layer Cause

- Invalid CM Settings
- CM not supported

#### Transport Layer Cause

- Transport Resources Unavailable

#### Protocol Cause

- Semantic error

#### Miscellaneous Cause

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

### 8.3.5.4 Abnormal Conditions

If only a subset of all the DCHs belonging to a set of coordinated DCHs is requested to be deleted, the Node B shall regard the Unsynchronised Radio Link Reconfiguration procedure as having failed and shall send the RADIO LINK RECONFIGURATION FAILURE message to the CRNC.

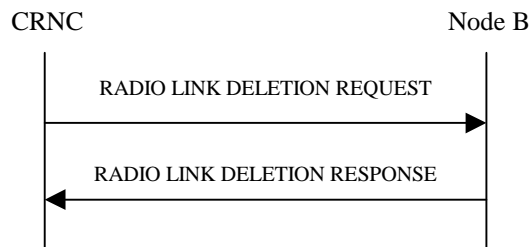
## 8.3.6 Radio Link Deletion

### 8.3.6.1 General

The Radio Link Deletion procedure is used to release the resources in a Node B for one or more established radio links towards a UE.

The Radio Link Deletion procedure may be initiated by the CRNC at any time when the Node B Communication Context exists.

### 8.3.6.2 Successful Operation



**Figure 36: Radio Link Deletion procedure: Successful Operation**

The procedure is initiated with a RADIO LINK DELETION REQUEST message sent from the CRNC to the Node B.

Upon receipt of this message, the Node B shall delete the radio link(s) identified by the *RL ID IE, Node B Communication ID IE and CRNC Communication ID IE* and release all associated resources and respond to the CRNC with a RADIO LINK DELETION RESPONSE message.

[FDD – After deletion of the RL(s), the UL out-of-sync algorithm defined in [10] shall for each of the remaining RL Set(s) use the maximum value of the parameters *N\_OUTSYNC\_IND* and *T\_RLFAILURE*, and the minimum value of the parameters *N\_INSYNC\_IND*, that are configured in the cells supporting the radio links of the RL Set].

### 8.3.6.3 Unsuccessful Operation

-

### 8.3.6.4 Abnormal Conditions

If the RL indicated by the *RL ID IE, Node B Communication ID IE and CRNC Communication ID IE* does not exist, the Node B shall respond with the RADIO LINK DELETION RESPONSE message and use the *CRNC Communication Context ID IE* received in the RADIO LINK DELETION REQUEST message.

## 8.3.7 Downlink Power Control [FDD]

### 8.3.7.1 General

The purpose of this procedure is to balance the DL transmission powers of one or more Radio Links used for the related RRC connection within the Node B. The Downlink Power Control procedure may be initiated by the CRNC at any time when the Node B communication context exists, irrespective of other ongoing CRNC initiated dedicated NBAP procedures towards this Node B communication context. The only exception occurs when the CRNC has requested the deletion of the last RL via this Node B, in which case the Downlink Power Control procedure shall no longer be initiated.

### 8.3.7.2 Successful Operation



**Figure 37: Downlink Power Control procedure: Successful Operation**

The procedure is initiated by the CRNC sending a DL POWER CONTROL REQUEST message to the Node B.

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

If the value of the *Power Adjustment Type* IE is *Common*, the Node B shall perform the power adjustment (see below) for all radio links associated with the context identified by the *Node B Communication Context ID* IE using a common DL reference power level.

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

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

If the *Inner Loop DL PC Status* IE is present and set to *'Active'*, the Node B shall activate inner loop DL power control for all radio links for the Node B communication context. If the *Inner Loop DL PC Status* IE is present and set to *'Inactive'*, the Node B shall deactivate inner loop DL power control for all radio links for the Node B communication context according to ref. [10].

#### Power Adjustment

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

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

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

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

The power adjustments shall be started at the first slot of a frame with CFN modulo the value of *Adjustment Period* IE equal to 0 and shall be repeated for every adjustment period and shall be restarted at the first slot of a frame with CFN=0, until a new DL POWER CONTROL REQUEST message is received or the RL is deleted.

### 8.3.7.3 Abnormal Conditions

-

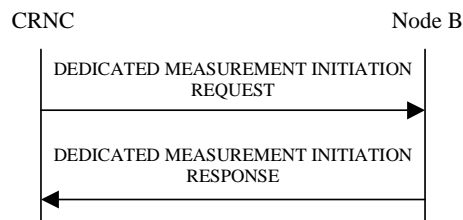
## 8.3.8 Dedicated Measurement Initiation

### 8.3.8.1 General

This procedure is used by a CRNC to request the initiation of measurements on dedicated resources in a Node B.

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

### 8.3.8.2 Successful Operation



**Figure 38: Dedicated Measurement Initiation procedure: Successful Operation**

The procedure is initiated with a DEDICATED MEASUREMENT INITIATION REQUEST message sent from the CRNC to the Node B using the communication control port assigned to the Node B communication context.

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

If the *Node B Communication Context ID* IE equals the reserved value 'All NBCC', this measurement request shall apply for all current and future Node B Communication Contexts controlled via the Communication Control Port on which the DEDICATED MEASUREMENT INITIATION REQUEST message was received. Otherwise, this measurement request shall apply for the requested Node B Communication Context ID only.

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

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

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

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

[TDD - If DPCH ID is provided within the RL Information the measurement request shall apply for the requested physical channel individually.]

If the *CFN Reporting Indicator* IE is set to "FN Reporting Required", the *CFN* IE shall be included in the measurement report or in the measurement response, the latter only in the case the *Report Characteristics* IE is set to 'On-Demand'. The reported CFN shall be the CFN at the time when the measurement value was reported by the layer 3 filter, referred to as point C in the measurement model [25].

If the *CFN* IE is provided, it indicates the frame for which the first measurement shall be provided. The provided measurement value shall be the one reported by the layer 3 filter, referred to as point C in the measurement model [25].

#### Report characteristics

The *Report Characteristics* IE is set to how the reporting of the measurement shall be performed.

If the *Report Characteristics* IE is set to 'On-Demand', the Node B shall return the result of the measurement immediately.

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

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

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

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

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

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

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

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

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 Node B shall initiate a Measurement Reporting procedure immediately, and then continue with the measurements as specified in the DEDICATED MEASUREMENT INITIATION REQUEST message.

#### Higher layer filtering

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

The averaging shall be performed according to the following formula.

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

The variables in the formula are defined as follows

$F_n$  is the updated filtered measurement result

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

$M_n$  is the latest received measurement result from physical layer measurements

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

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

#### Response message

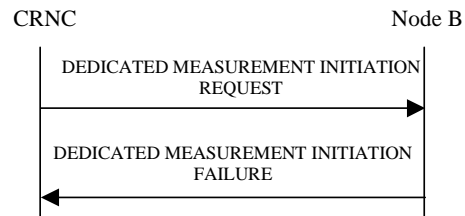
If the Node B was able to initiate the measurement requested by the CRNC it shall respond with the DEDICATED MEASUREMENT INITIATION RESPONSE message using the communication control port assigned to the Node B communication context. The message shall include the same Measurement ID that was used in the measurement request.

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



In the case that the *Node B Communication Context ID* IE is set to 'All NBCC' the *CRNC Communication Context ID* IE in the DEDICATED MEASUREMENT INITIATION RESPONSE shall be set to the value 'All CRNCCC', which is reserved for this purpose.

### 8.3.8.3 Unsuccessful Operation



**Figure 39: Dedicated Measurement Request procedure: Unsuccessful Operation**

If the Dedicated Measurement Type received in the *Dedicated Measurement Type* IE is not defined in ref. [4] or [5] to be measured on the Dedicated Measurement Object Type received in the *Dedicated Measurement Object Type* IE in the DEDICATED MEASUREMENT INITIATION REQUEST message the Node B shall regard the Dedicated Measurement Initiation procedure as failed.

If the requested measurement cannot be initiated, the Node B shall send a DEDICATED MEASUREMENT INITIATION FAILURE message using the communication control port assigned to the Node B communication context. The message shall include the same Measurement ID that was used in the DEDICATED MEASUREMENT INITIATION REQUEST message and the *Cause* IE set to an appropriate value.

In the case that the *Node B Communication Context ID* IE is set to 'All NBCC' the *CRNC Communication Context ID* IE in the DEDICATED MEASUREMENT INITIATION FAILURE shall be set to the value 'All CRNCCC', which is reserved for this purpose.

Typical cause values are as follows:

#### Radio Network Layer cause

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

#### Miscellaneous Cause

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

### 8.3.8.4 Abnormal Conditions

-

## 8.3.9 Dedicated Measurement Reporting

### 8.3.9.1 General

This procedure is used by the Node B to report the result of measurements requested by the CRNC with the Dedicated Measurement Initiation procedure. The Node B may initiate the Dedicated Measurement Reporting procedure at any time after establishing a Radio Link, as long as the Node B communication context exists.

### 8.3.9.2 Successful Operation



**Figure 40: Dedicated Measurement Reporting procedure: Successful Operation**

If the requested measurement reporting criteria are met, the Node B shall initiate a Measurement Reporting procedure. The DEDICATED MEASUREMENT REPORT message shall use the communication control port assigned to the Node B communication context. If the measurement was initiated (by the Dedicated Measurement Initiation procedure) for multiple dedicated measurement objects, the Node B may include measurement values for multiple objects in the DEDICATED MEASUREMENT REPORT message. Unless specified below, the meaning of the parameters are given in other specifications.

The *Dedicated Measurement ID* IE shall be set to the Dedicated Measurement ID provided by the CRNC when initiating the measurement with the Dedicated Measurement Initiation procedure.

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

### 8.3.9.3 Abnormal Conditions

-

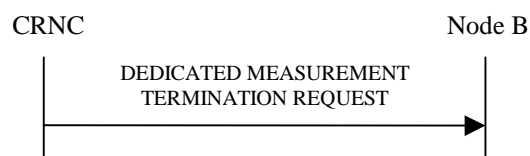
## 8.3.10 Dedicated Measurement Termination

### 8.3.10.1 General

This procedure is used by the CRNC to terminate a measurement previously requested by the Dedicated Measurement Initiation procedure.

The Dedicated Measurement Termination procedure shall not be initiated if a Prepared Reconfiguration exists, as defined in chapter 3.1.

### 8.3.10.2 Successful Operation



**Figure 41: Dedicated Measurement Termination procedure: Successful Operation**

This procedure is initiated with a DEDICATED MEASUREMENT TERMINATION REQUEST message, sent from the CRNC to the Node B using the communication control port assigned to the Node B communication context.

Upon reception, the Node B shall terminate reporting of measurements corresponding to the received Dedicated Measurement ID.

### 8.3.10.3 Abnormal Conditions

-

## 8.3.11 Dedicated Measurement Failure

### 8.3.11.1 General

This procedure is used by the Node B to notify the CRNC that a measurement previously requested by the Measurement Initiation procedure can no longer be reported. The Node B is allowed to initiate the DEDICATED MEASUREMENT FAILURE INDICATION message at any time after having sent the RADIO LINK SETUP RESPONSE message, as long as the Node B communication context exists.

### 8.3.11.2 Successful Operation



**Figure 42: Dedicated Measurement Failure procedure: Successful Operation**

This procedure is initiated with a DEDICATED MEASUREMENT FAILURE INDICATION message, sent from the Node B to the CRNC using the communication control port assigned to the Node B communication context, to inform the CRNC that a previously requested measurement can no longer be reported. The Node B has locally terminated the indicated measurement.

If the failed measurement was initiated with the *Node B Communication Context ID* IE set to the reserved value "All NBCC" the Node B has terminated the measurement reporting of the measurement corresponding to the Measurement ID indicated in the DEDICATED MEASUREMENT FAILURE INDICATION message and the *CRNC Communication Context ID* IE shall be set to the value 'All CRNCCC'.

### 8.3.11.3 Abnormal Conditions

-

## 8.3.12 Radio Link Failure

### 8.3.12.1 General

This procedure is used by Node B to indicate a failure in one or more Radio Links or Radio Link Sets.

### 8.3.12.2 Successful Operation



**Figure 43: Radio Link Failure procedure: Successful Operation**

When Node B detects that one or more Radio Link or Radio Link Sets is no longer available, it sends the RADIO LINK FAILURE INDICATION message to CRNC indicating the failed Radio Links or Radio Link Sets with the most appropriate cause values in the *Cause* IE. If the failure concerns one or more individual Radio Links the Node B 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 Node B shall indicate the affected Radio Link Set(s) using the *RL Set Information* IE group.]

When the Radio Link Failure procedure is used to notify the loss of UL synchronisation, the message shall be sent, with the cause value 'Synchronisation Failure', when indicated by the UL out-of-sync algorithm defined in [10] and [21]. [FDD – The algorithm in [10] shall use the maximum value of the parameters N\_OUTSYNC\_IND and T\_RLFFAILURE, and the minimum value of the parameters N\_INSYNC\_IND, that are configured in the cells supporting the radio links of the RL Set].

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

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

Typical cause values are:

**Radio Network Layer Causes:**

- Synchronisation Failure
- Invalid CM settings

**Transport Layer Causes:**

- Transport Resources Unavailable

**Miscellaneous Causes:**

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

### 8.3.12.3 Abnormal Conditions

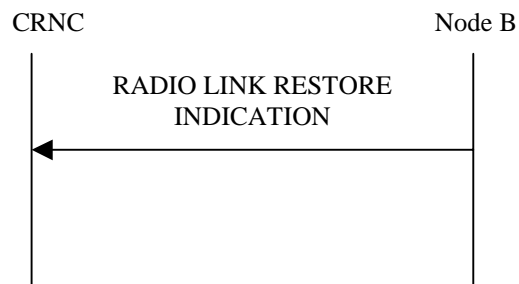
-

## 8.3.13 Radio Link Restoration

### 8.3.13.1 General

This procedure is used by the Node B to notify the achievement and re-achievement of uplink synchronisation of one or more Radio Links or Radio Link Sets.

### 8.3.13.2 Successful Operation



**Figure 44: Radio Link Restoration procedure: Successful Operation**

The Node B shall send the RADIO LINK RESTORE INDICATION message to the CRNC when indicated by the UL sync detection algorithm defined in [10 and [21]. [FDD – The algorithm in [10] shall use the minimum value of the parameters N\_INSYNCR\_IND that are configured in the cells supporting the radio links of the RL Set].

[TDD - If the re-established synchronisation concerns one or more individual Radio Links the Node B shall indicate the affected Radio Link(s) using the *RL Information IE* group.] [FDD - If the re-established synchronisation concerns one or more Radio Link Sets the Node B shall indicate the affected Radio Link Set(s) using the *RL Set Information IE* group.]

### 8.3.13.3 Abnormal Condition

-

## 8.3.14 Compressed Mode Command [FDD]

### 8.3.14.1 General

The Compressed Mode Command procedure is used to activate or deactivate the compressed mode in the Node B for one UE-UTRAN connection.

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

### 8.3.14.2 Successful Operation



**Figure 47: Compressed Mode Command procedure, Successful Operation**

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

If during the compressed mode measurement the gaps of two or more pattern sequences overlap, the Node B shall behave as specified in subclause 8.3.12.

### 8.3.14.3 Abnormal Conditions

-

## 8.3.15 Downlink Power Timeslot Control [TDD]

### 8.3.15.1 General

The purpose of this procedure is to enable the Node B to use the indicated DL Timeslot ISCP values when deciding the DL TX Power for each timeslot

The Downlink Power Timeslot Control procedure can be initiated by the CRNC at any time when the Node B communication context exists, irrespective of other ongoing CRNC initiated dedicated NBAP procedures towards this Node B communication context. The only exception occurs when the CRNC has requested the deletion of the last RL via this Node B, in which case the Downlink Power Timeslot Control procedure shall no longer be initiated.

### 8.3.15.2 Successful Operation



**Figure 47A: Downlink Power Timeslot Control procedure: Successful Operation**

The procedure is initiated by the CRNC sending a DL POWER TIMESLOT CONTROL REQUEST message to the Node B.

Upon reception, the Node B shall use the indicated DL Timeslot ISCP value when deciding the DL TX Power for each timeslot as specified in [21], i.e. it shall reduce the DL TX power in those downlink timeslots of the radio link where the interference is low, and increase the DL TX power in those timeslots where the interference is high, while keeping the total downlink power in the radio link unchanged.

### 8.3.15.3 Abnormal Conditions

-

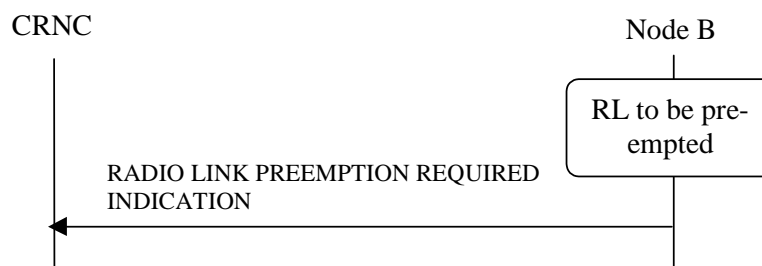
## 8.3.16 Radio Link Pre-emption

### 8.3.16.1 General

This procedure is started by the Node B when resources need to be freed.

The Node B may initiate the Radio Link Pre-emption procedure at any time after establishing a Radio Link.

### 8.3.16.2 Successful Operation



**Figure 47B: RL Pre-emption procedure, Successful Operation**

When Node B detects that a one or more Radio Links should be pre-empted, see Annex A, it shall send the RADIO LINK PREEMPTION REQUIRED INDICATION message to the CRNC. If all Radio Links for a CRNC Communication Context ID should be pre-empted, the *RL Information* IE shall be omitted. If one or several but not all

Radio Links should be pre-empted for a CRNC Communication Context, the Radio Links that should be pre-empted shall be indicated in the *RL Information* IE. The Radio Link(s) that should be pre-empted, should be deleted by the CRNC.

### 8.3.16.3 Abnormal Conditions

-

## 8.4 Error Handling Procedures

### 8.4.1 Error Indication

#### 8.4.1.1 General

The Error Indication procedure is initiated by a node to report detected errors in one incoming message, provided they cannot be reported by an appropriate failure message.

#### 8.4.1.2 Successful Operation

When the conditions defined in chapter 10 are fulfilled, the Error Indication procedure is initiated by an ERROR INDICATION message sent from the receiving node.

When the ERROR INDICATION message is sent from a Node B to its CRNC, the *CRNC Communication Context ID* IE shall be included in the message if available. When the ERROR INDICATION message is sent from a CRNC to a Node B, the *Node B Communication Context ID* IE shall be included in the message if available.

When a message for a dedicated procedure is received in Node B with an invalid *Node B Communication Context ID* IE, the Node B shall include the unknown *Node B Communication Context ID* IE from the dedicated message in the ERROR INDICATION message, unless another handling is specified in the procedure text for the affected procedure.

Typical cause values for the ERROR INDICATION message are:

#### Protocol Causes:

- Transfer Syntax Error
- Abstract Syntax Error (Reject)
- Abstract Syntax Error (Ignore and Notify)
- Message not Compatible with Receiver State
- Unspecified

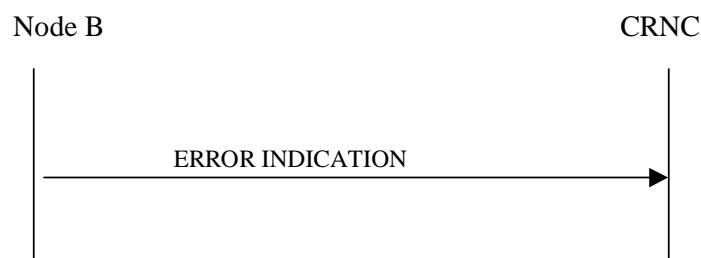


Figure 49: Error Indication procedure (Node B to CRNC): Successful Operation



**Figure 50: Error Indication procedure (CRNC to Node B): Successful Operation**

### 8.4.1.3 Abnormal Conditions

-



## 9 Elements for NBAP communication

### 9.1 Message Functional Definition and Content

#### 9.1.1 General

Section 9.1 presents the contents of NBAP messages in tabular format. The corresponding ASN.1 definition is presented in section 9.3. In case there is contradiction between the tabular format in section 9.1 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional IEs, where the tabular format shall take precedence.

NOTE: The messages have been defined in accordance to the guidelines specified in [26].

#### 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 table below the message containing the explanation of the condition |

In case of an information element group, the group is preceded by a name for the info group (in bold). It is also indicated how many times a group may be repeated in the message and whether the group is conditional. 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:

|               |   |
|---------------|---|
| <b>-</b>      | 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. |

##### 9.1.2.3 Range

The Range column indicates the allowed number of copies of repetitive IEs/IE groups.

##### 9.1.2.4 Assigned Criticality

This column provides the actual criticality information as defined in chapter 10.3.2, if applicable.

## 9.1.3 COMMON TRANSPORT CHANNEL SETUP REQUEST

### 9.1.3.1 FDD Message

| IE/Group Name                                   | Presence       | Range             | IE type and reference    | Semantics description              | Criticality | Assigned Criticality |
|---|----------------|-------------------|--------------------------|------------------------------------|-------------|----------------------|
| Message Discriminator                           | M              |                   | 9.2.1.45                 |                                    | –           |                      |
| Message Type                                    | M              |                   | 9.2.1.46                 |                                    | YES         | reject               |
| Transaction ID                                  | M              |                   | 9.2.1.62                 |                                    | –           |                      |
| C-ID  | M              |                   | 9.2.1.9                  |                                    | YES         | reject               |
| Configuration Generation ID                     | M              |                   | 9.2.1.16                 |                                    | YES         | reject               |
| CHOICE common physical channel to be configured | M              |                   |                          |                                    | YES         | ignore               |
| >Secondary CCPCH                                |                |                   |                          |                                    | –           |                      |
| <b>&gt;&gt;Secondary CCPCH</b>                  |                | 1                 |                          |                                    |             |                      |
| >>>Common Physical Channel ID                   | M              |                   | 9.2.1.13                 |                                    | –           |                      |
| >>>FDD S-CCPCH Offset                           | M              |                   | 9.2.2.15                 | Corresponds to [7]: s-CCPCH,k      | –           |                      |
| >>>DL Scrambling Code                           | C-PCH          |                   | 9.2.2.13                 |                                    | –           |                      |
| >>>FDD DL Channelisation Code Number            | M              |                   | 9.2.2.14                 |                                    | –           |                      |
| >>>TFCS   | M              |                   | 9.2.1.58                 | For the DL.                        | –           |                      |
| >>>Secondary CCPCH Slot Format                  | M              |                   | 9.2.2.43                 |                                    | –           |                      |
| >>>TFCI Presence                                | C – SlotFormat |                   | 9.2.1.57                 | Refer to TS [7]                    | –           |                      |
| >>>Multiplexing Position                        | M              |                   | 9.2.2.23                 |                                    | –           |                      |
| <b>&gt;&gt;&gt;Power Offset Information</b>     |                | 1                 |                          |                                    | –           |                      |
| >>>>PO1   | M              |                   | Power Offset<br>9.2.2.29 | Power offset for the TFCI bits     | –           |                      |
| >>>>PO3   | M              |                   | Power Offset<br>9.2.2.29 | Power offset for the pilot bits    | –           |                      |
| >>>STTD Indicator                               | M              |                   | 9.2.2.48                 |                                    | –           |                      |
| <b>&gt;&gt;&gt;FACH Parameters</b>              | C-choiceCh     | 0..<maxnoofFACHs> |                          |                                    | GLOBAL      | reject               |
| >>>>Common Transport Channel ID                 | M              |                   | 9.2.1.14                 |                                    | –           |                      |
| >>>>Transport Format Set                        | M              |                   | 9.2.1.59                 | For the DL.                        | –           |                      |
| >>>>ToAWS                                       | M              |                   | 9.2.1.61                 |                                    | –           |                      |
| >>>>ToAWE                                       | M              |                   | 9.2.1.60                 |                                    | –           |                      |
| >>>>Max FACH Power                              | M              |                   | DL Power<br>9.2.1.21     | Maximum allowed power on the FACH. | –           |                      |
| <b>&gt;&gt;&gt;PCH Parameters</b>               | C-choiceCh     | 0..1              |                          |                                    | YES         | reject               |
| >>>>Common Transport Channel ID                 | M              |                   | 9.2.1.14                 |                                    | –           |                      |
| >>>>Transport Format                            | M              |                   | 9.2.1.59                 | For the DL.                        | –           |                      |

|  |   |                               |                      |                        |     |        |
|--|---|-------------------------------|----------------------|------------------------|-----|--------|
| Set  |   |                               |                      |                        |     |        |
| >>>>ToAWS  | M |                               | 9.2.1.61             |                        | -   |        |
| >>>>ToAWE  | M |                               | 9.2.1.60             |                        | -   |        |
| >>>>PCH Power                                      | M |                               | DL Power<br>9.2.1.21 |                        | -   |        |
| <b>&gt;&gt;&gt;&gt;PICH Parameters</b>             |   | 1                             |                      |                        | -   |        |
| >>>>>Common Physical Channel ID                    | M |                               | 9.2.1.13             |                        | -   |        |
| >>>>>FDD DL Channelisation Code Number             | M |                               | 9.2.2.14             |                        | -   |        |
| >>>>>PICH Power                                    | M |                               | 9.2.1.49A            |                        | -   |        |
| >>>>>PICH Mode                                     | M |                               | 9.2.2.26             | Number of PI per frame | -   |        |
| >>>>>STTD Indicator                                | M |                               | 9.2.2.48             |                        | -   |        |
| >PRACH   |   |                               |                      |                        | -   |        |
| <b>&gt;&gt;PRACH</b>                               |   | 1                             |                      |                        |     |        |
| >>>Common Physical Channel ID                      | M |                               | 9.2.1.13             |                        | -   |        |
| >>>Scrambling Code Number                          | M |                               | 9.2.2.42             |                        | -   |        |
| >>>TFCS  | M |                               | 9.2.1.58             | For the UL.            | -   |        |
| >>>Preamble Signatures                             | M |                               | 9.2.2.31             |                        | -   |        |
| <b>&gt;&gt;&gt;Allowed Slot Format Information</b> |   | 1..<Maximum of Formats PRACH> |                      |                        | -   |        |
| >>>>RACH Slot Format                               | M |                               | 9.2.2.37             |                        | -   |        |
| >>>RACH Sub Channel Numbers                        | M |                               | 9.2.2.38             |                        | -   |        |
| >>>Puncture Limit                                  | M |                               | 9.2.1.50             | For the UL             | -   |        |
| >>>Preamble Threshold                              | M |                               | 9.2.2.32             |                        | -   |        |
| <b>&gt;&gt;&gt;RACH Parameters</b>                 |   | 1                             |                      |                        | YES | Reject |
| >>>>>Common Transport Channel ID                   | M |                               | 9.2.1.14             |                        | -   |        |
| >>>>>Transport Format Set                          | M |                               | 9.2.1.59             | For the UL.            | -   |        |
| <b>&gt;&gt;AICH Parameters</b>                     |   | 1                             |                      |                        | -   |        |
| >>>Common Physical Channel ID                      | M |                               | 9.2.1.13             |                        | -   |        |
| >>>AICH Transmission Timing                        | M |                               | 9.2.2.1              |                        | -   |        |
| >>>FDD DL Channelisation Code Number               | M |                               | 9.2.2.14             |                        | -   |        |
| >>>AICH Power                                      | M |                               | 9.2.2.D              |                        | -   |        |
| >>>STTD Indicator                                  | M |                               | 9.2.2.48             |                        | -   |        |
| >PCPCHes   |   |                               |                      |                        | -   |        |
| <b>&gt;&gt;CPCH Parameters</b>                     |   | 1                             |                      |                        | -   |        |
| >>>Common Transport Channel ID                     | M |                               | 9.2.1.14             |                        | -   |        |
| >>>Transport Format Set                            | M |                               | 9.2.1.59             | For the UL.            | -   |        |
| >>>AP Preamble Scrambling Code                     | M |                               | CPCH Scrambling      |                        | -   |        |

|                                       |         |                                 |   |   |   |  |
|---------------------------------------|---------|---------------------------------|---|---|---|--|
|                                       |         |                                 | Code Number<br>9.2.2.4B                 |   |   |  |
| >>>CD Preamble Scrambling Code        | M       |                                 | CPCH Scrambling Code Number<br>9.2.2.4B |   | – |  |
| >>>TFCS                               | M       |                                 | 9.2.1.58                                | For the UL  | – |  |
| >>>CD Signatures                      | O       |                                 | Preamble Signatures<br>9.2.2.31         | Note: When not present, all CD signatures are to be used. | – |  |
| >>>CD Sub Channel Numbers             | C-CDSig |                                 | 9.2.2.1C                                |   | – |  |
| >>>Puncture Limit                     | M       |                                 | 9.2.1.50                                | For the UL  | – |  |
| >>>CPCH UL DPCCH Slot Format          | M       |                                 | 9.2.2.4C                                | For UL CPCH message control part                          | – |  |
| >>>UL SIR                             | M       |                                 | UL SIR<br>9.2.2.58                      |   | – |  |
| >>>Initial DL transmission Power      | M       |                                 | DL Power<br>9.2.1.21                    |   | – |  |
| >>>Maximum DL Power                   | M       |                                 | DL Power<br>9.2.1.21                    |   | – |  |
| >>>Minimum DL Power                   | M       |                                 | DL Power<br>9.2.1.21                    |   | – |  |
| >>>PO2                                | M       |                                 | Power Offset<br>9.2.2.29                | Power offset for the TPC bits                             | – |  |
| >>>PO3                                | M       |                                 | Power Offset<br>9.2.2.29                | Power offset for the pilot bits                           | – |  |
| >>>FDD TPC DL Step Size               | M       |                                 | 9.2.2.16                                |   | – |  |
| >>>N_Start_Message                    | M       |                                 | 9.2.2.23C                               |   | – |  |
| >>>N_EOT                              | M       |                                 | 9.2.2.23A                               |   | – |  |
| >>>Channel Assignment Indication      | M       |                                 | 9.2.2.1D                                |   | – |  |
| >>>CPCH Allowed Total Rate            | M       |                                 | 9.2.2.4A                                |   | – |  |
| >>>PCPCH Channel Information          |         | <i>1..&lt;maxnoofPCPCHs&gt;</i> |   |   | – |  |
| >>>>Common Physical Channel ID        | M       |                                 | 9.2.1.13                                |   | – |  |
| >>>>CPCH Scrambling Code Number       | M       |                                 | 9.2.2.4B                                | For UL PCPCH  | – |  |
| >>>>DL Scrambling Code                | M       |                                 | 9.2.2.13                                | For DL CPCH message part                                  | – |  |
| >>>>FDD DL Channelisation Code Number | M       |                                 | 9.2.2.14                                | For DL CPCH message                                       | – |  |

|   |       |                   |                    |                                       |   |  |
|---|-------|-------------------|--------------------|---------------------------------------|---|--|
|   |       |                   |                    | part                                  |   |  |
| >>>>PCP Length                          | M     |                   | 9.2.2.24A          |                                       | – |  |
| >>>> <b>UCSM Information</b>            | C-NCA | 1                 |                    |                                       | – |  |
| >>>>>Min UL Channelisation Code Length  | M     |                   | 9.2.2.22           |                                       | – |  |
| >>>>>NF_max                             | M     |                   | 9.2.2.23B          |                                       | – |  |
| >>>>> <b>Channel Request Parameters</b> |       | 0..<maxAPSig Num> |                    |                                       | – |  |
| >>>>>>AP Preamble Signature             | M     |                   | 9.2.2.1A           |                                       | – |  |
| >>>>>AP Sub Channel Number              | O     |                   | 9.2.2.1B           |                                       | – |  |
| >>> <b>VCAM Mapping Information</b>     | C-CA  | 1..<maxnoofLen>   |                    | Refer to TS [18]                      | – |  |
| >>>>>Min UL Channelisation Code Length  | M     |                   | 9.2.2.22           |                                       | – |  |
| >>>>>NF_max                             | M     |                   | 9.2.2.23B          |                                       | – |  |
| >>>>>Max Number of PCPCHes              | M     |                   | 9.2.2.20A          |                                       | – |  |
| >>>>> <b>SF Request Parameters</b>      |       | 1..<maxAPSig Num> |                    |                                       | – |  |
| >>>>>>AP Preamble Signature             | M     |                   | 9.2.2.1A           |                                       | – |  |
| >>>>>>AP Sub Channel Number             | O     |                   | 9.2.2.1B           |                                       | – |  |
| >>> <b>AP-AICH Parameters</b>           |       | 1                 |                    |                                       | – |  |
| >>>>>Common Physical Channel ID         | M     |                   | 9.2.1.13           |                                       | – |  |
| >>>>>FDD DL Channelisation Code Number  | M     |                   | 9.2.2.14           |                                       | – |  |
| >>>>>AP-AICH Power                      | M     |                   | AICH Power 9.2.2.D |                                       | – |  |
| >>>>>CSICH Power                        | M     |                   | AICH Power 9.2.2.D | For CSICH bits at end of AP-AICH slot | – |  |
| >>>>>STTD Indicator                     | M     |                   | 9.2.2.48           |                                       | – |  |
| >>> <b>CD/CA-ICH Parameters</b>         |       | 1                 |                    |                                       | – |  |
| >>>>>Common Physical Channel ID         | M     |                   | 9.2.1.13           |                                       | – |  |
| >>>>>FDD DL Channelisation Code Number  | M     |                   | 9.2.2.14           |                                       | – |  |
| >>>>>CD/CA-ICH Power                    | M     |                   | AICH Power 9.2.2.D |                                       | – |  |
| >>>>>STTD Indicator                     | M     |                   | 9.2.2.48           |                                       | – |  |

| <b>Condition</b> | <b>Explanation</b>  |
|------------------|---|
| SlotFormat       | This IE is present only if the Secondary CCPCH Slot Format is equal to any of the value 8 to 17 |
| <i>ChoiceCh</i>  | One of the channels FACH or PCH or both must be present.  |
| <i>CDSig</i>     | The IE may be present if the Available CD Signatures is present.                                |
| <i>CA</i>        | The IE must be present if the Channel Assignment Indication is set to 'CA Active'.              |
| <i>NCA</i>       | The IE must be present if the Channel Assignment Indication is set to 'CA Inactive'.            |
| <i>PCH</i>       | This IE is present only if the PCH parameters IE group is not present.                          |

| <b>Range bound</b>             | <b>Explanation</b>  |
|--------------------------------|---|
| <i>MaxnoofFACHs</i>            | Maximum number of FACHs that can be defined on a Secondary CCPCH. |
| <i>MaxnoofPCPCHs</i>           | Maximum number of PCPCHs for a CPCH                               |
| <i>MaxnoofLen</i>              | Maximum number of Min UL Channelisation Code Length               |
| <i>MaxnoofSlotFormatsPRACH</i> | Maximum number of SF for a PRACH                                  |
| <i>MaxAPSigNum</i>             | Maximum number of AP Signatures.                                  |

## 9.1.3.2 TDD Message

| IE/Group Name   | Presence      | Range                   | IE type and reference | Semantics description                                    | Criticality | Assigned Criticality |
|---|---------------|-------------------------|-----------------------|--|-------------|----------------------|
| Message Discriminator                                   | M             |                         | 9.2.1.45              |  | –           |                      |
| Message Type  | M             |                         | 9.2.1.46              |  | YES         | reject               |
| Transaction ID  | M             |                         | 9.2.1.62              |  | –           |                      |
| C-ID  | M             |                         | 9.2.1.9               |  | YES         | reject               |
| Configuration Generation ID                             | M             |                         | 9.2.1.16              |  | YES         | reject               |
| CHOICE <i>common physical channels to be configured</i> | M             |                         |                       |  | YES         | ignore               |
| >Secondary CCPCHs                                       |               |                         |                       |  | –           |                      |
| >>CCTrCH ID   | M             |                         | 9.2.3.3               | For DL CCTrCH supporting one or several Secondary CCPCHs | –           |                      |
| >>TFCS  | M             |                         | 9.2.1.58              | For DL CCTrCH supporting one or several Secondary CCPCHs | –           |                      |
| >>TFCI Coding   | M             |                         | 9.2.3.22              |  | –           |                      |
| >>Puncture Limit  | M             |                         | 9.2.1.50              |  | –           |                      |
| >>>Secondary CCPCH                                      |               | 1..<maxnoofS - CCPC Hs> |                       |  | GLOBAL      | reject               |
| >>>Common Physical Channel ID                           | M             |                         | 9.2.1.13              |  | –           |                      |
| >>>TDD Channelisation Code                              | M             |                         | 9.2.3.19              |  | –           |                      |
| >>>Time Slot  | M             |                         | 9.2.3.23              |  | –           |                      |
| >>>Midamble shift and Burst Type                        | M             |                         | 9.2.3.7               |  | –           |                      |
| >>>TDD Physical Channel Offset                          | M             |                         | 9.2.3.20              |  | –           |                      |
| >>>Repetition Period                                    | M             |                         | 9.2.3.16              |  | –           |                      |
| >>>Repetition Length                                    | M             |                         | 9.2.3.15              |  | –           |                      |
| >>>S-CCPCH Power  | M             |                         | DL Power 9.2.1.21     |  | –           |                      |
| >>>FACH   | C<br>ChoiceCh | 0..<maxnoofFACHs>       |                       |  | GLOBAL      | reject               |
| >>>Common Transport Channel ID                          | M             |                         | 9.2.1.14              |  | –           |                      |
| >>>CCTrCH ID  | M             |                         | 9.2.3.3               |  | –           |                      |
| >>>Transport Format Set                                 | M             |                         | 9.2.1.59              | For the DL.  | –           |                      |
| >>>ToAWS  | M             |                         | 9.2.1.61              |  | –           |                      |
| >>>ToAWE  | M             |                         | 9.2.1.60              |  | –           |                      |
| >>>PCH  | C             | 0..1                    |                       |  | YES         | reject               |

|                                   |          |   |           |             |     |        |
|-----------------------------------|----------|---|-----------|-------------|-----|--------|
|                                   | ChoiceCh |   |           |             |     |        |
| >>>Common Transport Channel ID    | M        |   | 9.2.1.14  |             | –   |        |
| >>>CCTrCH ID                      | M        |   | 9.2.3.3   |             | –   |        |
| >>>Transport Format Set           | M        |   | 9.2.1.59  | For the DL. | –   |        |
| >>>ToAWS                          | M        |   | 9.2.1.61  |             | –   |        |
| >>>ToAWE                          | M        |   | 9.2.1.60  |             | –   |        |
| >>>PICH Parameters                |          | 1 |           |             | YES | reject |
| >>>>Common Physical Channel ID    | M        |   | 9.2.1.13  |             | –   |        |
| >>>>TDD Channelisation Code       | M        |   | 9.2.3.19  |             | –   |        |
| >>>>Time Slot                     | M        |   | 9.2.3.23  |             | –   |        |
| >>>>Midamble shift and Burst Type | M        |   | 9.2.3.7   |             | –   |        |
| >>>>TDD Physical Channel Offset   | M        |   | 9.2.3.20  |             | –   |        |
| >>>>Repetition period             | M        |   | 9.2.3.16  |             | –   |        |
| >>>>Repetition length             | M        |   | 9.2.3.15  |             | –   |        |
| >>>>Paging Indicator Length       | M        |   | 9.2.3.8   |             | –   |        |
| >>>>PICH Power                    | M        |   | 9.2.1.49A |             | –   |        |
| >PRACH                            |          |   |           |             | –   |        |
| >>PRACH                           | M        | 1 |           |             | YES | reject |
| >>>Common Physical Channel ID     | M        |   | 9.2.1.13  |             | –   |        |
| >>>TFCS                           | M        |   | 9.2.1.58  |             | –   |        |
| >>>Time Slot                      | M        |   | 9.2.3.23  |             | –   |        |
| >>>TDD Channelisation Code        | M        |   | 9.2.3.19  |             | –   |        |
| >>>Max PRACH Midamble Shifts      | M        |   | 9.2.3.6   |             | –   |        |
| >>>PRACH Midamble                 | M        |   | 9.2.3.14  |             | –   |        |
| >>>RACH                           |          | 1 |           |             | YES | reject |
| >>>>Common Transport Channel ID   | M        |   | 9.2.1.14  |             | –   |        |
| >>>>Transport Format Set          | M        |   | 9.2.1.59  | For the UL  | –   |        |

| Condition       | Explanation  |
|-----------------|--|
| <i>ChoiceCh</i> | One of the channels FACH or PCH or both must be present. |

| Range bound            | Explanation   |
|------------------------|---|
| <i>MaxnoofS-CCPCHs</i> | Maximum number of Secondary CCPCHs per CCTrCH.                    |
| <i>MaxnoofCCTrCHs</i>  | Maximum number of CCTrCHs that can be defined in a cell.          |
| <i>MaxnoofFACHs</i>    | Maximum number of FACHs that can be defined on a Secondary CCPCH. |



## 9.1.4 COMMON TRANSPORT CHANNEL SETUP RESPONSE

| IE/Group Name               | Presence | Range                          | IE type and reference                                   | Semantics description   | Criticality | Assigned Criticality |
|-----------------------------|----------|--------------------------------|---|---|-------------|----------------------|
| Message Discriminator       | M        |                                | 9.2.1.45  |   | –           |                      |
| Message Type                | M        |                                | 9.2.1.46  |   | YES         | reject               |
| Transaction ID              | M        |                                | 9.2.1.62  |   | –           |                      |
| <b>FACH Parameters info</b> |          | <i>0..&lt;maxnoofFACHs&gt;</i> |   | The FACH Parameters may be combined with PCH Parameters   | GLOBAL      | ignore               |
| >FACH Parameters            | M        |                                | Common Transport Channel Information Response 9.2.1.14A |   | –           |                      |
| PCH Parameters              | O        |                                | Common Transport Channel Information Response 9.2.1.14A | The PCH Parameters may be combined with FACH Parameters   | YES         | ignore               |
| RACH parameters             | O        |                                | Common Transport Channel Information Response 9.2.1.14A | The RACH Parameters shall not be combined with FACH Parameters or PCH Parameters                    | YES         | ignore               |
| CPCH parameters             | O        |                                | Common Transport Channel Information Response 9.2.1.14A | The CPCH Parameters shall not be combined with FACH Parameters or PCH Parameters or RACH Parameters | YES         | ignore               |
| Criticality Diagnostics     | O        |                                | 9.2.1.17  |   | YES         | ignore               |

| Range bound         | Explanation  |
|---------------------|--|
| <i>MaxnoofFACHs</i> | Maximum number of FACHs that can be defined on a Secondary CCPCH[FDD] / a group of Secondary CCPCHs [TDD]. |

## 9.1.5 COMMON TRANSPORT CHANNEL SETUP FAILURE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           | –                    |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           | –                    |
| Cause                   | M        |       | 9.2.1.6               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

## 9.1.6 COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST

### 9.1.6.1 FDD Message

| IE/Group Name  | Presence | Range                         | IE type and reference | Semantics description              | Criticality | Assigned Criticality |
|--|----------|-------------------------------|-----------------------|------------------------------------|-------------|----------------------|
| Message Discriminator                                    | M        |                               | 9.2.1.45              |                                    | –           |                      |
| Message Type   | M        |                               | 9.2.1.46              |                                    | YES         | reject               |
| Transaction ID   | M        |                               | 9.2.1.62              |                                    | –           |                      |
| C-ID   | M        |                               | 9.2.1.9               |                                    | YES         | reject               |
| Configuration Generation ID                              | M        |                               | 9.2.1.16              |                                    | YES         | reject               |
| CHOICE <i>common physical channel to be reconfigured</i> | M        |                               |                       |                                    | YES         | reject               |
| >Secondary CCPCCH  |          |                               |                       |                                    | –           |                      |
| >>FACH parameters  |          | 0..<maxFACHCell>              |                       |                                    | GLOBAL      | reject               |
| >>>Common Transport Channel ID                           | M        |                               | 9.2.1.14              |                                    | –           |                      |
| >>>Max FACH Power  | O        |                               | DL Power 9.2.1.21     | Maximum allowed power on the FACH. | –           |                      |
| >>>ToAWS   | O        |                               | 9.2.1.61              |                                    | –           |                      |
| >>>ToAWE   | O        |                               | 9.2.1.60              |                                    | –           |                      |
| >>PCH Parameters   |          | 0..1                          |                       |                                    | YES         | reject               |
| >>>Common Transport Channel ID                           | M        |                               | 9.2.1.14              |                                    | –           |                      |
| >>>PCH Power   | O        |                               | DL Power 9.2.1.21     | Power to be used on the PCH.       | –           |                      |
| >>>ToAWS   | O        |                               | 9.2.1.61              |                                    | –           |                      |
| >>>ToAWE   | O        |                               | 9.2.1.60              |                                    | –           |                      |
| >>PICH Parameters  |          | 0..1                          |                       |                                    | YES         | reject               |
| >>>Common Physical Channel ID                            | M        |                               | 9.2.1.13              |                                    | –           |                      |
| >>>PICH Power  | O        |                               | 9.2.1.49A             |                                    | –           |                      |
| >PRACH   |          |                               |                       |                                    | –           |                      |
| >>PRACH Parameters                                       |          | 0..<MaxPRACHCell>             |                       |                                    | GLOBAL      | reject               |
| >>>Common Physical Channel ID                            | M        |                               | 9.2.1.13              |                                    | –           |                      |
| >>>Preamble Signatures                                   | O        |                               | 9.2.2.31              |                                    | –           |                      |
| >>>Allowed Slot Format Information                       |          | 0..<Maxno ofSlotFormatsPRACH> |                       |                                    | –           |                      |
| >>>>RACH Slot Format                                     | M        |                               | 9.2.2.37              |                                    | –           |                      |
| >>>>RACH Sub Channel Numbers                             | O        |                               | 9.2.2.38              |                                    | –           |                      |
| >>AICH Parameters  |          | 0..<MaxPRACHCell>             |                       |                                    | GLOBAL      | reject               |
| >>>Common Physical Channel ID                            | M        |                               | 9.2.1.13              |                                    | –           |                      |

|                                  |   |                    |                    |                                       |        |        |
|----------------------------------|---|--------------------|--------------------|---------------------------------------|--------|--------|
| >>>AICH Power                    | O |                    | 9.2.2.D            |                                       | –      |        |
| >CPCH                            |   |                    |                    |                                       | –      |        |
| >>CPCH Parameters                |   | 0..<maxno ofCPCHs> |                    |                                       | GLOBAL | reject |
| >>>Common Transport Channel ID   | M |                    | 9.2.1.14           |                                       | –      |        |
| >>>UL SIR                        | O |                    | 9.2.2.58           |                                       | –      |        |
| >>>Initial DL transmission Power | O |                    | DL Power 9.2.1.21  |                                       | –      |        |
| >>>Maximum DL Power              | O |                    | DL Power 9.2.1.21  |                                       | –      |        |
| >>>Minimum DL Power              | O |                    | DL Power 9.2.1.21  |                                       | –      |        |
| >>AP-AICH Parameters             |   | 0..<maxno ofCPCHs> |                    |                                       | GLOBAL | reject |
| >>>Common Physical Channel ID    | M |                    | 9.2.1.13           |                                       | –      |        |
| >>>AP-AICH Power                 | O |                    | AICH Power 9.2.2.D |                                       | –      |        |
| >>>CSICH Power                   | O |                    | AICH Power 9.2.2.D | For CSICH bits at end of AP-AICH slot | –      |        |
| >>CD/CA-ICH Parameters           |   | 0..<maxno ofCPCHs> |                    |                                       | GLOBAL | reject |
| >>>Common Physical Channel ID    | M |                    | 9.2.1.13           |                                       | –      |        |
| >>>CD/CA-ICH Power               | O |                    | AICH Power 9.2.2.D |                                       | –      |        |

| Range bound                    | Explanation  |
|--------------------------------|--|
| <i>MaxFACHCell</i>             | Maximum number of FACHs that can be defined in a Cell            |
| <i>MaxnoofCPCHs</i>            | Maximum number of CPCHs that can be defined in a Cell            |
| <i>MaxPRACHCell</i>            | Maximum number of PRACHs and AICHs that can be defined in a Cell |
| <i>MaxnoofSlotFormatsPRACH</i> | Maximum number of SF for a PRACH                                 |

### 9.1.6.2 TDD Message

| IE/Group Name                     | Presence | Range  | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-----------------------------------|----------|--------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator             | M        |        | 9.2.1.45              |                       | –           |                      |
| Message Type                      | M        |        | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID                    | M        |        | 9.2.1.62              |                       | –           |                      |
| C-ID                              | M        |        | 9.2.1.9               |                       | YES         | reject               |
| Configuration Generation ID       | M        |        | 9.2.1.16              |                       | YES         | reject               |
| <b>Secondary CCPCH parameters</b> |          | 0 .. 1 |                       |                       | YES         | reject               |

|                                    |   |                      |                   |  |        |        |
|------------------------------------|---|----------------------|-------------------|--|--------|--------|
| >CCTrCH ID                         | M |                      | 9.2.3.3           | For DL CCTrCH supporting one or several Secondary CCPCHs | –      |        |
| >Secondary CCPCHs to be configured |   | 0..<MaxnoofS CCPCHs> |                   |  | GLOBAL | reject |
| >>Common Physical Channel ID       | M |                      | 9.2.1.13          |  | –      |        |
| >>S-CCPCH Power                    | O |                      | DL power 9.2.1.21 |  | –      |        |
| <b>PICH Parameters</b>             |   | 0 .. 1               |                   |  | YES    | reject |
| >Common Physical Channel ID        | M |                      | 9.2.1.13          |  | –      |        |
| >PICH Power                        | O |                      | 9.2.1.49A         |  | –      |        |
| <b>FACH parameters</b>             |   | 0..<Maxno ofFACHs>   |                   |  | GLOBAL | reject |
| >Common Transport Channel ID       | M |                      | 9.2.1.14          |  | –      |        |
| >ToAWS                             | O |                      | 9.2.1.61          |  | –      |        |
| >ToAWE                             | O |                      | 9.2.1.60          |  |        |        |
| <b>PCH parameters</b>              |   | 0 .. 1               |                   |  | YES    | reject |
| >Common Transport Channel ID       | M |                      | 9.2.1.14          |  | –      |        |
| >ToAWS                             | O |                      | 9.2.1.61          |  | –      |        |
| >ToAWE                             | O |                      | 9.2.1.60          |  | –      |        |

| Range bound        | Explanation  |
|--------------------|--|
| <i>MaxFACHCell</i> | Maximum number of FACHs that can be repeated in a Cell |

### 9.1.7 COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

## 9.1.8 COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Cause                   | M        |       | 9.2.1.6               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

## 9.1.9 COMMON TRANSPORT CHANNEL DELETION REQUEST

| IE/Group Name               | Presence | Range | IE type and reference | Semantics description   | Criticality | Assigned Criticality |
|-----------------------------|----------|-------|-----------------------|---|-------------|----------------------|
| Message Discriminator       | M        |       | 9.2.1.45              |   | –           |                      |
| Message Type                | M        |       | 9.2.1.46              |   | YES         | reject               |
| Transaction ID              | M        |       | 9.2.1.62              |   | –           |                      |
| C-ID                        | M        |       | 9.2.1.9               |   | YES         | reject               |
| Common Physical Channel ID  | M        |       | 9.2.1.13              | Indicates the Common Physical Channel for which the Common Transport Channels (together with the Common Physical Channel) shall be deleted. | YES         | reject               |
| Configuration Generation ID | M        |       | 9.2.1.16              |   | YES         | reject               |

## 9.1.10 COMMON TRANSPORT CHANNEL DELETION RESPONSE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

### 9.1.11 BLOCK RESOURCE REQUEST

| IE/Group Name               | Presence                 | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-----------------------------|--------------------------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator       | M                        |       | 9.2.1.45              |                       | –           |                      |
| Message Type                | M                        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID              | M                        |       | 9.2.1.62              |                       | –           |                      |
| C-ID                        | M                        |       | 9.2.1.9               |                       | YES         | reject               |
| Blocking Priority Indicator | M                        |       | 9.2.1.5               |                       | YES         | reject               |
| Shutdown Timer              | C-<br><i>BlockNormal</i> |       | 9.2.1.56              |                       | YES         | reject               |

| Condition   | Explanation   |
|-------------|---|
| BlockNormal | The information element is present when the Blocking Priority Indicator IE indicates 'Normal Priority'. |

### 9.1.12 BLOCK RESOURCE RESPONSE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

### 9.1.13 BLOCK RESOURCE FAILURE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Cause                   | M        |       | 9.2.1.6               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

### 9.1.14 UNBLOCK RESOURCE INDICATION

| IE/Group Name         | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-----------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type          | M        |       | 9.2.1.46              |                       | YES         | ignore               |
| Transaction ID        | M        |       | 9.2.1.62              |                       | –           |                      |
| C-ID                  | M        |       | 9.2.1.9               |                       | YES         | ignore               |

### 9.1.15 AUDIT REQUIRED INDICATION

| IE/Group Name         | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-----------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type          | M        |       | 9.2.1.46              |                       | YES         | ignore               |
| Transaction ID        | M        |       | 9.2.1.62              |                       | –           |                      |

## 9.1.16 AUDIT REQUEST

| <b>IE/Group Name</b>              | <b>Presence</b> | <b>Range</b> | <b>IE type and reference</b> | <b>Semantics description</b> | <b>Criticality</b> | <b>Assigned Criticality</b> |
|-----------------------------------|-----------------|--------------|------------------------------|------------------------------|--------------------|-----------------------------|
| Message Discriminator             | M               |              | 9.2.1.45                     |                              | –                  |                             |
| Message Type                      | M               |              | 9.2.1.46                     |                              | YES                | reject                      |
| Transaction ID                    | M               |              | 9.2.1.62                     |                              | –                  |                             |
| Start Of Audit Sequence Indicator | M               |              | 9.2.1.56B                    |                              | YES                | reject                      |



## 9.1.17 AUDIT RESPONSE

| IE/Group Name                            | Presence | Range                        | IE type and reference                                 | Semantics description                         | Criticality | Assigned Criticality |
|--|----------|------------------------------|---|---|-------------|----------------------|
| Message Discriminator                    | M        |                              | 9.2.1.45  |   | –           |                      |
| Message Type                             | M        |                              | 9.2.1.46  |   | YES         | reject               |
| Transaction ID                           | M        |                              | 9.2.1.62  |   | –           |                      |
| End Of Audit Sequence Indicator          | M        |                              | 9.2.1.29A   |   | YES         | ignore               |
| <b>Cell Information</b>                  |          | 0..<br><maxCellin<br>NodeB > |   |   | EACH        | ignore               |
| >C-ID                                    | M        |                              | 9.2.1.9   |   | –           |                      |
| >Configuration Generation ID             | M        |                              | 9.2.1.16  |   | –           |                      |
| >Resource Operational State              | M        |                              | 9.2.1.52  |   | –           |                      |
| >Availability Status                     | M        |                              | 9.2.1.2   |   | –           |                      |
| >Local Cell ID                           | M        |                              | 9.2.1.38  | The local cell that the cell is configured on | –           |                      |
| >Primary SCH Information                 | O        |                              | Common Physical Channel Status Information 9.2.1.13A  |   | YES         | ignore               |
| >Secondary SCH Information               | O        |                              | Common Physical Channel Status Information 9.2.1.13A  |   | YES         | ignore               |
| >Primary CPICH Information               | O        |                              | Common Physical Channel Status Information 9.2.1.13A  |   | YES         | ignore               |
| <b>&gt;Secondary CPICH Information</b>   |          | 0..<maxSC<br>PICHCell>       |   |   | EACH        | ignore               |
| >>Secondary CPICH Individual Information | M        |                              | Common Physical Channel Status Information 9.2.1.13A  |   | –           |                      |
| >Primary CCPCH Information               | O        |                              | Common Physical Channel Status Information 9.2.1.13A  |   | YES         | ignore               |
| >BCH Information                         | O        |                              | Common Transport Channel Status Information 9.2.1.13A |   | YES         | ignore               |

|  |   |   |   |  |      |        |
|--|---|---|---|--|------|--------|
| <b>&gt;Secondary CCPCH Information</b>   |   | <i>0..&lt;maxSC<br/>CPCHCell<br/>&gt;</i> |   |  | EACH | ignore |
| >>Secondary CCPCH Individual Information | M |   | Common Physical Channel Status Information 9.2.1.13A  |  | –    |        |
| >PCH Information                         | O |   | Common Transport Channel Status Information 9.2.1.14B |  | YES  | ignore |
| >PICH Information                        | O |   | Common Physical Channel Status Information 9.2.1.13A  |  | YES  | ignore |
| <b>&gt;FACH Information</b>              |   | <i>0..&lt;maxFA<br/>CHCell&gt;</i>        |   |  | EACH | ignore |
| >>FACH Individual Information            | M |   | Common Transport Channel Status Information 9.2.1.14B |  | –    |        |
| <b>&gt;PRACH Information</b>             |   | <i>0..&lt;maxPR<br/>ACHCell&gt;</i>       |   |  | EACH | ignore |
| >>PRACH Individual Information           | M |   | Common Physical Channel Status Information 9.2.1.13A  |  | –    |        |
| <b>&gt;RACH Information</b>              |   | <i>0..&lt;maxRA<br/>CHCell&gt;</i>        |   |  | EACH | ignore |
| >>RACH Individual Information            | M |   | Common Transport Channel Status Information 9.2.1.14B |  | –    |        |
| <b>&gt;AICH Information</b>              |   | <i>0..&lt;maxRA<br/>CHCell&gt;</i>        |   |  | EACH | ignore |
| >>AICH Individual Information            | M |   | Common Physical Channel Status Information 9.2.1.13A  |  | –    |        |
| <b>&gt;PCPCH Information</b>             |   | <i>0..&lt;maxPC<br/>PCHCell&gt;</i>       |   |  | EACH | ignore |
| >>PCPCH Individual Information           | M |   | Common Physical Channel Status Information            |  | –    |        |

|   |   |  |   |                  |      |        |
|---|---|--|---|------------------|------|--------|
|   |   |  | 9.2.1.13A   |                  |      |        |
| <b>&gt;CPCH Information</b>                   |   | <i>0..&lt;maxCP<br/>CHCell&gt;</i>                   |   |                  | EACH | ignore |
| >>CPCH Individual Information                 | M |  | Common Transport Channel Status Information 9.2.1.14B |                  | –    |        |
| <b>&gt;AP-AICH Information</b>                |   | <i>0..&lt;maxCP<br/>CHCell&gt;</i>                   |   |                  | EACH | ignore |
| >>AP-AICH Individual Information              | M |  | Common Physical Channel Status Information 9.2.1.13A  |                  | –    |        |
| <b>&gt;CD/CA-ICH Information</b>              |   | <i>0..&lt;maxCP<br/>CHCell&gt;</i>                   |   |                  | EACH | ignore |
| >>CD/CA-ICH Individual Information            | M |  | Common Physical Channel Status Information 9.2.1.13A  |                  | –    |        |
| >SCH Information                              | O |  | Common Physical Channel Status Information 9.2.1.13A  | TDD Sync Channel | YES  | ignore |
| <b>Communication Control Port Information</b> |   | <i>0..<br/>&lt;maxCCPi<br/>nNodeB&gt;</i>            |   |                  | EACH | ignore |
| >Communication Control Port ID                | M |  | 9.2.1.15  |                  | –    |        |
| >Resource Operational State                   | M |  | 9.2.1.52  |                  | –    |        |
| >Availability Status                          | M |  | 9.2.1.2   |                  | –    |        |
| <b>Local Cell Information</b>                 |   | <i>0..<br/>&lt;maxLocal<br/>CellinNode<br/>B&gt;</i> |   |                  | EACH | ignore |
| >Local Cell ID                                | M |  | 9.2.1.38  |                  | –    |        |
| >DL or Global Capacity Credit                 | M |  | 9.2.1.20B   |                  | –    |        |
| >UL Capacity Credit                           | O |  | 9.2.1.65A   |                  | –    |        |
| >Common Channels Capacity Consumption Law     | M |  | 9.2.1.9A  |                  | –    |        |
| >Dedicated Channels Capacity Consumption Law  | M |  | 9.2.1.20A   |                  | –    |        |
| >Maximum DL Power Capability                  | O |  | 9.2.1.39  |                  | –    |        |
| >Minimum Spreading Factor                     | O |  | 9.2.1.47  |                  | –    |        |
| >Minimum DL Power Capability                  | O |  | 9.2.1.46A   |                  | –    |        |

|  |   |  |           |  |      |        |
|--|---|--|-----------|--|------|--------|
| >Local Cell Group ID                         | O |  | 9.2.1.37A |  | –    |        |
| <b>Local Cell Group Information</b>          |   | <i>0..<br/>&lt;maxLocal<br/>CellinNode<br/>B&gt;</i> |           |  | EACH | ignore |
| >Local Cell Group ID                         | M |  | 9.2.1.37A |  | –    |        |
| >DL or Global Capacity Credit                | M |  | 9.2.1.20B |  | –    |        |
| >UL Capacity Credit                          | O |  | 9.2.1.65A |  | –    |        |
| >Common Channels Capacity Consumption Law    | M |  | 9.2.1.9A  |  | –    |        |
| >Dedicated Channels Capacity Consumption Law | M |  | 9.2.1.20A |  | –    |        |
| Criticality Diagnostics                      | O |  | 9.2.1.17  |  | YES  | ignore |

| Range bound         | Explanation  |
|---------------------|--|
| MaxCellinNodeB      | Maximum number of Cell that can be configured in Node B                    |
| MaxCCPinNodeB       | Maximum number of communication control ports that can exist in the Node B |
| MaxCPCHCell         | Maximum number of CPCHes that can be defined in a Cell                     |
| MaxLocalCellinNodeB | Maximum number of Local Cells that can exist in the Node B                 |
| MaxPCPCHCell        | Maximum number of PCPCHes that can be defined in a Cell                    |
| MaxSCPICHCell       | Maximum number of Secondary CPICH that can be defined in a Cell.           |
| MaxSCCPCHCell       | Maximum number of Secondary CCPCH that can be defined in a Cell.           |
| MaxFACHCell         | Maximum number of FACHes that can be defined in a Cell                     |

### 9.1.17A AUDIT FAILURE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Cause                   | M        |       | 9.2.1.6               |                       | YES         | ignore               |
| Criticality diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

## 9.1.18 COMMON MEASUREMENT INITIATION REQUEST

| IE/Group Name                         | Presence | Range | IE Type and Reference                             | Semantics Description | Criticality | Assigned Criticality |
|---------------------------------------|----------|-------|---|-----------------------|-------------|----------------------|
| Message Discriminator                 | M        |       | 9.2.1.45  |                       | –           |                      |
| Message Type                          | M        |       | 9.2.1.46  |                       | YES         | reject               |
| Transaction ID                        | M        |       | 9.2.1.62  |                       | –           |                      |
| Measurement ID                        | M        |       | 9.2.1.42  |                       | YES         | reject               |
| Common Measurement Object Type        | M        |       | 9.2.1.10  |                       | YES         | reject               |
| CHOICE Common Measurement Object Type | M        |       |   |                       | YES         | reject               |
| >Cell                                 |          |       |   |                       | –           |                      |
| >>C-ID                                | M        |       | 9.2.1.9   |                       | –           |                      |
| >>Time Slot                           | O        |       | 9.2.3.23  | TDD only              | –           |                      |
| >RACH                                 |          |       |   | FDD only              | –           |                      |
| >>C-ID                                | M        |       | 9.2.1.9   |                       | –           |                      |
| >>Common Transport Channel ID         | M        |       | 9.2.1.14  |                       | –           |                      |
| >CPCH                                 |          |       |   | FDD only              | –           |                      |
| >>C-ID                                | M        |       | 9.2.1.9   |                       | –           |                      |
| >>Common Transport Channel ID         | M        |       | 9.2.1.14  |                       | –           |                      |
| >>Spreading Factor                    | O        |       | Minimum UL Channelisation Code Length<br>9.2.2.22 |                       | –           |                      |
| Common Measurement Type               | M        |       | 9.2.1.11  |                       | YES         | reject               |
| Measurement Filter Coefficient        | O        |       | 9.2.1.41  |                       | YES         | reject               |
| Report Characteristics                | M        |       | 9.2.1.51  |                       | YES         | reject               |
| SFN reporting indicator               | M        |       | FN reporting indicator<br>9.2.1.29B               |                       | YES         | reject               |
| SFN                                   | O        |       | 9.2.1.53A   |                       | YES         | reject               |

### 9.1.19 COMMON MEASUREMENT INITIATION RESPONSE

| IE/Group Name                         | Presence | Range | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|---------------------------------------|----------|-------|-----------------------|---|-------------|----------------------|
| Message Discriminator                 | M        |       | 9.2.1.45              |   | –           |                      |
| Message Type                          | M        |       | 9.2.1.46              |   | YES         | reject               |
| Transaction ID                        | M        |       | 9.2.1.62              |   | –           |                      |
| Measurement ID                        | M        |       | 9.2.1.42              |   | YES         | ignore               |
| CHOICE Common Measurement Object Type | O        |       |                       | Common Measurement Object Type that the measurement was initiated with. | YES         | ignore               |
| >Cell                                 |          |       |                       |   | YES         |                      |
| >>Common Measurement value            | M        |       | 9.2.1.12              |   | –           |                      |
| >RACH                                 |          |       |                       | FDD only  | –           |                      |
| >>Common Measurement Value            | M        |       | 9.2.1.12              |   | –           |                      |
| >CPCH                                 |          |       |                       | FDD only  | –           |                      |
| >>Common Measurement Value            | M        |       | 9.2.1.12              |   | –           |                      |
| SFN                                   | O        |       | 9.2.1.53A             | Common Measurement Time Reference                                       | YES         | ignore               |
| Criticality Diagnostics               | O        |       | 9.2.1.17              |   | YES         | ignore               |

### 9.1.20 COMMON MEASUREMENT INITIATION FAILURE

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Measurement ID          | M        |       | 9.2.1.42              |                       | YES         | Ignore               |
| Cause                   | M        |       | 9.2.1.6               |                       | YES         | Ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | Ignore               |

### 9.1.21 COMMON MEASUREMENT REPORT

| IE/Group Name                          | Presence | Range | IE Type and Reference | Semantics Description   | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|---|-------------|----------------------|
| Message Discriminator                  | M        |       | 9.2.1.45              |   | –           |                      |
| Message Type                           | M        |       | 9.2.1.46              |   | YES         | ignore               |
| Transaction ID                         | M        |       | 9.2.1.62              |   | –           |                      |
| Measurement ID                         | M        |       | 9.2.1.42              |   | YES         | ignore               |
| CHOICE Common Measurement Object Type  | M        |       |                       | Common Measurement Object Type that the measurement was initiated with. | YES         | ignore               |
| >Cell                                  |          |       |                       |   | –           |                      |
| >>Common Measurement Value Information | M        |       | 9.2.1.12A             |   | –           |                      |
| >RACH                                  |          |       |                       | FDD only  | –           |                      |
| >>Common Measurement Value Information | M        |       | 9.2.1.12A             |   | –           |                      |
| >CPCH                                  |          |       |                       | FDD only  | –           |                      |
| >>Common Measurement Value Information | M        |       | 9.2.1.12A             |   |             |                      |
| SFN                                    | O        |       | 9.2.1.53A             | Common Measurement Time Reference                                       | YES         | ignore               |

### 9.1.22 COMMON MEASUREMENT TERMINATION REQUEST

| IE/Group Name         | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-----------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type          | M        |       | 9.2.1.46              |                       | YES         | ignore               |
| Transaction ID        | M        |       | 9.2.1.62              |                       | –           |                      |
| Measurement ID        | M        |       | 9.2.1.42              |                       | YES         | ignore               |

### 9.1.23 COMMON MEASUREMENT FAILURE INDICATION

| IE/Group Name         | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-----------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type          | M        |       | 9.2.1.46              |                       | YES         | ignore               |
| Transaction ID        | M        |       | 9.2.1.62              |                       | –           |                      |
| Measurement ID        | M        |       | 9.2.1.42              |                       | YES         | ignore               |
| Cause                 | M        |       | 9.2.1.6               |                       | YES         | ignore               |

## 9.1.24 CELL SETUP REQUEST

### 9.1.24.1 FDD Message

| IE/Group Name               | Presence | Range | IE type and Reference | Semantics description  | Criticality | Assigned Criticality |
|-----------------------------|----------|-------|-----------------------|------------------------|-------------|----------------------|
| Message Discriminator       | M        |       | 9.2.1.45              |                        | –           |                      |
| Message Type                | M        |       | 9.2.1.46              |                        | YES         | reject               |
| Transaction ID              | M        |       | 9.2.1.62              |                        | –           |                      |
| Local Cell ID               | M        |       | 9.2.1.38              |                        | YES         | reject               |
| C-ID                        | M        |       | 9.2.1.9               |                        | YES         | reject               |
| Configuration Generation ID | M        |       | 9.2.1.16              |                        | YES         | reject               |
| T Cell                      | M        |       | 9.2.2.49              |                        | YES         | reject               |
| UARFCN                      | M        |       | 9.2.1.65              | Corresponds to Nu [14] | YES         | reject               |
| UARFCN                      | M        |       | 9.2.1.65              | Corresponds to Nd [14] | YES         | reject               |



|   |   |                     |                   |  |      |        |
|---|---|---------------------|-------------------|--|------|--------|
| Maximum transmission power                | M |                     | 9.2.1.40          |  | YES  | reject |
| Closed Loop Timing Adjustment Mode        | O |                     |                   |  | YES  | reject |
| Primary scrambling code                   | M |                     | 9.2.2.34          |  | YES  | reject |
| <b>Synchronisation Configuration</b>      |   | 1                   |                   |  | YES  | reject |
| >N_INSYNC_IND                             | M |                     | 9.2.1.47A         |  | –    |        |
| >N_OUTSYNC_IND                            | M |                     | 9.2.1.47B         |  | –    |        |
| >T_RLFAILURE                              | M |                     | 9.2.1.56A         |  | –    |        |
| DL TPC pattern 01 count                   | M |                     | 9.2.2.13A         |  | YES  | reject |
| <b>Primary SCH Information</b>            |   | 1                   |                   |  | YES  | reject |
| >Common Physical Channel ID               | M |                     | 9.2.1.13          |  | –    |        |
| >Primary SCH Power                        | M |                     | DL Power 9.2.1.21 |  | –    |        |
| >TSTD Indicator                           | M |                     | 9.2.1.64          |  | –    |        |
| <b>Secondary SCH Information</b>          |   | 1                   |                   |  | YES  | reject |
| >Common Physical Channel ID               | M |                     | 9.2.1.13          |  | –    |        |
| >Secondary SCH power                      | M |                     | DL Power 9.2.1.21 |  | –    |        |
| >TSTD Indicator                           | M |                     | 9.2.1.64          |  | –    |        |
| <b>Primary CPICH Information</b>          |   | 1                   |                   |  | YES  | reject |
| >Common Physical Channel ID               | M |                     | 9.2.1.13          |  | –    |        |
| >Primary CPICH power                      | M |                     | 9.2.2.33          |  | –    |        |
| >Transmit Diversity Indicator             | M |                     | 9.2.2.53          |  | –    |        |
| <b>Secondary CPICH Information</b>        |   | 0..<maxSC PICHCell> |                   |  | EACH | reject |
| >Common Physical Channel ID               | M |                     | 9.2.1.13          |  | –    |        |
| >DL Scrambling code                       | M |                     | 9.2.2.13          |  | –    |        |
| >FDD DL Channelisation Code Number        | M |                     | 9.2.2.14          |  | –    |        |
| >Secondary CPICH Power                    | M |                     | DL Power 9.2.1.21 |  | –    |        |
| >Transmit Diversity Indicator             | M |                     | 9.2.2.53          |  | –    |        |
| <b>Primary CCPCH Information</b>          |   | 1                   |                   |  | YES  | reject |
| >Common Physical Channel ID               | M |                     | 9.2.1.13          |  | –    |        |
| <b>&gt;BCH Information</b>                |   | 1                   |                   |  | –    |        |
| >>Common Transport Channel ID             | M |                     | 9.2.1.14          |  | –    |        |
| >>BCH Power                               | M |                     | DL Power 9.2.1.21 |  | –    |        |
| >STTD Indicator                           | M |                     | 9.2.2.48          |  | –    |        |
| <b>Limited power increase information</b> |   | 1                   |                   |  | YES  | reject |
| >Power_Raise_Limit                        | M |                     | 9.2.2.29A         |  | –    |        |
| >DL_power_averaging_window_size           | M |                     | 9.2.2.12A         |  | –    |        |

| Range bound   | Explanation  |
|---------------|--|
| MaxSCPICHCell | Maximum number of Secondary CPICH that can be defined in a Cell. |

## 9.1.24.2 TDD Message

| IE/Group Name                        | Presence | Range   | IE type and reference | Semantics description  | Criticality | Assigned Criticality |
|--------------------------------------|----------|---------|-----------------------|------------------------|-------------|----------------------|
| Message Discriminator                | M        |         | 9.2.1.45              |                        | –           |                      |
| Message Type                         | M        |         | 9.2.1.46              |                        | YES         | reject               |
| Transaction ID                       | M        |         | 9.2.1.62              |                        | –           |                      |
| Local Cell ID                        | M        |         | 9.2.1.38              |                        | YES         | reject               |
| C-ID                                 | M        |         | 9.2.1.9               |                        | YES         | reject               |
| Configuration Generation Id          | M        |         | 9.2.1.16              |                        | YES         | reject               |
| UARFCN                               | M        |         | 9.2.1.65              | Corresponds to Nt [15] | YES         | reject               |
| Cell Parameter ID                    | M        |         | 9.2.3.4               |                        | YES         | reject               |
| Maximum Transmission Power           | M        |         | 9.2.1.40              |                        | YES         | reject               |
| Transmission Diversity Applied       | M        |         | 9.2.3.26              | On DCHs                | YES         | reject               |
| Sync Case                            | M        |         | 9.2.3.18              |                        | YES         | reject               |
| <b>Synchronisation Configuration</b> |          | 1       |                       |                        | YES         | reject               |
| >N_INSYNC_IND                        | M        |         | 9.2.1.47A             |                        | –           |                      |
| >N_OUTSYNC_IND                       | M        |         | 9.2.1.47B             |                        | –           |                      |
| >T_RLFAILURE                         | M        |         | 9.2.1.56A             |                        | –           |                      |
| DPCH Constant Value                  | M        |         | Constant Value        |                        | YES         | reject               |
| PUSCH Constant Value                 | M        |         | Constant Value        |                        | YES         | reject               |
| PRACH Constant Value                 | M        |         | Constant Value        |                        | YES         | reject               |
| Timing Advance Applied               | M        |         | 9.2.3.22A             |                        | YES         | reject               |
| <b>SCH Information</b>               |          | 1       |                       |                        | YES         | reject               |
| >Common physical channel ID          | M        |         | 9.2.1.13              |                        | –           |                      |
| >CHOICE Sync Case                    | M        |         |                       |                        | YES         | reject               |
| >>Case 1                             |          |         |                       |                        | –           |                      |
| >>>Time Slot                         | M        |         | 9.2.3.23              |                        | –           |                      |
| >>Case 2                             |          |         |                       |                        | –           |                      |
| >>>SCH Time Slot                     | M        |         | 9.2.3.17              |                        | –           |                      |
| >SCH Power                           | M        |         | DL Power<br>9.2.1.21  |                        | –           |                      |
| >TSTD Indicator                      | M        |         | 9.2.1.64              |                        | –           |                      |
| <b>PCCPCH Information</b>            |          | 1       |                       |                        | YES         | reject               |
| >Common physical channel ID          | M        |         | 9.2.1.13              |                        | –           |                      |
| >TDD Physical Channel Offset         | M        |         | 9.2.3.20              |                        | –           |                      |
| >Repetition Period                   | M        |         | 9.2.3.16              |                        | –           |                      |
| >Repetition Length                   | M        |         | 9.2.3.15              |                        | –           |                      |
| >PCCPCH Power                        | M        |         | 9.2.3.9               |                        | –           |                      |
| >Block STTD Indicator                | M        |         | 9.2.3.1               |                        | –           |                      |
| <b>Time Slot Configuration</b>       |          | 1 .. 15 |                       |                        | GLOBAL      | reject               |
| >Time Slot                           | M        |         | 9.2.3.23              |                        | –           |                      |
| >Time Slot Status                    | M        |         | 9.2.3.25              |                        | –           |                      |
| >Time Slot Direction                 | M        |         | 9.2.3.24              |                        | –           |                      |

### 9.1.25 CELL SETUP RESPONSE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

### 9.1.26 CELL SETUP FAILURE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Cause                   | M        |       | 9.2.1.6               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

## 9.1.27 CELL RECONFIGURATION REQUEST

## 9.1.27.1 FDD Message

| IE/Group Name                        | Presence | Range               | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--------------------------------------|----------|---------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator                | M        |                     | 9.2.1.45              |                       | –           |                      |
| Message Type                         | M        |                     | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID                       | M        |                     | 9.2.1.62              |                       | –           |                      |
| C-ID                                 | M        |                     | 9.2.1.9               |                       | YES         | reject               |
| Configuration Generation ID          | M        |                     | 9.2.1.16              |                       | YES         | reject               |
| Maximum Transmission Power           | O        |                     | 9.2.1.40              |                       | YES         | reject               |
| <b>Synchronisation Configuration</b> |          | 0,1                 |                       |                       | YES         | reject               |
| >N_INSYNC_IND                        | M        |                     | 9.2.1.47A             |                       | –           |                      |
| >N_OUTSYNC_IND                       | M        |                     | 9.2.1.47B             |                       | –           |                      |
| >T_RLFAILURE                         | M        |                     | 9.2.1.56A             |                       | –           |                      |
| <b>Primary SCH Information</b>       |          | 0,1                 |                       |                       | YES         | reject               |
| >Common Physical Channel ID          | M        |                     | 9.2.1.13              |                       | –           |                      |
| >Primary SCH power                   | M        |                     | DL Power 9.2.1.21     |                       | –           |                      |
| <b>Secondary SCH Information</b>     |          | 0,1                 |                       |                       | YES         | reject               |
| >Common Physical Channel ID          | M        |                     | 9.2.1.13              |                       | –           |                      |
| >Secondary SCH power                 | M        |                     | DL Power 9.2.1.21     |                       | –           |                      |
| <b>Primary CPICH Information</b>     |          | 0,1                 |                       |                       | YES         | reject               |
| >Common Physical Channel ID          | M        |                     | 9.2.1.13              |                       | –           |                      |
| >Primary CPICH power                 | M        |                     | 9.2.2.33              |                       | –           |                      |
| <b>Secondary CPICH Information</b>   |          | 0..<maxSC PICHCell> |                       |                       | YES         | reject               |
| >Common Physical Channel ID          | M        |                     | 9.2.1.13              |                       | –           |                      |
| >Secondary CPICH Power               | M        |                     | DL Power 9.2.1.21     |                       | –           |                      |
| <b>Primary CCPCH Information</b>     |          | 0,1                 |                       |                       | YES         | reject               |
| > <b>BCH Information</b>             |          | 1                   |                       |                       | –           |                      |
| >>Common Transport Channel ID        | M        |                     | 9.2.1.14              |                       | –           |                      |
| >>BCH Power                          | M        |                     | DL Power 9.2.1.21     |                       | –           |                      |

| Range bound   | Explanation  |
|---------------|--|
| MaxSCPICHCell | Maximum number of Secondary CPICH that can be defined in a Cell. |

## 9.1.27.2 TDD Message

| IE/Group Name                        | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--------------------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator                | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type                         | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID                       | M        |       | 9.2.1.62              |                       | –           |                      |
| C-ID                                 | M        |       | 9.2.1.9               |                       | YES         | reject               |
| Configuration Generation ID          | M        |       | 9.2.1.16              |                       | YES         | reject               |
| <b>Synchronisation Configuration</b> |          | 0,1   |                       |                       | YES         | reject               |
| >N_INSYNC_IND                        | M        |       | 9.2.1.47A             |                       | –           |                      |
| >N_OUTSYNC_IND                       | M        |       | 9.2.1.47B             |                       | –           |                      |
| >T_RLFAILURE                         | M        |       | 9.2.1.56A             |                       | –           |                      |
| Timing Advance Applied               | O        |       | 9.2.3.22A             |                       | YES         | reject               |
| <b>SCH Information</b>               |          | 0,1   |                       |                       | YES         | reject               |
| >Common Physical Channel ID          | M        |       | 9.2.1.13              |                       | –           |                      |
| >SCH Power                           | M        |       | DL Power<br>9.2.1.21  |                       | –           |                      |
| <b>PCCPCH Information</b>            |          | 0,1   |                       |                       | YES         | reject               |
| >Common Physical Channel ID          | M        |       | 9.2.1.13              |                       | –           |                      |
| >PCCPCH Power                        | M        |       | 9.2.3.9               |                       | –           |                      |
| Maximum Transmission Power           | O        |       | 9.2.1.40              |                       | YES         | reject               |
| DPCH Constant Value                  | O        |       | Constant Value        |                       | YES         | reject               |
| PUSCH Constant Value                 | O        |       | Constant Value        |                       | YES         | reject               |
| PRACH Constant Value                 | O        |       | Constant Value        |                       | YES         | reject               |
| <b>Time Slot Configuration</b>       |          | 1..15 |                       |                       | GLOBAL      | reject               |
| >Time Slot                           | M        |       | 9.2.3.23              |                       | –           |                      |
| >Time Slot Status                    | M        |       | 9.2.3.25              |                       | –           |                      |
| >Time Slot Direction                 | M        |       | 9.2.3.24              |                       | –           |                      |

## 9.1.28 CELL RECONFIGURATION RESPONSE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

## 9.1.29 CELL RECONFIGURATION FAILURE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Cause                   | M        |       | 9.2.1.6               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

### 9.1.30 CELL DELETION REQUEST

| IE/Group Name         | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-----------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type          | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID        | M        |       | 9.2.1.62              |                       | –           |                      |
| C-ID                  | M        |       | 9.2.1.9               |                       | YES         | reject               |

### 9.1.31 CELL DELETION RESPONSE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

## 9.1.32 RESOURCE STATUS INDICATION

| IE/Group Name                                  | Presence | Range                              | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|--|----------|------------------------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator                          | M        |                                    | 9.2.1.45              |                       | –           |                      |
| Message Type                                   | M        |                                    | 9.2.1.46              |                       | YES         | ignore               |
| Transaction ID                                 | M        |                                    | 9.2.1.62              |                       | –           |                      |
| Indication Type                                | M        |                                    | 9.2.1.36              |                       | YES         | ignore               |
| CHOICE <i>Indication Type</i>                  | M        |                                    |                       |                       | YES         | ignore               |
| > <i>No Failure</i>                            |          |                                    |                       |                       | –           |                      |
| <b>&gt;&gt;Local Cell Information</b>          |          | 1.. <max<br>LocalCellin<br>NodeB > |                       |                       | EACH        | ignore               |
| >>>Local Cell ID                               | M        |                                    | 9.2.1.38              |                       | –           |                      |
| >>>Add/Delete Indicator                        | M        |                                    | 9.2.1.1               |                       | –           |                      |
| >>>DL or Global Capacity Credit                | C-add    |                                    | 9.2.1.20B             |                       | –           |                      |
| >>>UL Capacity Credit                          | O        |                                    | 9.2.1.65A             |                       | –           |                      |
| >>>Common Channels Capacity Consumption Law    | C-add    |                                    | 9.2.1.9A              |                       | –           |                      |
| >>>Dedicated Channels Capacity Consumption Law | C-add    |                                    | 9.2.1.20A             |                       | –           |                      |
| >>>Maximum DL Power Capability                 | C-add    |                                    | 9.2.1.39              |                       | –           |                      |
| >>>Minimum Spreading Factor                    | C-add    |                                    | 9.2.1.47              |                       | –           |                      |
| >>>Minimum DL Power Capability                 | C-add    |                                    | 9.2.1.46A             |                       | –           |                      |
| >>>Local Cell Group ID                         | O        |                                    | 9.2.1.37A             |                       | –           |                      |
| <b>&gt;&gt;Local Cell Group Information</b>    |          | 0.. <maxLocal<br>CellinNode<br>B>  |                       |                       | EACH        | ignore               |
| >>>Local Cell Group ID                         | M        |                                    | 9.2.1.37A             |                       | –           |                      |
| >>>DL or Global Capacity Credit                | M        |                                    | 9.2.1.20B             |                       | –           |                      |
| >>>UL Capacity Credit                          | O        |                                    | 9.2.1.65A             |                       | –           |                      |
| >>>Common Channels Capacity Consumption Law    | M        |                                    | 9.2.1.9A              |                       | –           |                      |
| >>>Dedicated Channels Capacity Consumption Law | M        |                                    | 9.2.1.20A             |                       | –           |                      |
| > <i>Service Impacting</i>                     |          |                                    |                       |                       | –           |                      |
| <b>&gt;&gt;Local Cell Information</b>          |          | 0.. <maxLocal<br>CellinNode<br>B>  |                       |                       | EACH        | ignore               |
| >>>Local Cell ID                               | M        |                                    | 9.2.1.38              |                       | –           |                      |
| >>>DL or Global Capacity Credit                | O        |                                    | 9.2.1.20B             |                       | –           |                      |
| >>>UL Capacity Credit                          | O        |                                    | 9.2.1.65A             |                       | –           |                      |
| >>>Common Channels Capacity Consumption        | O        |                                    | 9.2.2.3               |                       | –           |                      |

|   |   |   |  |  |      |        |
|---|---|---|--|--|------|--------|
| Law   |   |   |  |  |      |        |
| >>>Dedicated Channels Capacity Consumption Law        | O |   | 9.2.2.6  |  | –    |        |
| >>>Maximum DL Power Capability                        | O |   | 9.2.1.39   |  | –    |        |
| >>>Minimum Spreading Factor                           | O |   | 9.2.1.47   |  | –    |        |
| >>>Minimum DL Power Capability                        | O |   | 9.2.1.46A  |  | –    |        |
| <b>&gt;&gt;Local Cell Group Information</b>           |   | <i>0.. &lt;maxLocal CellinNodeB&gt;</i> |  |  | EACH | ignore |
| >>>Local Cell Group ID                                | M |   | 9.2.1.37A  |  | –    |        |
| >>>DL or Global Capacity Credit                       | O |   | 9.2.2.12   |  | –    |        |
| >>>UL Capacity Credit                                 | O |   | 9.2.2.60   |  | –    |        |
| >>>Common Channels Capacity Consumption Law           | O |   | 9.2.2.3  |  | –    |        |
| >>>Dedicated Channels Capacity Consumption Law        | O |   | 9.2.2.6  |  | –    |        |
| <b>&gt;&gt;Communication Control Port Information</b> |   | <i>0.. &lt;maxCCPi nNodeB&gt;</i>       |  |  | EACH | ignore |
| >>>Communication Control Port ID                      | M |   | 9.2.1.15   |  | –    |        |
| >>>Resource Operational State                         | M |   | 9.2.1.52   |  | –    |        |
| >>>Availability Status                                | M |   | 9.2.1.2  |  | –    |        |
| <b>&gt;&gt;Cell Information</b>                       |   | <i>0.. &lt;maxCellin NodeB&gt;</i>      |  |  | EACH | ignore |
| >>>C-ID   | M |   | 9.2.1.9  |  | –    |        |
| >>>Resource Operational State                         | O |   | 9.2.1.52   |  | –    |        |
| >>>Availability Status                                | O |   | 9.2.1.2  |  | –    |        |
| >>>Primary SCH Information                            | O |   | Common Physical Channel Status Information 9.2.1.13A |  | YES  | ignore |
| >>>Secondary SCH Information                          | O |   | Common Physical Channel Status Information 9.2.1.13A |  | YES  | ignore |
| >>>Primary CPICH Information                          | O |   | Common Physical Channel Status Information 9.2.1.13A |  | YES  | ignore |
| <b>&gt;&gt;&gt;Secondary CPICH Information</b>        |   | <i>0..&lt;maxSC PICHCell&gt;</i>        |  |  | EACH | ignore |
| >>>>Secondary   | M |   | Common   |  | –    |        |



|  |   |                                   |   |  |      |        |
|--|---|-----------------------------------|---|--|------|--------|
| CPICH Individual Information               |   |                                   | Physical Channel Status Information 9.2.1.13A         |  |      |        |
| >>>Primary CCPCH Information               | O |                                   | Common Physical Channel Status Information 9.2.1.13A  |  | YES  | ignore |
| >>>BCH Information                         | O |                                   | Common Transport Channel Status Information 9.2.1.14B |  | YES  | ignore |
| >>>Secondary CCPCH Information             |   | <i>0..&lt;maxSC CPCHCell &gt;</i> |   |  | EACH | ignore |
| >>>>Secondary CCPCH Individual Information | M |                                   | Common Physical Channel Status Information 9.2.1.13A  |  | –    |        |
| >>>PCH Information                         | O |                                   | Common Transport Channel Status Information 9.2.1.14B |  | YES  | ignore |
| >>>PICH Information                        | O |                                   | Common Physical Channel Status Information 9.2.1.13A  |  | YES  | ignore |
| >>>FACH Information                        |   | <i>0..&lt;maxFACHCell&gt;</i>     |   |  | EACH | ignore |
| >>>>FACH Individual Information            | M |                                   | Common Transport Channel Status Information 9.2.1.14B |  | –    |        |
| >>>PRACH Information                       |   | <i>0..&lt;maxPRACHCell&gt;</i>    |   |  | EACH | ignore |
| >>>>PRACH Individual Information           | M |                                   | Common Physical Channel Status Information 9.2.1.13A  |  | –    |        |
| >>>RACH Information                        |   | <i>0..&lt;maxPRACHCell&gt;</i>    |   |  | EACH | ignore |
| >>>>RACH Individual Information            | M |                                   | Common Transport Channel Status Information 9.2.1.14B |  | –    |        |
| >>>AICH Information                        |   | <i>0..&lt;maxPRACHCell&gt;</i>    |   |  | EACH | ignore |

|                                      |   |                    |   |  |      |        |
|--------------------------------------|---|--------------------|---|--|------|--------|
| >>>>AICH Individual Information      | M |                    | Common Physical Channel Status Information 9.2.1.13A  |  | –    |        |
| >>>PCPCH Information                 |   | 0..<maxPC PCHCell> |   |  | EACH | ignore |
| >>>>PCPCH Individual Information     | M |                    | Common Physical Channel Status Information 9.2.1.13A  |  | –    |        |
| >>>CPCH Information                  |   | 0..<maxCPC HCell>  |   |  | EACH | ignore |
| >>>>CPCH Individual Information      | M |                    | Common Transport Channel Status Information 9.2.1.14B |  | –    |        |
| >>>AP-AICH Information               |   | 0..<maxCPC HCell>  |   |  | EACH | ignore |
| >>>>AP-AICH Individual Information   | M |                    | Common Physical Channel Status Information 9.2.1.13A  |  | –    |        |
| >>>CD/CA-ICH Information             |   | 0..<maxCPC HCell>  |   |  | EACH | ignore |
| >>>>CD/CA-ICH Individual Information | M |                    | Common Physical Channel Status Information 9.2.1.13A  |  | –    |        |
| >>>SCH Information                   | O |                    | Common Physical Channel Status Information 9.2.1.13A  |  | YES  | ignore |
| Cause                                | O |                    | 9.2.1.6   |  | YES  | ignore |

| Condition | Explanation   |
|-----------|---|
| C-add     | This IE is present only if "Add/Delete Indicator" equals to add |

| Range bound                | Explanation  |
|----------------------------|--|
| <i>MaxLocalCellinNodeB</i> | Maximum number of Local Cells that can exist in the Node B                 |
| <i>MaxCellinNodeB</i>      | Maximum number of C ID that can be configured in Node B                    |
| <i>MaxCPCHCell</i>         | Maximum number of CPCHes that can be defined in a Cell                     |
| <i>MaxSCPICHCell</i>       | Maximum number of Secondary CPICH that can be defined in a Cell.           |
| <i>MaxSCCPCHCell</i>       | Maximum number of Secondary CCPCH that can be defined in a Cell.           |
| <i>MaxFACHCell</i>         | Maximum number of FACHes that can be defined in a Cell                     |
| <i>MaxPCPCHCell</i>        | Maximum number of PCPCHes that can be defined in a Cell                    |
| MaxPRACHCell               | Maximum number of PRACHes and AICHes that can be defined in a Cell         |
| <i>MaxCCPinNodeB</i>       | Maximum number of communication control ports that can exist in the Node B |

### 9.1.33 SYSTEM INFORMATION UPDATE REQUEST

| IE/Group Name                       | Presence              | Range                  | IE type and reference | Semantics description   | Criticality | Assigned Criticality |
|-------------------------------------|-----------------------|------------------------|-----------------------|---|-------------|----------------------|
| Message Discriminator               | M                     |                        | 9.2.1.45              |   | –           |                      |
| Message Type                        | M                     |                        | 9.2.1.46              |   | YES         | reject               |
| Transaction ID                      | M                     |                        | 9.2.1.62              |   | –           |                      |
| C-ID                                | M                     |                        | 9.2.1.9               |   | YES         | reject               |
| BCCH Modification Time              | O                     |                        | 9.2.1.3               |   | YES         | reject               |
| <b>MIB/SB/SIBInformation</b>        |                       | 1..<br><i>maxIB</i>    |                       |   | GLOBAL      | reject               |
| >IB Type                            | M                     |                        | 9.2.1.35              |   | –           |                      |
| >IB OC ID                           | M                     |                        | 9.2.1.31A             | In one message, every occurrence of IB Type can only be deleted once and/or added once. | –           |                      |
| >CHOICE <i>IB DeletionIndicator</i> | M                     |                        |                       |   | –           |                      |
| >> <i>NoDeletion</i>                |                       |                        |                       |   | –           |                      |
| >>>SIB Originator                   | C-SIB                 |                        | 9.2.1.55              |   | –           |                      |
| >>>IB SG REP                        | O                     |                        | 9.2.1.34              |   | –           |                      |
| >>> <b>Segment Information</b>      |                       | 1..<br><i>maxIBSEG</i> |                       |   | GLOBAL      | reject               |
| >>>>IB SG POS                       | O                     |                        | 9.2.1.33              |   | –           |                      |
| >>>>Segment type                    | C – CRNCOri<br>nation |                        | 9.2.1.53B             |   | –           |                      |
| >>>>IB SG DATA                      | C – CRNCOri<br>nation |                        | 9.2.1.32              |   | –           |                      |
| >> <i>Deletion</i>                  |                       |                        | NULL                  |   | –           |                      |

| Range bound | Explanation  |
|-------------|--|
| 1..maxIB    | Maximum number of information Blocks supported in one message. |
| 1..maxIBSEG | Maximum number of segments for one Information Block           |

| Condition      | Explanation  |
|----------------|--|
| CRNCOriination | The IE shall be present if <i>the SIB Originator</i> IE is set to 'CRNC' or if the IB Type equals "MIB", "SB1" or "SB2". |
| SIB            | This IE shall be present if the IB Type is equal to "SIB"  |

### 9.1.34 SYSTEM INFORMATION UPDATE RESPONSE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

### 9.1.35 SYSTEM INFORMATION UPDATE FAILURE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Cause                   | M        |       | 9.2.1.6               |                       | YES         | ignore               |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

## 9.1.36 RADIO LINK SETUP REQUEST

## 9.1.36.1 FDD message

| IE/Group Name                       | Presence      | Range | IE type and reference             | Semantics description                               | Criticality | Assigned Criticality |
|-------------------------------------|---------------|-------|-----------------------------------|---|-------------|----------------------|
| Message Discriminator               | M             |       | 9.2.1.45                          |   | –           |                      |
| Message Type                        | M             |       | 9.2.1.46                          |   | YES         | reject               |
| CRNC Communication Context ID       | M             |       | 9.2.1.18                          | The reserved value "All CRNCC C" shall not be used. | YES         | reject               |
| Transaction ID                      | M             |       | 9.2.1.62                          |   | –           |                      |
| <b>UL DPCH Information</b>          |               | 1     |                                   |   | YES         | reject               |
| >UL Scrambling Code                 | M             |       | 9.2.2.59                          |   | –           |                      |
| >Min UL Channelisation Code length  | M             |       | 9.2.2.22                          |   | –           |                      |
| >Max Number of UL DPCHs             | C – CodeLen   |       | 9.2.2.21                          |   | –           |                      |
| >puncture Limit                     | M             |       | 9.2.1.50                          | For UL  | –           |                      |
| >TFCS                               | M             |       | 9.2.1.58                          | for UL  | –           |                      |
| >UL DPCH Slot Format                | M             |       | 9.2.2.57                          |   | –           |                      |
| > UL SIR Target                     | M             |       | UL SIR<br>9.2.2.58                |   | –           |                      |
| >Diversity mode                     | M             |       | 9.2.2.9                           |   | –           |                      |
| >SSDT cell ID Length                | O             |       | 9.2.2.45                          |   | –           |                      |
| >S Field Length                     | C-FBI         |       | 9.2.2.40                          |   | –           |                      |
| <b>DL DPCH Information</b>          |               | 1     |                                   |   | YES         | reject               |
| >TFCS                               | M             |       | 9.2.1.58                          | For DL  | –           |                      |
| >DL DPCH Slot Format                | M             |       | 9.2.2.10                          |   | –           |                      |
| >TFCI signalling mode               | M             |       | 9.2.2.50                          |   | –           |                      |
| >TFCI presence                      | C- SlotFormat |       | 9.2.1.57                          |   | –           |                      |
| >Multiplexing Position              | M             |       | 9.2.2.23                          |   | –           |                      |
| >PDSCH RL ID                        | C-DSCH        |       | RL ID<br>9.2.1.53                 |   | –           |                      |
| >PDSCH code mapping                 | C-DSCH        |       | 9.2.2.25                          |   | –           |                      |
| <b>&gt;Power Offset Information</b> |               | 1     |                                   |   | –           |                      |
| >>PO1                               | M             |       | Power Offset<br>9.2.2.29          | Power offset for the TFCI bits                      | –           |                      |
| >>PO2                               | M             |       | Power Offset<br>9.2.2.29          | Power offset for the TPC bits                       | –           |                      |
| >>PO3                               | M             |       | Power Offset<br>9.2.2.29          | Power offset for the pilot bits                     | –           |                      |
| >FDD TPC DL Step Size               | M             |       | 9.2.2.16                          |   | –           |                      |
| >Limited Power Increase             | M             |       | 9.2.2.18A                         |   | –           |                      |
| >Inner Loop DL PC Status            | M             |       | 9.2.2.18B                         |   | –           |                      |
| DCH Information                     | M             |       | DCH FDD Information<br>9.2.2.4D   |   | YES         | reject               |
| DSCH Information                    | O             |       | DSCH FDD Information<br>9.2.2.13B |   | YES         | reject               |
| <b>TFCI2 bearer information</b>     |               | 0..1  |                                   |   | -           |                      |

|  |                          |                          |  |  |      |        |
|--|--------------------------|--------------------------|--|--|------|--------|
| >ToAWS   | M                        |                          | 9.2.1.61                                   |  | -    |        |
| >ToAWE   | M                        |                          | 9.2.1.60                                   |  | -    |        |
| <b>RL Information</b>                            |                          | 1 to<br><maxnoof<br>RLs> |  |  | EACH | notify |
| >RL ID   | M                        |                          | 9.2.1.53                                   |  | -    |        |
| >C-ID  | M                        |                          | 9.2.1.9                                    |  | -    |        |
| >First RLS Indicator                             | M                        |                          | 9.2.2.16A                                  |  | -    |        |
| >Frame Offset                                    | M                        |                          | 9.2.1.31                                   |  | -    |        |
| >Chip Offset                                     | M                        |                          | 9.2.2.2                                    |  | -    |        |
| >Propagation Delay                               | O                        |                          | 9.2.2.35                                   |  | -    |        |
| >Diversity Control Field                         | C –<br>NotFirstRL        |                          | 9.2.1.25                                   |  | -    |        |
| >DL Code Information                             | M                        |                          | FDD DL<br>Code<br>Information<br>9.2.2.14A |  | -    |        |
| >Initial DL transmission<br>Power                | M                        |                          | DL Power<br>9.2.1.21                       |  | -    |        |
| >Maximum DL power                                | M                        |                          | DL Power<br>9.2.1.21                       |  | -    |        |
| >Minimum DL power                                | M                        |                          | DL Power<br>9.2.1.21                       |  | -    |        |
| >SSDT Cell Identity                              | O                        |                          | 9.2.2.44                                   |  | -    |        |
| >Transmit Diversity<br>Indicator                 | C –<br>Diversity<br>mode |                          | 9.2.2.53                                   |  | -    |        |
| Transmission Gap Pattern<br>Sequence Information | O                        |                          | 9.2.2.53A                                  |  | YES  | reject |
| Active Pattern Sequence<br>Information           | O                        |                          | 9.2.2.A                                    |  | YES  | reject |

| Condition      | Explanation   |
|----------------|---|
| CodeLen        | This IE is present only if "Min UL Channelisation Code length" equals to 4  |
| FBI            | This IE shall be present if the <i>UL DPCCH Slot Format</i> IE indicates a slot format with 1 or 2 FBI bits (see ref.[7]) |
| NotFirstRL     | This IE is present only if the RL is not the first one in the RL Information.   |
| DSCH           | This IE is present only if the <i>DSCH Information</i> IE is present  |
| SlotFormat     | This IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16.                                 |
| Diversity mode | This IE is present unless <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> IE is "none"                             |

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

## 9.1.36.2 TDD message

| IE/Group Name                  | Presence | Range               | IE type and reference            | Semantics description                               | Criticality | Assigned Criticality |
|--------------------------------|----------|---------------------|----------------------------------|---|-------------|----------------------|
| Message Discriminator          | M        |                     | 9.2.1.45                         |   | –           |                      |
| Message Type                   | M        |                     | 9.2.1.46                         |   | YES         | reject               |
| CRNC Communication Context ID  | M        |                     | 9.2.1.18                         | The reserved value "All CRNCC C" shall not be used. | YES         | reject               |
| Transaction ID                 | M        |                     | 9.2.1.62                         |   | –           |                      |
| <b>UL CCTrCH Information</b>   |          | 0 to <maxno CCTrCH> |                                  |   | EACH        | notify               |
| >CCTrCH ID                     | M        |                     | 9.2.3.3                          |   | –           |                      |
| >TFCS                          | M        |                     | 9.2.1.58                         |   | –           |                      |
| >TFCI Coding                   | M        |                     | 9.2.3.22                         |   | –           |                      |
| >Puncture Limit                | M        |                     | 9.2.1.50                         |   | –           |                      |
| <b>&gt;UL DPCH Information</b> |          | 0..1                |                                  |   | YES         | notify               |
| >>Repetition Period            | M        |                     | 9.2.3.16                         |   | –           |                      |
| >>Repetition Length            | M        |                     | 9.2.3.15                         |   | –           |                      |
| >>TDD DPCH Offset              | M        |                     | 9.2.3.19A                        |   | –           |                      |
| >>UL Timeslot Information      | M        |                     | 9.2.3.26C                        |   | –           |                      |
| <b>DL CCTrCH Information</b>   |          | 0 to <maxno CCTrCH> |                                  |   | EACH        | notify               |
| >CCTrCH ID                     | M        |                     | 9.2.3.3                          |   | –           |                      |
| >TFCS                          | M        |                     | 9.2.1.58                         |   | –           |                      |
| >TFCI Coding                   | M        |                     | 9.2.3.22                         |   | –           |                      |
| >Puncture Limit                | M        |                     | 9.2.1.50                         |   | –           |                      |
| >TDD TPC DL Step Size          | M        |                     | 9.2.3.21                         |   | –           |                      |
| <b>&gt;TPC CCTrCH List</b>     |          | 0 to <maxnoC CTRCH> |                                  | List of uplink CCTrCH which provide TPC             | –           |                      |
| >>TPC CCTrCH ID                | M        |                     | CCTrCH ID<br>9.2.3.3             |   | –           |                      |
| <b>&gt;DL DPCH information</b> |          | 0..1                |                                  |   | YES         | notify               |
| >>Repetition Period            | M        |                     | 9.2.3.16                         |   | –           |                      |
| >>Repetition Length            | M        |                     | 9.2.3.15                         |   | –           |                      |
| >>TDD DPCH Offset              | M        |                     | 9.2.3.19A                        |   | –           |                      |
| >>DL Timeslot Information      | M        |                     | 9.2.3.4E                         |   | –           |                      |
| DCH Information                | O        |                     | DCH TDD Information<br>9.2.3.4C  |   | YES         | reject               |
| DSCH Information               | O        |                     | DSCH TDD Information<br>9.2.3.5A |   | YES         | reject               |
| USCH Information               | O        |                     | 9.2.3.28                         |   | YES         | reject               |
| <b>RL Information</b>          |          | 1                   |                                  |   | YES         | reject               |
| >RL ID                         | M        |                     | 9.2.1.53                         |   | –           |                      |
| >C-ID                          | M        |                     | 9.2.1.9                          |   | –           |                      |
| >Frame Offset                  | M        |                     | 9.2.1.31                         |   | –           |                      |
| >Initial DL transmission Power | M        |                     | DL Power<br>9.2.1.21             |   | –           |                      |

|   |   |                                    |                      |  |   |  |
|---|---|------------------------------------|----------------------|--|---|--|
| >Maximum DL power                           | M |                                    | DL Power<br>9.2.1.21 |  | – |  |
| >Minimum DL power                           | M |                                    | DL Power<br>9.2.1.21 |  | – |  |
| <b>&gt;DL Timeslot ISCP<br/>Information</b> |   | <i>0..&lt;maxno<br/>ofDLts&gt;</i> |                      |  | – |  |
| >>Time slot                                 | M |                                    | 9.2.3.23             |  | – |  |
| >>DL Timeslot ISCP                          | M |                                    | 9.2.3.4B             |  | – |  |

| <b>Range bound</b> | <b>Explanation</b>                                   |
|--------------------|--|
| MaxnoCCTrCH        | Number of CCTrCH for one UE.                         |
| <i>MaxnoofDLts</i> | Maximum number of Downlink time slots per Radio Link |



## 9.1.37 RADIO LINK SETUP RESPONSE

### 9.1.37.1 FDD message

| IE/Group Name                       | Presence     | Range             | IE type and reference | Semantics description                               | Criticality | Assigned Criticality |
|-------------------------------------|--------------|-------------------|-----------------------|---|-------------|----------------------|
| Message Discriminator               | M            |                   | 9.2.1.45              |   | –           |                      |
| Message Type                        | M            |                   | 9.2.1.46              |   | YES         | reject               |
| CRNC Communication Context ID       | M            |                   | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used. | YES         | ignore               |
| Transaction ID                      | M            |                   | 9.2.1.62              |   | –           |                      |
| Node B Communication Context ID     | M            |                   | 9.2.1.48              | The reserved value "All NBCC" shall not be used.    | YES         | ignore               |
| Communication Control Port ID       | M            |                   | 9.2.1.15              |   | YES         | ignore               |
| <b>RL Information Response</b>      |              | 1 to <maxnoofRLs> |                       |   | EACH        | ignore               |
| >RL ID                              | M            |                   | 9.2.1.53              |   | –           |                      |
| >RL Set ID                          | M            |                   | 9.2.2.39              |   |             |                      |
| >Received total wide band power     | M            |                   | 9.2.2.39A             |   | –           |                      |
| >Diversity Indication               | C-NotFirstRL |                   | 9.2.1.26              |   | –           |                      |
| >CHOICE <i>diversity Indication</i> | M            |                   |                       |   | –           |                      |
| >>Combining                         |              |                   |                       |   | –           |                      |
| >>>RL ID                            | M            |                   | 9.2.1.53              | Reference RL ID for the combining                   | –           |                      |
| >>Non Combining or First RL         |              |                   |                       |   | –           |                      |
| >>>DCH Information Response         | M            |                   | 9.2.1.20C             |   | -           |                      |
| >DSCH Information Response          | O            |                   | 9.2.1.27A             |   | YES         | ignore               |
| >SSDT Support Indicator             | M            |                   | 9.2.2.46              |   | –           |                      |
| TFCI2 Bearer Information Response   | O            |                   | 9.2.2.49A             |   | YES         | ignore               |
| Criticality Diagnostics             | O            |                   | 9.2.1.17              |   | YES         | ignore               |

| Condition  | Explanation   |
|------------|---|
| NotFirstRL | This IE is present only if the RL is not the first one in the RL Information. |

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

## 9.1.37.2 TDD Message

| IE/Group Name                   | Presence | Range | IE type and reference | Semantics description                               | Criticality | Assigned Criticality |
|---------------------------------|----------|-------|-----------------------|---|-------------|----------------------|
| Message Discriminator           | M        |       | 9.2.1.45              |   | –           |                      |
| Message Type                    | M        |       | 9.2.1.46              |   | YES         | reject               |
| CRNC Communication Context ID   | M        |       | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used. | YES         | ignore               |
| Transaction ID                  | M        |       | 9.2.1.62              |   | –           |                      |
| Node B Communication Context ID | M        |       | 9.2.1.48              | The reserved value "All NBCC" shall not be used.    | YES         | ignore               |
| Communication Control Port ID   | M        |       | 9.2.1.15              |   | YES         | ignore               |
| <b>RL Information Response</b>  |          | 1     |                       |   | YES         | ignore               |
| >RL ID                          | M        |       | 9.2.1.53              |   | –           |                      |
| >UL Time Slot ISCP Info         | M        |       | 9.2.3.26D             |   | –           |                      |
| >UL PhysCH SF Variation         | M        |       | 9.2.3.26B             |   | –           |                      |
| >DCH Information Response       | O        |       | 9.2.1.20C             |   | YES         | ignore               |
| >DSCH Information Response      | O        |       | 9.2.1.27A             |   | YES         | ignore               |
| >USCH Information Response      | O        |       | 9.2.3.28              |   | YES         | ignore               |
| Criticality Diagnostics         | O        |       | 9.2.1.17              |   | YES         | ignore               |

## 9.1.38 RADIO LINK SETUP FAILURE

## 9.1.38.1 FDD Message

| IE/Group Name                          | Presence     | Range                | IE type and reference | Semantics description                               | Criticality | Assigned Criticality |
|--|--------------|----------------------|-----------------------|---|-------------|----------------------|
| Message Discriminator                  | M            |                      | 9.2.1.45              |   | –           |                      |
| Message Type                           | M            |                      | 9.2.1.46              |   | YES         | reject               |
| CRNC Communication Context ID          | M            |                      | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used. | YES         | ignore               |
| Transaction ID                         | M            |                      | 9.2.1.62              |   | –           |                      |
| Node B Communication Context ID        | C-Success    |                      | 9.2.1.48              | The reserved value "All NBCC" shall not be used     | YES         | ignore               |
| Communication Control Port ID          | O            |                      | 9.2.1.15              |   | YES         | ignore               |
| CHOICE <i>cause level</i>              | M            |                      |                       |   | YES         | ignore               |
| > <i>General</i>                       |              |                      |                       |   | –           |                      |
| >>Cause                                | M            |                      | 9.2.1.6               |   | –           |                      |
| > <i>RL specific</i>                   |              |                      |                       |   | –           |                      |
| >>Unsuccessful RL Information Response |              | 1 to <maxnoo fRLs>   |                       |   | EACH        | ignore               |
| >>>RL ID                               | M            |                      | 9.2.1.53              |   | –           |                      |
| >>>Cause                               | M            |                      | 9.2.1.6               |   | –           |                      |
| >>Successful RL Information Response   |              | 0 to <maxnoo fRLs–1> |                       |   | EACH        | ignore               |
| >>>RL ID                               | M            |                      | 9.2.1.53              |   | –           |                      |
| >>>RL Set ID                           | M            |                      | 9.2.2.39              |   |             |                      |
| >>>Received total wide band power      | M            |                      | 9.2.2.39A             |   | –           |                      |
| >>>Diversity Indication                | C-NotFirstRL |                      | 9.2.1.26              |   | –           |                      |
| >>>CHOICE <i>diversity Indication</i>  | M            |                      |                       |   | –           |                      |
| >>>>Combining                          |              |                      |                       |   | –           |                      |
| >>>>RL ID                              | M            |                      | 9.2.1.53              | Reference RL ID for the combining                   | –           |                      |
| >>>>Non Combining or First RL          |              |                      |                       |   | –           |                      |
| >>>>DCH Information Response           | M            |                      | 9.2.1.20C             |   | -           |                      |
| >>>DSCH Information Response           | O            |                      | 9.2.1.27A             |   | YES         | ignore               |
| >>>TFCI2 Bearer Information Response   | O            |                      | 9.2.2.49A             |   | -           |                      |
| >>>SSDT Support Indicator              | M            |                      | 9.2.2.46              |   | –           |                      |
| Criticality Diagnostics                | O            |                      | 9.2.1.17              |   | YES         | ignore               |

| Condition  | Explanation   |
|------------|---|
| Success    | This IE is present if at least one of the radio links has been successfully set up. |
| NotFirstRL | This IE is present only if the RL is not the first one in the RL Information.       |

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

### 9.1.38.2 TDD Message

| IE/Group Name                          | Presence | Range | IE type and reference | Semantics description                               | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|---|-------------|----------------------|
| Message Discriminator                  | M        |       | 9.2.1.45              |   | –           |                      |
| Message Type                           | M        |       | 9.2.1.46              |   | YES         | reject               |
| CRNC Communication Context ID          | M        |       | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used. | YES         | ignore               |
| Transaction ID                         | M        |       | 9.2.1.62              |   | –           |                      |
| CHOICE <i>cause level</i>              | M        |       |                       |   | YES         | ignore               |
| > <i>General</i>                       |          |       |                       |   | –           |                      |
| >>Cause                                | M        |       | 9.2.1.6               |   | –           |                      |
| > <i>RL specific</i>                   |          |       |                       |   | –           |                      |
| >>Unsuccessful RL Information Response |          | 1     |                       |   | YES         | ignore               |
| >>>RL ID                               | M        |       | 9.2.1.53              |   | –           |                      |
| >>>Cause                               | M        |       | 9.2.1.6               |   | –           |                      |
| Criticality Diagnostics                | O        |       | 9.2.1.17              |   | YES         | ignore               |

## 9.1.39 RADIO LINK ADDITION REQUEST

## 9.1.39.1 FDD Message

| IE/Group Name                     | Presence | Range            | IE type and reference             | Semantics description                            | Criticality | Assigned Criticality |
|-----------------------------------|----------|------------------|-----------------------------------|--|-------------|----------------------|
| Message Discriminator             | M        |                  | 9.2.1.45                          |  | –           |                      |
| Message Type                      | M        |                  | 9.2.1.46                          |  | YES         | reject               |
| Node B Communication Context ID   | M        |                  | 9.2.1.48                          | The reserved value "All NBCC" shall not be used. | YES         | reject               |
| Transaction ID                    | M        |                  | 9.2.1.62                          |  | –           |                      |
| Compressed Mode Deactivation Flag | O        |                  | 9.2.2.3A                          |  | YES         | reject               |
| <b>RL Information</b>             |          | 1..<maxnoofRL-1> |                                   |  | EACH        | notify               |
| >RL ID                            | M        |                  | 9.2.1.53                          |  | –           |                      |
| >C-ID                             | M        |                  | 9.2.1.9                           |  | –           |                      |
| >Frame Offset                     | M        |                  | 9.2.1.31                          |  | –           |                      |
| >Chip Offset                      | M        |                  | 9.2.2.2                           |  | –           |                      |
| >Diversity Control Field          | M        |                  | 9.2.1.25                          |  | –           |                      |
| >DL Code Information              | M        |                  | FDD DL Code Information 9.2.2.14A |  | –           |                      |
| >Initial DL transmission power    | O        |                  | DL Power 9.2.1.21                 |  | –           |                      |
| >Maximum DL power                 | O        |                  | DL Power 9.2.1.21                 |  | –           |                      |
| >Minimum DL power                 | O        |                  | DL Power 9.2.1.21                 |  | –           |                      |
| >SSDT Cell Identity               | O        |                  | 9.2.2.44                          |  | –           |                      |
| >Transmit Diversity Indicator     | O        |                  | 9.2.2.53                          |  | –           |                      |

| Range bound           | Explanation                           |
|-----------------------|---------------------------------------|
| <i>MaxnoofRL</i>      | Maximum number of RLs for one UE      |
| <i>MaxnoofDLCodes</i> | Maximum number of DL code information |

## 9.1.39.2 TDD Message

| IE/Group Name                           | Presence | Range              | IE type and reference | Semantics description                            | Criticality | Assigned Criticality |
|---|----------|--------------------|-----------------------|--|-------------|----------------------|
| Message Discriminator                   | M        |                    | 9.2.1.45              |  | –           |                      |
| Message Type                            | M        |                    | 9.2.1.46              |  | YES         | reject               |
| Node B Communication Context ID         | M        |                    | 9.2.1.48              | The reserved value "All NBCC" shall not be used. | YES         | reject               |
| Transaction ID                          | M        |                    | 9.2.1.62              |  | –           |                      |
| <b>UL CCTrCH Information</b>            |          | 0 to <maxnoCCTrCH> |                       |  | GLOBAL      | reject               |
| >CCTrCH ID                              | M        |                    | 9.2.3.3               |  | –           |                      |
| <b>&gt;UL DPCH Information</b>          |          | 0..1               |                       |  | YES         | notify               |
| >>Repetition Period                     | M        |                    | 9.2.3.16              |  | –           |                      |
| >>Repetition Length                     | M        |                    | 9.2.3.15              |  | –           |                      |
| >>TDD DPCH Offset                       | M        |                    | 9.2.3.19A             |  | –           |                      |
| >>UL Timeslot Information               | M        |                    | 9.2.3.26C             |  | –           |                      |
| <b>DL CCTrCH Information</b>            |          | 0 to <maxnoCCTrCH> |                       |  | GLOBAL      | reject               |
| >CCTrCH ID                              | M        |                    | 9.2.3.3               |  | –           |                      |
| <b>&gt;DL DPCH information</b>          |          | 0..1               |                       |  | YES         | notify               |
| >>Repetition Period                     | M        |                    | 9.2.3.16              |  | –           |                      |
| >>Repetition Length                     | M        |                    | 9.2.3.15              |  | –           |                      |
| >>TDD DPCH Offset                       | M        |                    | 9.2.3.19A             |  | –           |                      |
| >>DL Timeslot Information               | M        |                    | 9.2.3.4E              |  | –           |                      |
| <b>RL Information</b>                   |          | 1                  |                       |  | YES         | reject               |
| >RL ID                                  | M        |                    | 9.2.1.53              |  | –           |                      |
| >C-ID                                   | M        |                    | 9.2.1.9               |  | –           |                      |
| >Frame Offset                           | M        |                    | 9.2.1.31              |  | –           |                      |
| >Diversity Control Field                | M        |                    | 9.2.1.25              |  | –           |                      |
| >Initial DL transmission Power          | O        |                    | DL Power 9.2.1.21     |  | –           |                      |
| >Maximum DL power                       | O        |                    | DL Power 9.2.1.21     |  | –           |                      |
| >Minimum DL power                       | O        |                    | DL Power 9.2.1.21     |  | –           |                      |
| <b>&gt;DL Timeslot ISCP Information</b> |          | 0..<maxnoofDLts>   |                       |  | –           |                      |
| >>Time slot                             | M        |                    | 9.2.3.23              |  | –           |                      |
| >>DL Timeslot ISCP                      | M        |                    | 9.2.3.4B              |  | –           |                      |

| Range bound | Explanation  |
|-------------|--|
| MaxnoCCTrCH | Number of CCTrCH for one UE.                         |
| MaxnoofDLts | Maximum number of Downlink time slots per Radio Link |

## 9.1.40 RADIO LINK ADDITION RESPONSE

## 9.1.40.1 FDD message

| IE/Group Name                       | Presence | Range             | IE type and reference | Semantics description                               | Criticality | Assigned Criticality |
|-------------------------------------|----------|-------------------|-----------------------|---|-------------|----------------------|
| Message Discriminator               | M        |                   | 9.2.1.45              |   | –           |                      |
| Message Type                        | M        |                   | 9.2.1.46              |   | YES         | reject               |
| CRNC Communication Context ID       | M        |                   | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used. | YES         | ignore               |
| Transaction ID                      | M        |                   | 9.2.1.62              |   | –           |                      |
| <b>RL Information Response</b>      |          | 1..<maxno ofRL-1> |                       |   | EACH        | ignore               |
| >RL ID                              | M        |                   | 9.2.1.53              |   | –           |                      |
| >RL Set ID                          | M        |                   | 9.2.2.9               |   | –           |                      |
| > Received total wide band power    | M        |                   | 9.2.2.39A             |   | –           |                      |
| >Diversity Indication               | M        |                   | 9.2.1.26              |   | –           |                      |
| >CHOICE <i>diversity indication</i> | M        |                   |                       |   | –           |                      |
| >> <i>Combining</i>                 |          |                   |                       |   | –           |                      |
| >>>RL ID                            | M        |                   | 9.2.1.53              | Reference RL  | –           |                      |
| >> <i>Non combining</i>             |          |                   |                       |   | –           |                      |
| >>>DCH Information Response         | M        |                   | 9.2.1.20C             |   | –           |                      |
| >SSDT support indicator             | M        |                   | 9.2.2.46              |   | –           |                      |
| Criticality Diagnostics             | O        |                   | 9.2.1.17              |   | YES         | ignore               |

| Range bound      | Explanation                      |
|------------------|----------------------------------|
| <i>MaxnoofRL</i> | Maximum number of RLs for one UE |

## 9.1.40.2 TDD Message

| IE/Group Name                        | Presence | Range | IE type and reference | Semantics description   | Criticality | Assigned Criticality |
|--------------------------------------|----------|-------|-----------------------|---|-------------|----------------------|
| Message Discriminator                | M        |       | 9.2.1.45              |   | –           |                      |
| Message Type                         | M        |       | 9.2.1.46              |   | YES         | reject               |
| CRNC Communication Context ID        | M        |       | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used.                         | YES         | ignore               |
| Transaction ID                       | M        |       | 9.2.1.62              |   | –           |                      |
| <b>RL Information response</b>       |          | 1     |                       |   | YES         | ignore               |
| >RL ID                               | M        |       | 9.2.1.53              |   | –           |                      |
| > UL Time Slot ISCP Info             | M        |       | 9.2.3.26D             |   | –           |                      |
| >UL PhysCH SF Variation              | M        |       | 9.2.3.26B             |   | –           |                      |
| <b>&gt;DCH Information</b>           |          | 0..1  |                       |   | –           |                      |
| >>Diversity Indication               | M        |       | 9.2.1.26              |   | –           |                      |
| >>CHOICE <i>diversity indication</i> | M        |       |                       |   | –           |                      |
| >>> <i>Combining</i>                 |          |       |                       | In TDD it indicates whether the old Transport Bearer shall be reused or not | –           |                      |
| >>>>RL ID                            | M        |       | 9.2.1.53              | Reference RL  | –           |                      |
| >>>> <i>Non combining</i>            |          |       |                       |   | –           |                      |
| >>>>DCH Information Response         | M        |       | 9.2.1.20C             |   | –           |                      |
| >DSCH Information Response           | O        |       | 9.2.1.27A             |   | YES         | ignore               |
| >USCH Information Response           | O        |       | 9.2.3.29              |   | YES         | ignore               |
| Criticality Diagnostics              | O        |       | 9.2.1.17              |   | YES         | ignore               |



## 9.1.41 RADIO LINK ADDITION FAILURE

## 9.1.41.1 FDD Message

| IE/Group Name                                  | Presence | Range            | IE type and reference | Semantics description                               | Criticality | Assigned Criticality |
|--|----------|------------------|-----------------------|---|-------------|----------------------|
| Message Discriminator                          | M        |                  | 9.2.1.45              |   | –           |                      |
| Message Type                                   | M        |                  | 9.2.1.46              |   | YES         | reject               |
| CRNC Communication Context ID                  | M        |                  | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used. | YES         | ignore               |
| Transaction ID                                 | M        |                  | 9.2.1.62              |   | –           |                      |
| CHOICE <i>cause level</i>                      | M        |                  |                       |   | YES         | ignore               |
| > <i>General</i>                               |          |                  |                       |   | –           |                      |
| >> <i>Cause</i>                                | M        |                  | 9.2.1.6               |   | –           |                      |
| > <i>RL specific</i>                           |          |                  |                       |   | –           |                      |
| >> <b>Unsuccessful RL Information Response</b> |          | 1..<maxnoofRL-1> |                       |   | EACH        | ignore               |
| >>>RL ID                                       | M        |                  | 9.2.1.53              |   | –           |                      |
| >>>Cause                                       | M        |                  | 9.2.1.6               |   | –           |                      |
| >> <b>Successful RL Information Response</b>   |          | 1..<maxnoofRL-2> |                       |   | EACH        | ignore               |
| >>>RL ID                                       | M        |                  | 9.2.1.53              |   | –           |                      |
| >>>RL Set ID                                   | M        |                  | 9.2.2.39              |   |             |                      |
| >>> Received total wide band power             | M        |                  | 9.2.2.39A             |   | –           |                      |
| >>>Diversity Indication                        | M        |                  | 9.2.1.26              |   | –           |                      |
| >>>CHOICE <i>diversity indication</i>          | M        |                  |                       |   | –           |                      |
| >>>> <i>Combining</i>                          |          |                  |                       |   | –           |                      |
| >>>>>RL ID                                     | M        |                  | 9.2.1.53              | Reference RL  | –           |                      |
| >>>>> <i>Non combining</i>                     |          |                  |                       |   | –           |                      |
| >>>>>DCH Information Response                  | M        |                  | 9.2.1.20C             |   | –           |                      |
| >>>>SSDT support indicator                     | M        |                  | 9.2.2.46              |   | –           |                      |
| Criticality Diagnostics                        | O        |                  | 9.2.1.17              |   | YES         | ignore               |

| Range bound      | Explanation                      |
|------------------|----------------------------------|
| <i>MaxnoofRL</i> | Maximum number of RLs for one UE |

## 9.1.41.2 TDD Message

| IE/Group Name                                  | Presence | Range | IE type and reference | Semantics description                               | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|---|-------------|----------------------|
| Message Discriminator                          | M        |       | 9.2.1.45              |   | –           |                      |
| Message Type                                   | M        |       | 9.2.1.46              |   | YES         | reject               |
| CRNC Communication Context ID                  | M        |       | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used. | YES         | ignore               |
| Transaction ID                                 | M        |       | 9.2.1.62              |   | –           |                      |
| CHOICE <i>cause level</i>                      | M        |       |                       |   | YES         | Ignore               |
| > <i>General</i>                               |          |       |                       |   | –           |                      |
| >> <i>Cause</i>                                | M        |       | 9.2.1.6               |   | –           |                      |
| > <i>RL specific</i>                           |          |       |                       |   | –           |                      |
| >> <b>Unsuccessful RL Information Response</b> |          | 1     |                       |   | YES         | ignore               |
| >>>RL ID                                       | M        |       | 9.2.1.53              |   | –           |                      |
| >>> <i>Cause</i>                               | M        |       | 9.2.1.6               |   | –           |                      |
| Criticality Diagnostics                        | O        |       | 9.2.1.17              |   | YES         | ignore               |

## 9.1.42 RADIO LINK RECONFIGURATION PREPARE

## 9.1.42.1 FDD Message

| IE/Group Name                      | Presence      | Range               | IE Type and Reference           | Semantic Description                             | Criticality | Assigned Criticality |
|------------------------------------|---------------|---------------------|---------------------------------|--|-------------|----------------------|
| Message Discriminator              | M             |                     | 9.2.1.45                        |  | –           |                      |
| Message Type                       | M             |                     | 9.2.1.46                        |  | YES         | reject               |
| Node B Communication Context ID    | M             |                     | 9.2.1.48                        | The reserved value "All NBCC" shall not be used. | YES         | reject               |
| Transaction ID                     | M             |                     | 9.2.1.62                        |  | –           |                      |
| <b>UL DPCH Information</b>         |               | 0..1                |                                 |  | YES         | reject               |
| >UL Scrambling code                | O             |                     | 9.2.2.59                        |  | –           |                      |
| >UL SIR Target                     | O             |                     | UL SIR<br>9.2.2.58              |  | –           |                      |
| >Min UL Channelisation Code Length | O             |                     | 9.2.2.22                        |  | –           |                      |
| >Max Number of UL DPDCHs           | C – CodeLen   |                     | 9.2.2.20                        |  | –           |                      |
| >Puncture Limit                    | O             |                     | 9.2.1.50                        | For UL   | –           |                      |
| >TFCS                              | O             |                     | 9.2.1.58                        |  | –           |                      |
| >UL DPCCH Slot Format              | O             |                     | 9.2.2.57                        |  | –           |                      |
| >Diversity mode                    | O             |                     | 9.2.2.9                         |  | –           |                      |
| >SSDT Cell Identity Length         | O             |                     | 9.2.2.45                        |  | –           |                      |
| >S-Field Length                    | O             |                     | 9.2.2.40                        |  | –           |                      |
| <b>DL DPCH Information</b>         |               | 0..1                |                                 |  | YES         | reject               |
| >TFCS                              | O             |                     | 9.2.1.58                        |  | –           |                      |
| >DL DPCH Slot Format               | O             |                     | 9.2.2.10                        |  | –           |                      |
| >TFCI Signalling Mode              | O             |                     | 9.2.2.50                        |  | –           |                      |
| >TFCI presence                     | C-Slot Format |                     | 9.2.1.57                        |  | –           |                      |
| >Multiplexing Position             | O             |                     | 9.2.2.23                        |  | –           |                      |
| >PDSCH code mapping                | O             |                     | 9.2.2.25                        |  | –           |                      |
| >PDSCH RL ID                       | O             |                     | RL ID<br>9.2.1.53               |  | –           |                      |
| >Limited Power Increase            | O             |                     | 9.2.2.18A                       |  | –           |                      |
| DCHs to Modify                     | O             |                     | DCHs FDD to Modify<br>9.2.2.4E  |  | YES         | reject               |
| DCHs to Add                        | O             |                     | DCH FDD Information<br>9.2.2.4D |  | YES         | reject               |
| <b>DCHs to Delete</b>              |               | 0..<max noofDC Hs>  |                                 |  | GLOBAL      | reject               |
| >DCH ID                            | M             |                     | 9.2.1.20                        |  | –           |                      |
| <b>DSCH to modify</b>              |               | 0..<max noofDS CHs> |                                 |  | YES         | reject               |
| >DSCH ID                           | M             |                     | 9.2.1.27                        |  | –           |                      |
| >Transport Format Set              | O             |                     | 9.2.1.59                        | For the DL.                                      | –           |                      |
| >Allocation/Retention Priority     | O             |                     | 9.2.1.1A                        |  | –           |                      |
| >Frame Handling Priority           | O             |                     | 9.2.1.30                        |  | –           |                      |
| >ToAWS                             | O             |                     | 9.2.1.61                        |  | –           |                      |
| >ToAWE                             | O             |                     | 9.2.1.60                        |  | –           |                      |

|   |                    |                                  |                                   |  |      |        |
|---|--------------------|----------------------------------|-----------------------------------|--|------|--------|
| >Transport Bearer Request Indicator           | M                  |                                  | 9.2.1.62A                         |  | –    |        |
| DSCH to add                                   | O                  |                                  | DSCH FDD Information 9.2.2.13B    |  | YES  | reject |
| <b>DSCH to Delete</b>                         |                    | <i>0..&lt;max noofDS CHs&gt;</i> |                                   |  | YES  | reject |
| >DSCH ID                                      | M                  |                                  | 9.2.1.27                          |  | –    |        |
| <b>TFCI2 bearer specific information</b>      |                    | 0..1                             |                                   |  | YES  | reject |
| >CHOICE <i>TFCI2 bearer action</i>            | M                  |                                  |                                   |  | –    |        |
| >>Add or modify                               |                    |                                  |                                   |  | –    |        |
| >>>ToAWS                                      | M                  |                                  | 9.2.1.61                          |  | –    |        |
| >>>ToAWE                                      | M                  |                                  | 9.2.1.60                          |  | –    |        |
| >>Delete                                      |                    |                                  | NULL                              |  | –    |        |
| <b>RL Information</b>                         |                    | <i>0..&lt;max noofRLs &gt;</i>   |                                   |  | EACH | reject |
| >RL ID  | M                  |                                  | 9.2.1.53                          |  | –    |        |
| >DL Code Information                          | O                  |                                  | FDD DL Code Information 9.2.2.14A |  | –    |        |
| >Maximum DL Power                             | O                  |                                  | DL Power 9.2.1.21                 |  | –    |        |
| >Minimum DL Power                             | O                  |                                  | DL Power 9.2.1.21                 |  | –    |        |
| >SSDT Indication                              | O                  |                                  | 9.2.2.47                          |  | –    |        |
| >SSDT Cell Identity                           | C – SSDTIndON      |                                  | 9.2.2.44                          |  | –    |        |
| >Transmit Diversity Indicator                 | C – Diversity mode |                                  | 9.2.2.53                          |  | –    |        |
| Transmission Gap Pattern Sequence Information | O                  |                                  | 9.2.2.53A                         |  | YES  | reject |

| 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 value 12 to 16.   |
| SF/2           | This IE is present only if the <i>Transmission Gap Pattern Sequence Information</i> IE is included and the indicated Downlink Compressed Mode method for at least one of the included Transmission Gap Pattern Sequence is set to "SF/2". |
| Diversity mode | This IE is present unless <i>Diversity Mode</i> IE in <i>UL DPCH Information</i> group, unless it is equal to "none"  |

| <b>Range Bound</b>  | <b>Explanation</b>                |
|---------------------|-----------------------------------|
| <i>MaxnoofDCHs</i>  | Maximum number of DCHs for a UE.  |
| <i>MaxnoofDSCHs</i> | Maximum number of DSCHs for a UE. |
| <i>MaxnoofRLs</i>   | Maximum number of RLs for a UE.   |
|                     |                                   |

## 9.1.42.2 TDD Message

| IE/Group Name                          | Presence | Range                 | IE Type and Reference | Semantic Description                             | Criticality | Assigned Criticality |
|--|----------|-----------------------|-----------------------|--|-------------|----------------------|
| Message Discriminator                  | M        |                       | 9.2.1.45              |  | –           |                      |
| Message Type                           | M        |                       | 9.2.1.46              |  | YES         | reject               |
| Node B Communication Context ID        | M        |                       | 9.2.1.48              | The reserved value "All NBCC" shall not be used. | YES         | reject               |
| Transaction ID                         | M        |                       | 9.2.1.62              |  | –           |                      |
| <b>UL CCTrCH to Add</b>                |          | 0..<maxno of CCTrCHs> |                       |  | GLOBAL      | reject               |
| >CCTrCH ID                             | M        |                       | 9.2.3.3               |  | –           |                      |
| >TFCS                                  | M        |                       | 9.2.1.58              |  | –           |                      |
| >TFCI Coding                           | M        |                       | 9.2.3.22              |  | –           |                      |
| >Puncture Limit                        | M        |                       | 9.2.1.50              |  | –           |                      |
| <b>&gt;UL DPCH Information</b>         |          | 0..1                  |                       |  | YES         | reject               |
| >>Repetition Period                    | M        |                       | 9.2.3.16              |  | –           |                      |
| >>Repetition Length                    | M        |                       | 9.2.3.15              |  | –           |                      |
| >>TDD DPCH Offset                      | M        |                       | 9.2.3.19A             |  | –           |                      |
| >>UL Timeslot Information              | M        |                       | 9.2.3.26C             |  | –           |                      |
| <b>UL CCTrCH to Modify</b>             |          | 0..<maxno of CCTrCHs> |                       |  | GLOBAL      | reject               |
| >CCTrCH ID                             | M        |                       | 9.2.3.3               |  | –           |                      |
| >TFCS                                  | O        |                       | 9.2.1.58              |  | –           |                      |
| >TFCI Coding                           | O        |                       | 9.2.3.22              |  | –           |                      |
| >Puncture Limit                        | O        |                       | 9.2.1.50              |  | –           |                      |
| <b>&gt;UL DPCH to add</b>              |          | 0..1                  |                       |  | YES         | reject               |
| >>Repetition Period                    | M        |                       | 9.2.3.16              |  | –           |                      |
| >>Repetition Length                    | M        |                       | 9.2.3.15              |  | –           |                      |
| >>TDD DPCH Offset                      | M        |                       | 9.2.3.19A             |  | –           |                      |
| >>UL Timeslot Information              | M        |                       | 9.2.3.26C             |  | –           |                      |
| <b>&gt;UL DPCH to modify</b>           |          | 0..1                  |                       |  | YES         | reject               |
| >>Repetition Period                    | O        |                       | 9.2.3.16              |  | –           |                      |
| >>Repetition Length                    | O        |                       | 9.2.3.15              |  | –           |                      |
| >>TDD DPCH Offset                      | O        |                       | 9.2.3.19A             |  | –           |                      |
| <b>&gt;&gt;UL Timeslot Information</b> |          | 0 to <maxno of ULTs>  |                       |  | –           |                      |
| >>>Time Slot                           | M        |                       | 9.2.3.23              |  | –           |                      |
| >>>Midamble Shift and Burst Type       | O        |                       | 9.2.3.7               |  | –           |                      |
| >>>TFCI Presence                       | O        |                       | 9.2.1.57              |  | –           |                      |
| <b>&gt;&gt;&gt;UL Code Information</b> |          | 0 to <maxno OfDPC H>  |                       |  | –           |                      |
| >>>>DPCH ID                            | M        |                       | 9.2.3.5               |  | –           |                      |
| >>>>TDD Channelisation Code            | O        |                       | 9.2.3.19              |  | –           |                      |
| <b>&gt;UL DPCH to delete</b>           |          | 0..                   |                       |  | GLOBAL      | reject               |

|  |   |                        |                   |   |        |        |
|--|---|------------------------|-------------------|---|--------|--------|
|  |   | <maxno of DPCHs >      |                   |   |        |        |
| >>DPCH ID                              | M |                        | 9.2.3.5           |   | –      |        |
| <b>UL CCTrCH to Delete</b>             |   | 0.. <maxno of CCTrCHs> |                   |   | GLOBAL | reject |
| >CCTrCH ID                             | M |                        | 9.2.3.3           |   | –      |        |
| <b>DL CCTrCH to Add</b>                |   | 0.. <maxno of CCTrCHs> |                   |   | GLOBAL | reject |
| >CCTrCH ID                             | M |                        | 9.2.3.3           |   | –      |        |
| >TFCS                                  | M |                        | 9.2.1.58          |   | –      |        |
| >TFCI Coding                           | M |                        | 9.2.3.22          |   | –      |        |
| >PunctureLimit                         | M |                        | 9.2.1.50          |   | –      |        |
| <b>&gt;TPC CCTrCH List</b>             |   | 0 to <maxno CCTrCH>    |                   | List of uplink CCTrCH which provide TPC | –      |        |
| >>TPC CCTrCH ID                        | M |                        | CCTrCH ID 9.2.3.3 |   | –      |        |
| <b>&gt;DL DPCH Information</b>         |   | 0..1                   |                   |   | YES    | reject |
| >>Repetition Period                    | M |                        | 9.2.3.16          |   | –      |        |
| >>Repetition Length                    | M |                        | 9.2.3.15          |   | –      |        |
| >>TDD DPCH Offset                      | M |                        | 9.2.3.19A         |   | –      |        |
| >>DL Timeslot Information              | M |                        | 9.2.3.4E          |   | –      |        |
| <b>DL CCTrCH to Modify</b>             |   | 0.. <maxno of CCTrCHs> |                   |   | GLOBAL | reject |
| >CCTrCH ID                             | M |                        | 9.2.3.3.          |   | –      |        |
| >TFCS                                  | O |                        | 9.2.1.58          |   | –      |        |
| >TFCI Coding                           | O |                        | 9.2.3.22          |   | –      |        |
| >PunctureLimit                         | O |                        | 9.2.1.50          |   | –      |        |
| <b>&gt;TPC CCTrCH List</b>             |   | 0 to <maxno CCTrCH>    |                   | List of uplink CCTrCH which provide TPC | –      |        |
| >>TPC CCTrCH ID                        | M |                        | CCTrCH ID 9.2.3.3 |   | –      |        |
| <b>&gt;DL DPCH to add</b>              |   | 0..1                   |                   |   | YES    | reject |
| >>Repetition Period                    | M |                        | 9.2.3.16          |   | –      |        |
| >>Repetition Length                    | M |                        | 9.2.3.15          |   | –      |        |
| >>TDD DPCH Offset                      | M |                        | 9.2.3.19A         |   | –      |        |
| >>DL Timeslot Information              | M |                        | 9.2.3.4E          |   | –      |        |
| <b>&gt;DL DPCH to modify</b>           |   | 0..1                   |                   |   | YES    | reject |
| >>Repetition Period                    | O |                        | 9.2.3.16          |   | –      |        |
| >>Repetition Length                    | O |                        | 9.2.3.15          |   | –      |        |
| >>TDD DPCH Offset                      | O |                        | 9.2.3.19A         |   | –      |        |
| <b>&gt;&gt;DL Timeslot Information</b> |   | 0 .. <maxno ofDLTs>    |                   |   | –      |        |
| >>>Time Slot                           | M |                        | 9.2.3.23          |   | –      |        |
| >>>Midamble Shift and                  | O |                        | 9.2.3.7           |   | –      |        |

|  |   |                                    |  |  |        |        |
|--|---|------------------------------------|--|--|--------|--------|
| Burst Type                             |   |                                    |  |  |        |        |
| >>>TFCI Presence                       | O |                                    | 9.2.1.57                               |  | –      |        |
| <b>&gt;&gt;&gt;DL Code Information</b> |   | 0 ..<br><maxno<br>OFDPC<br>H>      |  |  | –      |        |
| >>>>DPCH ID                            | M |                                    | 9.2.3.5                                |  | –      |        |
| >>>>TDD<br>Channelisation Code         | O |                                    | 9.2.3.19                               |  | –      |        |
| <b>&gt;DL DPCH to delete</b>           |   | 0..<br><maxno<br>of<br>DPCHs<br>>  |  |  | GLOBAL | reject |
| >>DPCH ID                              | M |                                    | 9.2.3.5                                |  | –      |        |
| <b>DL CCTrCH to Delete</b>             |   | 0..<br><maxno<br>of<br>CCTrC<br>Hs |  |  | GLOBAL | reject |
| >CCTrCH ID                             | M |                                    | 9.2.3.3                                |  | –      |        |
| DCHs to Modify                         | O |                                    | DCHs TDD<br>to Modify<br>9.2.3.4D      |  | YES    | reject |
| DCHs to Add                            | O |                                    | DCH TDD<br>Information<br>9.2.3.4C     |  | YES    | reject |
| <b>DCHs to Delete</b>                  |   | 0..<max<br>noofDC<br>Hs>           |  |  | GLOBAL | reject |
| >DCH ID                                | M |                                    | 9.2.1.20                               |  | –      |        |
| <b>DSCH Information to modify</b>      |   | 0 ..<br><Maxno<br>of<br>DSCHs<br>> |  |  | GLOBAL | reject |
| >DSCH ID                               | M |                                    | 9.2.1.27                               |  | –      |        |
| >CCTrCH ID                             | O |                                    | 9.2.3.3                                | DL CCTrCH<br>in which the<br>DSCH is<br>mapped | –      |        |
| >Transport Format Set                  | O |                                    | 9.2.1.59                               |  | –      |        |
| > Allocation/Retention Priority        | O |                                    | 9.2.1.1A                               |  | –      |        |
| >Frame Handling Priority               | O |                                    | 9.2.1.30                               |  | –      |        |
| >ToAWS                                 | O |                                    | 9.2.1.61                               |  | –      |        |
| >ToAWE                                 | O |                                    | 9.2.1.60                               |  | –      |        |
| >Transport Bearer Request<br>Indicator | M |                                    | 9.2.1.62A                              |  | –      |        |
| DSCH Information to add                | O |                                    | DSCH<br>TDD<br>Information<br>9.2.3.5A |  | YES    | reject |
| <b>DSCH Information to delete</b>      |   | 0 ..<br><Maxno<br>of<br>DSCHs<br>> |  |  | GLOBAL | reject |
| >DSCH ID                               | M |                                    | 9.2.1.27                               |  | –      |        |
| <b>USCH Information to modify</b>      |   | 0 ..<br><Maxno<br>of<br>USCHs<br>> |  |  | GLOBAL | reject |
| >USCH ID                               | M |                                    | 9.2.3.27                               |  | –      |        |



|                                     |   |                        |                           |                                       |        |        |
|-------------------------------------|---|------------------------|---------------------------|---------------------------------------|--------|--------|
| >Transport Format Set               | O |                        | 9.2.1.59                  |                                       | –      |        |
| > Allocation/Retention Priority     | O |                        | 9.2.1.1A                  |                                       | –      |        |
| >CCTrCH ID                          | O |                        | 9.2.3.2                   | UL CCTrCH in which the USCH is mapped | –      |        |
| >Transport Bearer Request Indicator | M |                        | 9.2.1.62A                 |                                       | –      |        |
| USCH Information to add             | O |                        | USCH Information 9.2.3.28 |                                       | YES    | reject |
| <b>USCH Information to delete</b>   |   | 0 .. <Maxno of USCHs > |                           |                                       | GLOBAL | reject |
| >USCH ID                            | M |                        | 9.2.3.27                  |                                       | –      |        |
| <b>RL Information</b>               |   | 0..1                   |                           |                                       | YES    | reject |
| >RL ID                              | M |                        | 9.2.1.53                  |                                       | –      |        |
| >Maximum Downlink Power             | O |                        | DL Power 9.2.1.21         |                                       | –      |        |
| >Minimum Downlink Power             | O |                        | DL Power 9.2.1.21         |                                       | –      |        |

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

| Range Bound           | Explanation  |
|-----------------------|--|
| <i>MaxnoofDCHs</i>    | Maximum number of DCHs for a UE.                     |
| <i>MaxnoofCCTrCHs</i> | Maximum number of CCTrCHs for a UE.                  |
| <i>MaxnoofDPCHs</i>   | Maximum number of DPCHs in one CCTrCH.               |
| <i>MaxnoofDSCHs</i>   | Maximum number of DSCHs for one UE                   |
| <i>MaxnoofUSCHs</i>   | Maximum number of USCHs for one UE                   |
| <i>MaxnoofDLts</i>    | Maximum number of Downlink time slots per Radio Link |
| <i>MaxnoofULts</i>    | Maximum number of Uplink time slots per Radio Link   |

## 9.1.43 RADIO LINK RECONFIGURATION READY

| IE/Group name                      | Presence | Range                | IE Type and Reference | Semantic Description  | Criticality | Assigned Criticality |
|------------------------------------|----------|----------------------|-----------------------|---|-------------|----------------------|
| Message Discriminator              | M        |                      | 9.2.1.45              |   | –           |                      |
| Message Type                       | M        |                      | 9.2.1.46              |   | YES         | reject               |
| CRNC Communication Context ID      | M        |                      | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used.                                   | YES         | ignore               |
| Transaction ID                     | M        |                      | 9.2.1.62              |   | –           |                      |
| <b>RL Information Response</b>     |          | $0..<max\ noofRLs >$ |                       | Only one RL information response group for one group of combined RLs shall be present | EACH        | ignore               |
| >RL ID                             | M        |                      | 9.2.1.53              |   | –           |                      |
| >DCH Information Response          | O        |                      | 9.2.1.20C             |   | YES         | ignore               |
| >DSCH Information Response         | O        |                      | 9.2.1.27A             |   | YES         | ignore               |
| >USCH Information Response         | O        |                      | 9.2.3.29              | TDD only  | YES         | ignore               |
| >TFCI2 Bearer Information Response | O        |                      | 9.2.2.49A             |   | –           |                      |
| Criticality Diagnostics            | O        |                      | 9.2.1.17              |   | YES         | ignore               |

| Range Bound       | Explanation                     |
|-------------------|---------------------------------|
| <i>MaxnoofRLs</i> | Maximum number of RLs for a UE. |

## 9.1.44 RADIO LINK RECONFIGURATION FAILURE

| IE/Group Name                                 | Presence | Range                | IE Type and Reference | Semantic Description                                | Criticality | Assigned Criticality |
|---|----------|----------------------|-----------------------|---|-------------|----------------------|
| Message Discriminator                         | M        |                      | 9.2.1.45              |   | –           |                      |
| Message Type                                  | M        |                      | 9.2.1.46              |   | YES         | reject               |
| CRNC Communication Context ID                 | M        |                      | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used. | YES         | ignore               |
| Transaction ID                                | M        |                      | 9.2.1.62              |   | –           |                      |
| CHOICE <i>cause level</i>                     | M        |                      |                       |   | YES         | ignore               |
| > <i>General</i>                              |          |                      |                       |   | –           |                      |
| >>Cause                                       | M        |                      | 9.2.1.6               |   | YES         | ignore               |
| > <i>RL specific</i>                          |          |                      |                       |   | –           |                      |
| >> <b>RLs Causing Reconfiguration Failure</b> |          | $0..<max\ noofRLs >$ |                       |   | EACH        | ignore               |
| >>>RL ID                                      | M        |                      | 9.2.1.53              |   | –           |                      |
| >>>Cause                                      | M        |                      | 9.2.1.6               |   | –           |                      |
| Criticality Diagnostics                       | O        |                      | 9.2.1.17              |   | YES         | ignore               |

| Range Bound       | Explanation                     |
|-------------------|---------------------------------|
| <i>MaxnoofRLs</i> | Maximum number of RLs for a UE. |

### 9.1.45 RADIO LINK RECONFIGURATION COMMIT

| IE/Group Name                       | Presence | Range | IE Type and Reference | Semantic Description                             | Criticality | Assigned Criticality |
|-------------------------------------|----------|-------|-----------------------|--|-------------|----------------------|
| Message Discriminator               | M        |       | 9.2.1.45              |  | –           |                      |
| Message type                        | M        |       | 9.2.1.46              |  | YES         | ignore               |
| Node B Communication Context ID     | M        |       | 9.2.1.48              | The reserved value "All NBCC" shall not be used. | YES         | ignore               |
| Transaction ID                      | M        |       | 9.2.1.62              |  | –           |                      |
| CFN                                 | M        |       | 9.2.1.7               |  | YES         | ignore               |
| Active Pattern Sequence Information | O        |       | 9.2.2.A               |  | YES         | ignore               |

### 9.1.46 RADIO LINK RECONFIGURATION CANCEL

| IE/Group Name                   | Presence | Range | IE Type and Reference | Semantic Description                             | Criticality | Assigned Criticality |
|---------------------------------|----------|-------|-----------------------|--|-------------|----------------------|
| Message Discriminator           | M        |       | 9.2.1.45              |  | –           |                      |
| Message type                    | M        |       | 9.2.1.46              |  | YES         | ignore               |
| Node B Communication Context ID | M        |       | 9.2.1.48              | The reserved value "All NBCC" shall not be used. | YES         | ignore               |
| Transaction ID                  | M        |       | 9.2.1.62              |  | –           |                      |

## 9.1.47 RADIO LINK RECONFIGURATION REQUEST

## 9.1.47.1 FDD Message

| IE/Group Name                                 | Presence | Range            | IE Type and Reference             | Semantic Description                             | Criticality | Assigned Criticality |
|---|----------|------------------|-----------------------------------|--|-------------|----------------------|
| Message Discriminator                         | M        |                  | 9.2.1.45                          |  | –           |                      |
| Message Type                                  | M        |                  | 9.2.1.46                          |  | YES         | reject               |
| Node B Communication Context ID               | M        |                  | 9.2.1.48                          | The reserved value "All NBCC" shall not be used. | YES         | reject               |
| Transaction ID                                | M        |                  | 9.2.1.62                          |  | –           |                      |
| <b>UL DPCH Information</b>                    |          | 0..1             |                                   |  | YES         | reject               |
| >TFCS   | O        |                  | 9.2.1.58                          | For the UL.                                      | –           |                      |
| <b>DL DPCH Information</b>                    |          | 0..1             |                                   |  | YES         | reject               |
| >TFCS   | O        |                  | 9.2.1.58                          | For the DL.                                      | –           |                      |
| >TFCI Signalling Mode                         | O        |                  | 9.2.2.50                          |  | –           |                      |
| >Limited Power Increase                       | O        |                  | 9.2.2.18A                         |  | –           |                      |
| DCHs to Modify                                | O        |                  | DCHs FDD to Modify 9.2.2.4E       |  | YES         | reject               |
| DCHs to Add                                   | O        |                  | DCH FDD Information 9.2.2.4D      |  | YES         | reject               |
| <b>DCHs to Delete</b>                         |          | 0..<maxnoofDCHs> |                                   |  | GLOBAL      | reject               |
| >DCH ID                                       | M        |                  | 9.2.1.20                          |  | –           |                      |
| <b>Radio Link Information</b>                 |          | 0..<maxnoofRLs>  |                                   |  | EACH        | reject               |
| >RL ID  | M        |                  | 9.2.1.53                          |  | –           |                      |
| >Maximum DL Power                             | O        |                  | DL Power 9.2.1.21                 |  | –           |                      |
| >Minimum DL Power                             | O        |                  | DL Power 9.2.1.21                 |  | –           |                      |
| >DL Code Information                          | C-SF/2   |                  | FDD DL Code Information 9.2.2.14A |  | –           |                      |
| Transmission Gap Pattern Sequence Information | O        |                  | 9.2.2.53A                         |  | YES         | reject               |

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

| Condition | Explanation   |
|-----------|---|
| SF/2      | This IE group is present only if the <i>Transmission Gap Pattern Sequence Information</i> IE is included and the indicated Downlink Compressed Mode method for at least one of the included Transmission Gap Pattern Sequence is set to "SF/2". |

## 9.1.47.2 TDD Message

| IE/Group Name                   | Presence | Range                            | IE Type and Reference        | Semantic Description                             | Criticality | Assigned Criticality |
|---------------------------------|----------|----------------------------------|------------------------------|--|-------------|----------------------|
| Message Discriminator           | M        |                                  | 9.2.1.45                     |  | –           |                      |
| Message Type                    | M        |                                  | 9.2.1.46                     |  | YES         | reject               |
| Node B Communication Context ID | M        |                                  | 9.2.1.48                     | The reserved value "All NBCC" shall not be used. | YES         | reject               |
| Transaction ID                  | M        |                                  | 9.2.1.62                     |  | –           |                      |
| <b>UL CTrCH to modify</b>       |          | <i>0..&lt;maxn oofCTrCHs&gt;</i> |                              |  | EACH        | notify               |
| >CTrCH ID                       | M        |                                  | 9.2.3.3                      |  | –           |                      |
| >TFCS                           | O        |                                  | 9.2.1.58                     |  | –           |                      |
| >Puncture Limit                 | O        |                                  | 9.2.1.50                     |  | –           |                      |
| <b>UL CTrCH to delete</b>       |          | <i>0..&lt;maxn oofCTrCHs&gt;</i> |                              |  | EACH        | notify               |
| >CTrCH ID                       | M        |                                  | 9.2.3.3                      |  | –           |                      |
| <b>DL CTrCH to modify</b>       |          | <i>0..&lt;maxn oofCTrCHs&gt;</i> |                              |  | EACH        | notify               |
| >CTrCH ID                       | M        |                                  | 9.2.3.3                      |  | –           |                      |
| >TFCS                           | O        |                                  | 9.2.1.58                     |  | –           |                      |
| >Puncture Limit                 | O        |                                  | 9.2.1.50                     |  | –           |                      |
| <b>DL CTrCH to delete</b>       |          | <i>0..&lt;maxn oofCTrCHs&gt;</i> |                              |  | EACH        | notify               |
| >CTrCH ID                       | M        |                                  | 9.2.3.3                      |  | –           |                      |
| DCHs to Modify                  | O        |                                  | DCHs TDD to Modify 9.2.3.4D  |  | YES         | reject               |
| DCHs to Add                     | O        |                                  | DCH TDD Information 9.2.3.4C |  | YES         | reject               |
| <b>DCHs to Delete</b>           |          | <i>0..&lt;maxn oofDSCHs&gt;</i>  |                              |  | GLOBAL      | reject               |
| >DCH ID                         | M        |                                  | 9.2.1.20                     |  | –           |                      |
| <b>RL Information</b>           |          | <i>0..1</i>                      |                              |  | YES         | reject               |
| >RL ID                          | M        |                                  | 9.2.1.53                     |  | –           |                      |
| >Maximum Downlink Power         | O        |                                  | DL Power 9.2.1.21            |  | –           |                      |
| >Minimum Downlink Power         | O        |                                  | DL Power 9.2.1.21            |  | –           |                      |

| Range bound          | Explanation                        |
|----------------------|------------------------------------|
| <i>MaxnoofCTrCHs</i> | Maximum number of CTrCHs for a UE. |

## 9.1.48 RADIO LINK RECONFIGURATION RESPONSE

| IE/Group Name                  | Presence | Range                        | IE Type and Reference | Semantic Description  | Criticality | Assigned Criticality |
|--------------------------------|----------|------------------------------|-----------------------|---|-------------|----------------------|
| Message Discriminator          | M        |                              | 9.2.1.45              |   | –           |                      |
| Message Type                   | M        |                              | 9.2.1.46              |   | YES         | reject               |
| CRNC Communication Context ID  | M        |                              | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used.                                   | YES         | ignore               |
| Transaction ID                 | M        |                              | 9.2.1.62              |   | –           |                      |
| <b>RL Information Response</b> |          | <i>0..&lt;maxnoofRLs&gt;</i> |                       | Only one RL information response group for one group of combined RLs shall be present | EACH        | ignore               |
| >RL ID                         | M        |                              | 9.2.1.53              |   | –           |                      |
| >DCH Information Response      | O        |                              | 9.2.1.20C             |   | YES         | ignore               |
| Criticality Diagnostics        | O        |                              | 9.2.1.17              |   | YES         | ignore               |

| Range bound       | Explanation                     |
|-------------------|---------------------------------|
| <i>MaxnoofRLs</i> | Maximum number of RLs for a UE. |

## 9.1.49 RADIO LINK DELETION REQUEST

| IE/Group Name                   | Presence | Range                        | IE type and reference | Semantics description                            | Criticality | Assigned Criticality |
|---------------------------------|----------|------------------------------|-----------------------|--|-------------|----------------------|
| Message Discriminator           | M        |                              | 9.2.1.45              |  | –           |                      |
| Message Type                    | M        |                              | 9.2.1.46              |  | YES         | reject               |
| Node B Communication Context ID | M        |                              | 9.2.1.48              | The reserved value "All NBCC" shall not be used. | YES         | reject               |
| CRNC Communication Context ID   | M        |                              | 9.2.1.18              |  | YES         | reject               |
| Transaction ID                  | M        |                              | 9.2.1.62              |  | –           |                      |
| <b>RL Information</b>           |          | <i>1..&lt;maxnoofRLs&gt;</i> |                       |  | EACH        | notify               |
| >RL ID                          | M        |                              | 9.2.1.53              |  | –           |                      |

| Range bound       | Explanation                              |
|-------------------|--|
| <i>MaxnoofRLs</i> | Maximum number of radio links for one UE |

## 9.1.50 RADIO LINK DELETION RESPONSE

| IE/Group Name                 | Presence | Range | IE type and reference | Semantics description                               | Criticality | Assigned Criticality |
|-------------------------------|----------|-------|-----------------------|---|-------------|----------------------|
| Message Discriminator         | M        |       | 9.2.1.45              |   | –           |                      |
| Message Type                  | M        |       | 9.2.1.46              |   | YES         | reject               |
| CRNC Communication Context ID | M        |       | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used. | YES         | ignore               |
| Transaction ID                | M        |       | 9.2.1.62              |   | –           |                      |
| Criticality Diagnostics       | O        |       | 9.2.1.17              |   | YES         | ignore               |

## 9.1.51 DL POWER CONTROL REQUEST [FDD]

| IE/Group Name                         | Presence                 | Range            | IE type and reference | Semantics description                            | Criticality | Assigned Criticality |
|---------------------------------------|--------------------------|------------------|-----------------------|--|-------------|----------------------|
| Message Discriminator                 | M                        |                  | 9.2.1.45              |  | –           |                      |
| Message Type                          | M                        |                  | 9.2.1.46              |  | YES         | ignore               |
| Node B Communication Context ID       | M                        |                  | 9.2.1.48              | The reserved value "All NBCC" shall not be used. | YES         | ignore               |
| Transaction ID                        | M                        |                  | 9.2.1.62              |  | –           |                      |
| Power Adjustment Type                 | M                        |                  | 9.2.2.27              |  | YES         | ignore               |
| DL Reference Power                    | C-Common                 |                  | DL power 9.2.1.21     |  | YES         | Ignore               |
| Inner Loop DL PC Status               | O                        |                  | 9.2.2.18B             |  | YES         | ignore               |
| <b>DL Reference Power Information</b> | C-Individual             | 1..<maxnoof RLs> |                       |  | GLOBAL      | ignore               |
| >RL ID                                | M                        |                  | 9.2.1.53              |  | –           |                      |
| >DL Reference Power                   | M                        |                  | DL power 9.2.1.21     |  | –           |                      |
| Max Adjustment Step                   | C-Common<br>OrIndividual |                  | 9.2.2.20              |  | YES         | ignore               |
| Adjustment Period                     | C-Common<br>OrIndividual |                  | 9.2.2.A               |  | YES         | ignore               |
| Adjustment Ratio                      | C-Common<br>OrIndividual |                  | 9.2.2.B               |  | YES         | ignore               |

| Condition          | Explanation   |
|--------------------|---|
| Common             | This IE is present only "Adjustment Type " equals to 'Common'                 |
| Individual         | This IE is present only "Adjustment Type " equals to 'Individual'             |
| CommonOrIndividual | This IE is present only "Adjustment Type " equals to 'Common' or 'Individual' |

| Range Bound | Explanation                            |
|-------------|--|
| MaxnoofRLs  | Maximum number of Radio Links for a UE |

## 9.1.52 DEDICATED MEASUREMENT INITIATION REQUEST

| IE/Group Name                                   | Presence | Range              | IE Type and Reference               | Semantics Description   | Criticality | Assigned Criticality |
|---|----------|--------------------|-------------------------------------|---|-------------|----------------------|
| Message Discriminator                           | M        |                    | 9.2.1.45                            |   | –           |                      |
| Message Type                                    | M        |                    | 9.2.1.46                            |   | YES         | reject               |
| Node B Communication Context ID                 | M        |                    | 9.2.1.48                            | The reserved value "All NBCC" shall not be used when the Report characteristics type is set to "On-Demand". | YES         | reject               |
| Transaction ID                                  | M        |                    | 9.2.1.62                            |   | –           |                      |
| Measurement ID                                  | M        |                    | 9.2.1.42                            |   | YES         | reject               |
| Dedicated Measurement Object Type               | M        |                    | 9.2.1.22                            |   | YES         | reject               |
| CHOICE <i>Dedicated Measurement Object Type</i> | M        |                    |                                     |   | YES         | reject               |
| >RL   |          |                    |                                     |   | –           | reject               |
| >>RL Information                                |          | 1..<maxnoofRLs>    |                                     |   | EACH        | reject               |
| >>>RL ID  | M        |                    | 9.2.1.53                            |   | –           |                      |
| >>>DPCH ID                                      | O        |                    | 9.2.3.5                             | TDD only  | –           |                      |
| >ALL RL   |          |                    | NULL                                |   | –           |                      |
| >RLS  |          |                    |                                     | FDD only  | –           |                      |
| >>RL Set Information                            |          | 1..<maxnoofRLSets> |                                     |   | –           |                      |
| >>>RL Set ID                                    | M        |                    | 9.2.2.39                            |   | –           |                      |
| >ALL RLS  |          |                    | NULL                                | FDD only  | –           |                      |
| Dedicated Measurement Type                      | M        |                    | 9.2.1.23                            |   | YES         | reject               |
| Measurement Filter Coefficient                  | O        |                    | 9.2.1.41                            |   | YES         | reject               |
| Report Characteristics                          | M        |                    | 9.2.1.51                            |   | YES         | reject               |
| CFN reporting indicator                         | M        |                    | FN reporting indicator<br>9.2.1.29B |   | YES         | reject               |
| CFN   | O        |                    | 9.2.1.7                             |   | YES         | reject               |

| Range                | Explanation   |
|----------------------|---|
| <i>MaxnoofRLs</i>    | Maximum number of individual RL's a measurement can be started on.    |
| <i>MaxnoofRLSets</i> | Maximum number of individual RL Sets a measurement can be started on. |



## 9.1.53 DEDICATED MEASUREMENT INITIATION RESPONSE

| IE/Group Name                                   | Presence | Range              | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|--------------------|-----------------------|--|-------------|----------------------|
| Message Discriminator                           | M        |                    | 9.2.1.45              |  | –           |                      |
| Message Type                                    | M        |                    | 9.2.1.46              |  | YES         | reject               |
| CRNC Communication Context ID                   | M        |                    | 9.2.1.18              |  | YES         | ignore               |
| Transaction ID                                  | M        |                    | 9.2.1.62              |  | –           |                      |
| Measurement ID                                  | M        |                    | 9.2.1.42              |  | YES         | ignore               |
| CHOICE <i>Dedicated Measurement Object Type</i> | O        |                    |                       | Dedicated Measurement Object Type the measurement was initiated with | YES         | ignore               |
| >RL or ALL RL                                   |          |                    |                       |  | –           |                      |
| >>RL Information                                |          | 1..<maxnoofRLs>    |                       |  | EACH        | ignore               |
| >>>RL ID  | M        |                    | 9.2.1.53              |  | –           |                      |
| >>>DPCH ID                                      | O        |                    | 9.2.3.5               | TDD only   | –           |                      |
| >>>Dedicated Measurement Value                  | M        |                    | 9.2.1.24              |  | –           |                      |
| >>>CFN  | O        |                    | 9.2.1.7               | Dedicated Measurement Time Reference                                 | –           |                      |
| >RLS or ALL RLS                                 |          |                    |                       | FDD only   | –           |                      |
| >>RL Set Information                            |          | 1..<maxnoofRLSets> |                       |  | –           |                      |
| >>>RL Set ID                                    | M        |                    | 9.2.2.39              |  | –           |                      |
| >>>Dedicated Measurement Value                  | M        |                    | 9.2.1.24              |  | –           |                      |
| >>>CFN  | O        |                    | 9.2.1.7               | Dedicated Measurement Time Reference                                 | –           |                      |
| Criticality Diagnostics                         | O        |                    | 9.2.1.17              |  | YES         | ignore               |

| Range                | Explanation   |
|----------------------|---|
| <i>MaxnoofRLs</i>    | Maximum number of individual RL's the measurement can be started on.  |
| <i>MaxnoofRLSets</i> | Maximum number of individual RL Sets a measurement can be started on. |

### 9.1.54 DEDICATED MEASUREMENT INITIATION FAILURE

| IE/Group Name                 | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator         | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type                  | M        |       | 9.2.1.46              |                       | YES         | reject               |
| CRNC Communication Context ID | M        |       | 9.2.1.18              |                       | YES         | ignore               |
| Transaction ID                | M        |       | 9.2.1.62              |                       | –           |                      |
| Measurement ID                | M        |       | 9.2.1.42              |                       | YES         | ignore               |
| Cause                         | M        |       | 9.2.1.6               |                       | YES         | ignore               |
| Criticality Diagnostics       | O        |       | 9.2.1.17              |                       | YES         | ignore               |

### 9.1.55 DEDICATED MEASUREMENT REPORT

| IE/Group Name                                   | Presence | Range              | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---|----------|--------------------|-----------------------|--|-------------|----------------------|
| Message Discriminator                           | M        |                    | 9.2.1.45              |  | –           |                      |
| Message Type                                    | M        |                    | 9.2.1.46              |  | YES         | ignore               |
| CRNC Communication Context ID                   | M        |                    | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used.                  | YES         | ignore               |
| Transaction ID                                  | M        |                    | 9.2.1.62              |  | –           |                      |
| Measurement ID                                  | M        |                    | 9.2.1.42              |  | YES         | ignore               |
| CHOICE <i>Dedicated Measurement Object Type</i> | M        |                    |                       | Dedicated Measurement Object Type the measurement was initiated with | YES         | ignore               |
| >RL or ALL RL                                   |          |                    |                       |  | –           |                      |
| >>RL Information                                |          | 1..<maxnoofRLs>    |                       |  | EACH        | ignore               |
| >>>RL ID  | M        |                    | 9.2.1.53              |  | –           |                      |
| >>>DPCH ID                                      | O        |                    | 9.2.3.5               | TDD only   | –           |                      |
| >>>Dedicated Measurement Value Information      | M        |                    | 9.2.1.24A             |  | –           |                      |
| >RLS or ALL RLS                                 |          |                    |                       | FDD only   | –           |                      |
| >>RL Set Information                            |          | 1..<maxnoofRLSets> |                       |  | EACH        | ignore               |
| >>>RL Set ID                                    | M        |                    | 9.2.1.39              |  | –           |                      |
| >>>Dedicated Measurement Value Information      | M        |                    | 9.2.1.24A             |  | –           |                      |

| Range                | Explanation   |
|----------------------|---|
| <i>MaxnoofRLs</i>    | Maximum number of individual RL's the measurement can be started on.  |
| <i>MaxnoofRLSets</i> | Maximum number of individual RL Sets a measurement can be started on. |

### 9.1.56 DEDICATED MEASUREMENT TERMINATION REQUEST

| IE/Group Name                   | Presence | Range | IE Type and Reference | Semantics Description  | Criticality | Assigned Criticality |
|---------------------------------|----------|-------|-----------------------|--|-------------|----------------------|
| Message Discriminator           | M        |       | 9.2.1.45              |  | –           |                      |
| Message Type                    | M        |       | 9.2.1.46              |  | YES         | ignore               |
| Node B Communication Context ID | M        |       | 9.2.1.48              | The reserved value "All NBCC" shall only be used if this value was used when initiating the measurement. | YES         | ignore               |
| Transaction ID                  | M        |       | 9.2.1.62              |  | –           |                      |
| Measurement ID                  | M        |       | 9.2.1.42              |  | YES         | ignore               |

### 9.1.57 DEDICATED MEASUREMENT FAILURE INDICATION

| IE/Group Name                 | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|-------------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator         | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type                  | M        |       | 9.2.1.46              |                       | YES         | ignore               |
| CRNC Communication Context ID | M        |       | 9.2.1.18              |                       | YES         | ignore               |
| Transaction ID                | M        |       | 9.2.1.62              |                       | –           |                      |
| Measurement ID                | M        |       | 9.2.1.42              |                       | YES         | ignore               |
| Cause                         | M        |       | 9.2.1.6               |                       | YES         | ignore               |

## 9.1.58 RADIO LINK FAILURE INDICATION

| IE/Group Name                  | Presence | Range                   | IE type and reference | Semantics description                               | Criticality | Assigned Criticality |
|--------------------------------|----------|-------------------------|-----------------------|---|-------------|----------------------|
| Message Discriminator          | M        |                         | 9.2.1.45              |   | –           |                      |
| Message Type                   | M        |                         | 9.2.1.46              |   | YES         | ignore               |
| Transaction ID                 | M        |                         | 9.2.1.62              |   | –           |                      |
| CRNC Communication Context ID  | M        |                         | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used. | YES         | ignore               |
| CHOICE <i>Reporting Object</i> | M        |                         |                       | Object for which the Failure shall be reported.     | YES         | ignore               |
| >RL                            |          |                         |                       |   | –           |                      |
| >>RL Information               |          | 1 to<br><MaxnoofRLs>    |                       |   | EACH        | ignore               |
| >>>RL ID                       | M        |                         | 9.2.1.53              |   | –           |                      |
| >>>Cause                       | M        |                         | 9.2.1.6               |   | –           |                      |
| >RL Set                        |          |                         |                       |   | –           |                      |
| >>RL Set Information           |          | 1 to<br><MaxnoofRLSets> |                       |   | EACH        | ignore               |
| >>>RL Set ID                   | M        |                         | 9.2.2.39              |   | –           |                      |
| >>>Cause                       | M        |                         | 9.2.1.6               |   | –           |                      |

| Range bound          | Explanation                           |
|----------------------|---------------------------------------|
| <i>MaxnoofRLs</i>    | Maximum number of RLs for one UE.     |
| <i>MaxnoofRLSets</i> | Maximum number of RL Sets for one UE. |

## 9.1.59 RADIO LINK RESTORE INDICATION

| IE/Group Name                  | Presence | Range                    | IE type and reference | Semantics description                               | Criticality | Assigned Criticality |
|--------------------------------|----------|--------------------------|-----------------------|---|-------------|----------------------|
| Message Discriminator          | M        |                          | 9.2.1.45              |   | –           |                      |
| Message Type                   | M        |                          | 9.2.1.46              |   | YES         | ignore               |
| Transaction ID                 | M        |                          | 9.2.1.62              |   | –           |                      |
| CRNC Communication Context ID  | M        |                          | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used. | YES         | ignore               |
| CHOICE <i>Reporting Object</i> | M        |                          |                       | Object for which the Restoration shall be reported. | YES         | ignore               |
| >RL                            |          |                          |                       |   | –           |                      |
| >>Radio Link Information       |          | 1 to<br><MaxnoofRLs>     |                       |   | EACH        | ignore               |
| >>>RL ID                       | M        |                          | 9.2.1.53              |   | –           |                      |
| >RL Set                        |          |                          |                       |   | –           |                      |
| >>RL Set Information           |          | 1 to<br><MaxnoofRL Sets> |                       |   | EACH        | ignore               |
| >>>RL Set ID                   | M        |                          | 9.2.2.39              |   | –           |                      |

| Range bound           | Explanation                           |
|-----------------------|---------------------------------------|
| <i>MaxnoofRLs</i>     | Maximum number of RLs for one UE.     |
| <i>MaxnoofRL Sets</i> | Maximum number of RL Sets for one UE. |

## 9.1.60 COMPRESSED MODE COMMAND [FDD]

| IE/Group Name                       | Presence | Range | IE type and reference | Semantics description                            | Criticality | Assigned Criticality |
|-------------------------------------|----------|-------|-----------------------|--|-------------|----------------------|
| Message Discriminator               | M        |       | 9.2.1.45              |  | –           |                      |
| Message Type                        | M        |       | 9.2.1.46              |  | YES         | ignore               |
| Node B communication context ID     | M        |       | 9.2.1.48              | The reserved value "All NBCC" shall not be used. | YES         | ignore               |
| Transaction ID                      | M        |       | 9.2.1.62              |  | –           |                      |
| Active Pattern Sequence Information | M        |       | 9.2.2.A               |  | YES         | ignore               |

## 9.1.61 ERROR INDICATION

| IE/Group Name                   | Presence  | Range | IE Type and Reference | Semantics Description                               | Criticality | Assigned Criticality |
|---------------------------------|-----------|-------|-----------------------|---|-------------|----------------------|
| Message Discriminator           | M         |       | 9.2.1.45              |   | –           |                      |
| Message Type                    | M         |       | 9.2.1.46              |   | YES         | ignore               |
| CRNC Communication Context ID   | O         |       | 9.2.1.18              | The reserved value "All CRNCC C" shall not be used. | YES         | ignore               |
| Node B Communication Context ID | O         |       | 9.2.1.48              | The reserved value "All NBCC" shall not be used.    | YES         | ignore               |
| Transaction ID                  | M         |       | 9.2.1.62              |   | YES         | ignore               |
| Cause                           | C-ifalone |       | 9.2.1.6               |   | YES         | ignore               |
| Criticality Diagnostics         | C-ifalone |       | 9.2.1.17              |   | YES         | ignore               |

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

## 9.1.62 PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST [TDD]

| IE/Group Name                          | Presence | Range                                | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|--|----------|--------------------------------------|-----------------------|----------------------|-------------|----------------------|
| Message Discriminator                  | M        |                                      | 9.2.1.45              |                      | -           |                      |
| Message Type                           | M        |                                      | 9.2.1.46              |                      | YES         | reject               |
| Transaction ID                         | M        |                                      | 9.2.1.62              |                      | -           |                      |
| C-ID                                   | M        |                                      | 9.2.1.9               |                      | YES         | reject               |
| SFN                                    | O        |                                      | 9.2.1.53A             |                      | YES         | reject               |
| <b>PDSCH Sets to add</b>               |          | <i>0..&lt;maxnoof PDSCHSets &gt;</i> |                       |                      | GLOBAL      | reject               |
| >PDSCH Set ID                          | M        |                                      | 9.2.3.11              |                      | -           |                      |
| <b>&gt;PDSCH Information</b>           |          | <i>1</i>                             |                       |                      | YES         | reject               |
| >>Repetition Period                    | M        |                                      | 9.2.3.16              |                      | –           |                      |
| >>Repetition Length                    | M        |                                      | 9.2.3.15              |                      | –           |                      |
| >>TDD Physical Channel Offset          | M        |                                      | 9.2.3.20              |                      | –           |                      |
| <b>&gt;&gt;DL Timeslot Information</b> |          | <i>1 .. &lt;maxnoofDL ts&gt;</i>     |                       |                      | –           |                      |
| >>>Time Slot                           | M        |                                      | 9.2.3.23              |                      | –           |                      |
| >>>Midamble Shift and Burst Type       | M        |                                      | 9.2.3.7               |                      | –           |                      |
| >>>TFCI Presence                       | M        |                                      | 9.2.1.57              |                      | –           |                      |
| <b>&gt;&gt;&gt;DL Code Information</b> |          | <i>1 .. &lt;maxnoOfP DSCH&gt;</i>    |                       |                      | –           |                      |
| >>>>PDSCH ID                           | M        |                                      | 9.2.3.10              |                      | –           |                      |

|  |   |                                      |          |  |        |        |
|--|---|--------------------------------------|----------|--|--------|--------|
| >>>>TDD Channelisation Code            | M |                                      | 9.2.3.19 |  | -      |        |
| <b>PDSCH Sets to Modify</b>            |   | <i>0..&lt;maxnoof PDSCHSets &gt;</i> |          |  | GLOBAL | reject |
| >PDSCH Set ID                          | M |                                      | 9.2.3.11 |  | -      |        |
| <b>&gt;PDSCH Information</b>           |   | 1                                    |          |  | YES    | reject |
| >>Repetition Period                    | O |                                      | 9.2.3.16 |  | -      |        |
| >>Repetition Length                    | O |                                      | 9.2.3.15 |  | -      |        |
| >>TDD Physical Channel Offset          | O |                                      | 9.2.3.20 |  | -      |        |
| >>Midamble Shift and Burst Type        | M |                                      | 9.2.3.7  |  | -      |        |
| <b>&gt;&gt;DL Timeslot Information</b> |   | 0 .. <maxnoofDLts>                   |          |  | -      |        |
| >>>Time Slot                           | M |                                      | 9.2.3.23 |  | -      |        |
| >>>Midamble Shift and Burst Type       | O |                                      | 9.2.3.7  |  | -      |        |
| >>>TFCI Presence                       | O |                                      | 9.2.1.57 |  | -      |        |
| <b>&gt;&gt;&gt;DL Code Information</b> |   | 0 .. <maxnoOfPDSCH>                  |          |  | -      |        |
| >>>>PDSCH ID                           | M |                                      | 9.2.3.10 |  | -      |        |
| >>>>TDD Channelisation Code            | M |                                      | 9.2.3.19 |  | -      |        |
| <b>PDSCH Sets to Delete</b>            |   | <i>0..&lt;maxnoof PDSCHSets &gt;</i> |          |  | GLOBAL | reject |
| >PDSCH Set ID                          | M |                                      | 9.2.3.11 |  | -      |        |
| <b>PUSCH Sets to add</b>               |   | <i>0..&lt;maxnoof PUSCHSets &gt;</i> |          |  | GLOBAL | reject |
| >PUSCH Set ID                          | M |                                      | 9.2.3.13 |  | -      |        |
| <b>&gt;PUSCH Information</b>           |   | 1                                    |          |  | YES    | reject |
| >>Repetition Period                    | M |                                      | 9.2.3.16 |  | -      |        |
| >>Repetition Length                    | M |                                      | 9.2.3.15 |  | -      |        |
| >>TDD Physical Channel Offset          | M |                                      | 9.2.3.20 |  | -      |        |
| <b>&gt;&gt;UL Timeslot Information</b> |   | 1 .. <maxnoofULts>                   |          |  | -      |        |
| >>>Time Slot                           | M |                                      | 9.2.3.23 |  | -      |        |
| >>>Midamble Shift and Burst Type       | M |                                      | 9.2.3.7  |  | -      |        |
| >>>TFCI Presence                       | M |                                      | 9.2.1.57 |  | -      |        |
| <b>&gt;&gt;&gt;UL Code Information</b> |   | 1 .. <maxnoOfPUSCH>                  |          |  | -      |        |
| >>>>PUSCH ID                           | M |                                      | 9.2.3.12 |  | -      |        |
| >>>>TDD Channelisation Code            | M |                                      | 9.2.3.19 |  | -      |        |
| <b>PUSCH Sets to Modify</b>            |   | <i>0..&lt;maxnoof PUSCHSets &gt;</i> |          |  | GLOBAL | reject |
| >PUSCH Set ID                          | M |                                      | 9.2.3.13 |  | -      |        |
| <b>&gt;PUSCH Information</b>           |   | 1                                    |          |  | YES    | reject |
| >>Repetition Period                    | O |                                      | 9.2.3.16 |  | -      |        |

|  |   |                       |          |  |        |        |
|--|---|-----------------------|----------|--|--------|--------|
| >>Repetition Length                    | O |                       | 9.2.3.15 |  | -      |        |
| >>TDD Physical Channel Offset          | O |                       | 9.2.3.20 |  | -      |        |
| <b>&gt;&gt;UL Timeslot Information</b> |   | 0 .. <maxnoofULts>    |          |  | -      |        |
| >>>Time Slot                           | M |                       | 9.2.3.23 |  | -      |        |
| >>>Midamble Shift and Burst Type       | O |                       | 9.2.3.7  |  | -      |        |
| >>>TFCI Presence                       | O |                       | 9.2.1.57 |  | -      |        |
| <b>&gt;&gt;&gt;UL Code Information</b> |   | 0 .. <maxnoOfPDSCH>   |          |  | -      |        |
| >>>>PUSCH ID                           | M |                       | 9.2.3.12 |  | -      |        |
| >>>>TDD Channelisation Code            | M |                       | 9.2.3.19 |  | -      |        |
| <b>PUSCH Sets to Delete</b>            |   | 0..<maxnoofPUSCHSets> |          |  | GLOBAL | reject |
| >PUSCH Set ID                          | M |                       | 9.2.3.13 |  | -      |        |

| Range bound               | Explanation                                     |
|---------------------------|---|
| <i>Maxnoof PDSCH Sets</i> | Maximum number of PDSCH Sets in a cell.         |
| <i>Maxnoof PDSCH</i>      | Maximum number of PDSCH in a cell.              |
| <i>Maxnoof PUSCH Sets</i> | Maximum number of PUSCH Sets in a cell.         |
| <i>Maxnoof PUSCH</i>      | Maximum number of PUSCH in a cell.              |
| <i>MaxnoofDLts</i>        | Maximum number of Downlink time slots in a cell |
| <i>MaxnoofULts</i>        | Maximum number of Uplink time slots in a cell   |

### 9.1.63 PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE [TDD]

| IE/Group Name           | Presence | Range | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                      | -           |                      |
| Message Type            | M        |       | 9.2.1.46              |                      | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                      | -           |                      |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                      | YES         | ignore               |



## 9.1.64 PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE [TDD]

| IE/Group Name                        | Presence | Range                   | IE Type and Reference | Semantic Description | Criticality | Assigned Criticality |
|--------------------------------------|----------|-------------------------|-----------------------|----------------------|-------------|----------------------|
| Message Discriminator                | M        |                         | 9.2.1.45              |                      | -           |                      |
| Message Type                         | M        |                         | 9.2.1.46              |                      | YES         | reject               |
| Transaction ID                       | M        |                         | 9.2.1.62              |                      | -           |                      |
| CHOICE <i>cause level</i>            | M        |                         |                       |                      | YES         | ignore               |
| > <i>General</i>                     |          |                         |                       |                      | -           |                      |
| >> <i>Cause</i>                      | M        |                         | 9.2.1.6               |                      | -           |                      |
| > <i>Set specific</i>                |          |                         |                       |                      | -           |                      |
| >>Unsuccessful DL Shared channel set |          | 0..<maxnoof PDSCHSets > |                       |                      | EACH        | ignore               |
| >>>PDSCH Set ID                      | M        |                         | 9.2.3.13              |                      | -           |                      |
| >>>Cause                             | M        |                         | 9.2.1.6               |                      | YES         | ignore               |
| >>Unsuccessful UL Shared channel set |          | 0..<maxnoof PUSCHSets > |                       |                      | EACH        | ignore               |
| >>>PUSCH Set ID                      | M        |                         | 9.2.3.13              |                      | -           |                      |
| >>>Cause                             | M        |                         | 9.2.1.6               |                      | -           |                      |
| Criticality Diagnostics              | O        |                         | 9.2.1.17              |                      | YES         | ignore               |

| Range bound               | Explanation                             |
|---------------------------|---|
| <i>Maxnoof PDSCH Sets</i> | Maximum number of PDSCH Sets in a cell. |
| <i>Maxnoof PUSCH Sets</i> | Maximum number of PUSCH Sets in a cell. |

## 9.1.65 RESET REQUEST

| IE/Group Name         | Presence | Range | IE type and reference | Semantic Description | Criticality | Assigned Criticality |
|-----------------------|----------|-------|-----------------------|----------------------|-------------|----------------------|
| Message Discriminator | M        |       | 9.2.1.45              |                      | -           |                      |
| Message Type          | M        |       | 9.2.1.46              |                      | YES         | reject               |
| Transaction ID        | M        |       | 9.2.1.62              |                      | -           |                      |

|  |        |                                      |          |  |      |        |
|--|--------|--------------------------------------|----------|--|------|--------|
| CHOICE <i>Reset Indicator</i>                    | M      |                                      |          |  | YES  | ignore |
| > <i>CommunicationContext</i>                    |        |                                      |          |  | –    |        |
| >> <b>Communication Context Information</b>      |        | 1.. <i>maxCommunicationContext</i> > |          |  | EACH | reject |
| >>>CHOICE <i>Communication Context Type</i>      | M      |                                      |          |  | –    |        |
| >>>>CRNC <i>Communication Context</i>            |        |                                      |          |  | –    |        |
| >>>>>CRNC <i>Communication Context ID</i>        | C-ifUL |                                      | 9.2.1.18 |  | –    |        |
| >>>>Node B <i>Communication Context</i>          |        |                                      |          |  | –    |        |
| >>>>>Node B <i>Communication Context ID</i>      | C-ifDL |                                      | 9.2.1.48 |  | –    |        |
| > <i>CommunicationControl Port</i>               |        |                                      |          |  | –    |        |
| >> <b>Communication Control Port Information</b> |        | 1.. <i>maxCCPinNodeB</i> >           |          |  | EACH | reject |
| >>>Communication <i>Control Port ID</i>          | M      |                                      | 9.2.1.15 |  | –    |        |
| > <i>Node B</i>                                  |        |                                      | NULL     |  | –    |        |

| Range bound                        | Explanation  |
|------------------------------------|--|
| IfDL                               | This IE is only present when message is sent by the CRNC .                 |
| IfUL                               | This IE is only present when message is sent by the Node B .               |
| 1.. <i>maxCommunicationContext</i> | Maximum number of communication contexts that can exist in the Node-B      |
| 1.. <i>maxCCPinNodeB</i>           | Maximum number of communication control ports that can exist in the Node B |

## 9.1.66 RESET RESPONSE

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| Message Discriminator   | M        |       | 9.2.1.45              |                       | –           |                      |
| Message Type            | M        |       | 9.2.1.46              |                       | YES         | reject               |
| Transaction ID          | M        |       | 9.2.1.62              |                       | –           |                      |
| Criticality Diagnostics | O        |       | 9.2.1.17              |                       | YES         | ignore               |

## 9.1.67 DL POWER TIMESLOT CONTROL REQUEST [TDD]

| IE/Group Name                       | Presence | Range             | IE type and reference | Semantics description                            | Criticality | Assigned Criticality |
|-------------------------------------|----------|-------------------|-----------------------|--|-------------|----------------------|
| Message Discriminator               | M        |                   | 9.2.1.45              |  | –           |                      |
| Message Type                        | M        |                   | 9.2.1.46              |  | YES         | ignore               |
| Node B Communication Context ID     | M        |                   | 9.2.1.48              | The reserved value "All NBCC" shall not be used. | YES         | ignore               |
| Transaction ID                      | M        |                   | 9.2.1.62              |  | –           |                      |
| <b>DL Timeslot ISCP Information</b> |          | 1..<maxnoof DLts> |                       |  | GLOBAL      | ignore               |
| >RL ID                              | M        |                   | 9.2.1.53              |  | –           |                      |
| >Time slot                          | M        |                   | 9.2.3.23              |  | –           |                      |
| >DL Timeslot ISCP                   | M        |                   | 9.2.3.4B              |  | –           |                      |

| Range Bound        | Explanation  |
|--------------------|--|
| <i>MaxnoofDLts</i> | Maximum number of Downlink time slots per Radio Link |

## 9.1.68 RADIO LINK PREEMPTION REQUIRED INDICATION

| IE/Group Name                 | Presence | Range            | IE type and reference | Semantics description | Criticality | Assigned Criticality |
|-------------------------------|----------|------------------|-----------------------|-----------------------|-------------|----------------------|
| Message Type                  | M        |                  | 9.2.1.46              |                       | YES         | ignore               |
| Transaction ID                | M        |                  | 9.2.1.62              |                       | –           |                      |
| CRNC Communication Context ID | M        |                  | 9.2.1.18              |                       | YES         | ignore               |
| <b>RL Information</b>         |          | 0..<maxno ofRLs> |                       |                       | EACH        | ignore               |
| >RL ID                        | M        |                  | 9.2.1.53              |                       | –           |                      |

| Range bound       | Explanation                              |
|-------------------|--|
| <i>MaxnoofRLs</i> | Maximum number of radio links for one UE |

## 9.2 Information Element Functional Definition and Contents

### 9.2.0 General

Section 9.2 presents the NBAP IE definitions in tabular format. The corresponding ASN.1 definition is presented in section 9.3. In case there is contradiction between the tabular format in section 9.2 and the ASN.1 definition, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where the tabular format shall take precedence.

### 9.2.1 Common parameters

#### 9.2.1.1 Add/Delete Indicator

The add/delete indicator shall notify the RNC whether the associated resource has been added to or removed from the Node B.

| IE/Group Name        | Presence | Range | IE type and reference   | Semantics description |
|----------------------|----------|-------|-------------------------|-----------------------|
| Add/Delete Indicator |          |       | ENUMERATED(Add, Delete) |                       |

### 9.2.1.1A Allocation/Retention Priority

This parameter indicates the priority level in the allocation and retention of Node B internal resources. See Annex A.

| IE/Group Name                        | Presence | Range | IE type and reference  | Semantics description  |
|--------------------------------------|----------|-------|--|--|
| <b>Allocation/Retention Priority</b> |          |       |  |  |
| >Priority Level                      | M        |       | INTEGER (0..15)  | This IE indicates the priority of the request.<br>0 = spare.<br>1 = highest priority.<br>.<br>.<br>.<br>14 = Lowest priority.<br>15= not used. |
| >Pre-emption Capability              | M        |       | ENUMERATED(shall not trigger pre-emption, may trigger pre-emption) |  |
| >Pre-emption Vulnerability           | M        |       | ENUMERATED (not pre-emptable, pre-emptable)                        |  |

### 9.2.1.2 Availability Status

The availability status is used to indicate more detailed information of the availability of the resource. In accordance with [6], following values are defined. If the value of this attribute is an empty set, this implies that none of the status conditions described in [6] are present.

| IE/Group Name       | Presence | Range | IE type and reference  | Semantics description |
|---------------------|----------|-------|--|-----------------------|
| Availability Status |          |       | ENUMERATED (empty, in test, failed, power off, off line, off duty, dependency, degraded, not installed, log full, ...) |                       |

### 9.2.1.3 BCCH Modification Time

Indicates the time after which the new system information shall be applied on BCCH.

| IE/Group Name          | Presence | Range | IE type and reference | Semantics description  |
|------------------------|----------|-------|-----------------------|--|
| BCCH Modification Time |          |       | Integer (0..511)      | All SFN values in which MIB may be mapped are allowed. The tabular description is presented in [18]. |

### 9.2.1.4 Binding ID

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

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

### 9.2.1.5 Blocking Priority Indicator

The Blocking priority indicator shall indicate the immediacy with which a resource should be blocked from use. The following priority classes shall be supported in the Blocking priority indicator.

| IE/Group Name               | Presence | Range | IE type and reference             | Semantics description  |
|-----------------------------|----------|-------|-----------------------------------|--|
| Blocking Priority Indicator |          |       | ENUMERATED(High, Normal, Low,...) | High priority: Block resource immediately.<br>Normal priority: Block resource when idle or upon timer expiry.<br>Low priority: Block resource when idle. |

## 9.2.1.6 Cause

| IE/Group Name                | Presence | Range | IE type and reference  | Semantics description |
|------------------------------|----------|-------|--|-----------------------|
| CHOICE <i>Cause group</i>    |          |       |  |                       |
| > <i>Radio Network Layer</i> |          |       |  |                       |
| >Radio Network Layer Cause   | M        |       | Enumerated<br>(unknown C-ID,<br>Cell not available,<br>Power level not supported,<br>DL radio resources not available,<br>UL radio resources not available,<br>RL Already Activated/allocated,<br>Node B Resources Unavailable,<br>Measurement not supported for the object,<br>Combining Resources not available,<br>Requested configuration not supported,<br>Synchronization failure,<br>Priority transport channel established,<br>SIB Origination in Node B not Supported,<br>Requested Tx Diversity Mode not supported,<br>Unspecified,<br>BCCH scheduling error,<br>Measurement Temporarily not Available,<br>Invalid CM Setting,<br>Reconfiguration CFN not elapsed,<br>Number of DL codes not supported,<br>S-CPICH not supported,<br>Combining not supported,<br>UL SF not supported,<br>DL SF not supported,<br>Common Transport Channel Type not supported,<br>Dedicated Transport Channel Type not supported,<br>Downlink Shared Channel Type not supported,<br>Uplink Shared Channel Type not supported,<br>CM not supported,<br>Tx diversity no longer supported,<br>Unknown Local Cell ID,<br>...) |                       |
| > <i>Transport Layer</i>     |          |       |  |                       |
| >Transport Layer Cause       | M        |       | Enumerated<br>(Transport resource unavailable,<br>Unspecified,<br>...)   |                       |
| > <i>Protocol</i>            |          |       |  |                       |
| >Protocol Cause              |          |       | Enumerated<br>(Transfer syntax error,<br>Abstract syntax error (reject),<br>Abstract syntax error (ignore and notify),   |                       |

|                      |   |  |   |  |
|----------------------|---|--|---|--|
|                      |   |  | Message not compatible with receiver state,<br>Semantic error,<br>Unspecified,<br>Abstract syntax error (falsely constructed message),<br>...)              |  |
| >Misc                |   |  |   |  |
| >Miscellaneous Cause | M |  | Enumerated<br>(Control processing overload<br>Hardware failure,<br>O&M intervention,<br>Not enough user plane processing resources,<br>Unspecified,<br>...) |  |

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

| Radio Network Layer cause                      | Meaning   |
|--|---|
| BCCH scheduling error                          | The Node B has detected an illegal BCCH schedule update (see 8.2.16.3)  |
| Cell not Available,                            | The concerning cell or local cell is not available  |
| Combining not supported                        | The Node B does not support RL combining for the concerning cells   |
| Combining Resources Not Available              | The value of the received <i>Diversity Control Field</i> IE was set to 'Must', but the Node B cannot perform the requested combining      |
| CM not supported                               | The concerning cell(s) do not support Compressed Mode   |
| Common Transport Channel Type not supported    | The concerning cell(s) do not support the RACH and/or FACH and/or CPCH Common Transport Channel Type                                      |
| Dedicated Transport Channel Type not supported | The concerning cell(s) do not support the Dedicated Transport Channel Type  |
| DL Radio Resources not Available               | The Node B does not have sufficient DL radio resources available  |
| DL SF not supported                            | The concerning cell(s) do not support the requested DL SF   |
| DL Shared Channel Type not supported           | The concerning cell(s) do not support the Downlink Shared Channel Type  |
| Invalid CM Settings                            | The concerning cell(s) consider the requested Compressed Mode settings invalid  |
| Measurement not Supported For The Object       | At least one of the concerning cell(s) does not support the requested measurement on the concerning object type                           |
| Measurement Temporarily not Available          | The Node B can temporarily not provide the requested measurement value  |
| Node B resources unavailable                   | The Node B does not have sufficient resources available   |
| Number of DL codes not supported               | The concerning cell(s) do not support the requested number of DL codes  |
| Power Level not Supported                      | A DL power level was requested which the concerning cell(s) do not support  |
| Priority transport channel established         | The CRNC cannot perform the requested blocking since a transport channel with a high priority is present                                  |
| Reconfiguration CFN not elapsed                | The requested action cannot be performed due to that a COMMIT message was received previously, but the concerning CFN has not yet elapsed |
| Requested Configuration not Supported          | The concerning cell(s) do not support the requested configuration i.e. power levels, Transport Formats, physical channel parameters,..... |
| Requested Tx Diversity mode not supported      | The concerning cell(s) do not support the requested transmit diversity mode   |
| RL already Activated/ allocated                | The Node B has already allocated an RL with the requested RL-id for this UE context   |
| S-CPICH not supported                          | The concerning cell(s) do not support S-CPICH   |
| SIB origination in Node B not supported        | The Node B does not support the origination of the requested SIB for the concerning cell  |
| Synchronisation Failure                        | Loss of UL Uu synchronisation   |

|                                      |   |
|--------------------------------------|---|
| Tx diversity no longer supported     | Tx diversity can no longer be supported in the concerning cell.                                     |
| UL Radio Resources not Available     | The Node B does not have sufficient UL radio resources available                                    |
| UL SF not supported                  | The concerning cell(s) do not support the requested UL SF   |
| UL Shared Channel Type not supported | The concerning cell(s) do not support the Uplink Shared Channel Type                                |
| Unknown C-ID                         | The Node B is not aware of a cell with the provided C-ID  |
| Unknown Local Cell ID                | The Node B is not aware of a local cell with the provided Local Cell ID                             |
| Unspecified                          | Sent when none of the above cause values applies but still the cause is Radio Network layer related |

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

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

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

### 9.2.1.7 CFN

Connection Frame Number for the radio connection, see ref. [17].

| <b>IE/Group Name</b> | <b>Presence</b> | <b>Range</b> | <b>IE type and reference</b> | <b>Semantics description</b> |
|----------------------|-----------------|--------------|------------------------------|------------------------------|
| CFN                  |                 |              | Integer (0..255)             |                              |

### 9.2.1.8 CFN Offset

Void

### 9.2.1.9 C-ID

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



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

### 9.2.1.9A Common Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the allocated Spreading Factor.

This capacity consumption law indicates the consumption law to be used with the following procedures :

- Common Transport Channel Setup

In case of usage of the Common Transport Channel Deletion, the consumption cost given in the consumption law must be credited to the Capacity Credit.

If the modelling of the internal resource capability of the B is modelled independently for the Uplink and Downlink, the "DL cost" shall be applied to the "DL or Global Capacity Credit" and the "UL Cost" shall be applied to the "UL Capacity Credit". If it is modelled as shared resources, both the "DL cost" and the "UL cost" shall be applied to the "DL or Global Capacity Credit".

| IE/Group Name                                   | Presence | Range           | IE type and reference | Semantics description  |
|---|----------|-----------------|-----------------------|--|
| <b>Common Channels Capacity Consumption Law</b> |          |                 |                       |  |
| >SF allocation law                              |          | <maxNumberOfSF> |                       | For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on. |
| >>DL cost                                       | M        |                 | INTEGER<br>(0..65535) |  |
| >>UL cost                                       | M        |                 | INTEGER<br>(0..65535) |  |

### 9.2.1.10 Common Measurement Object Type

The Common 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 |
|--------------------------------|----------|-------|-----------------------------------|-----------------------|
| Common Measurement Object Type |          |       | ENUMERATED (CELL, RACH, CPCH,...) |                       |

### 9.2.1.11 Common Measurement Type

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

| IE/Group Name           | Presence | Range | IE Type and Reference  | Semantics Description   |
|-------------------------|----------|-------|--|---|
| Common Measurement Type |          |       | ENUMERATED<br>(Received total wide band power, Transmitted Carrier Power, Acknowledged PRACH preambles, UL Timeslot ISCP, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles, ...) | UL Timeslot ISCP is used by TDD only, Acknowledged PRACH preambles, Acknowledged PCPCH Access Preambles, Detected PCPCH Access Preambles are used by FDD only |

### 9.2.1.12 Common Measurement Value

The Common 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                 |
|---|-----------------------|-------|-----------------------|---------------------------------------|
| >Transmitted Carrier Power Value                | C<br><i>MeasValue</i> |       | INTEGER(0..100)       | According to mapping in [22] and [23] |
| >Received total wide band power Value           | C<br><i>MeasValue</i> |       | INTEGER(0..621)       | According to mapping in [22] and [23] |
| >Acknowledged PRACH Preamble Value (FDD only)   | C<br><i>MeasValue</i> |       | INTEGER(0..240, ...)  | According to mapping in [22]          |
| >UL Timeslot ISCP (TDD only)                    | C<br><i>MeasValue</i> |       | INTEGER(0..81)        | According to mapping in [23]          |
| >Acknowledged PCPCH Access Preambles (FDD only) | C<br><i>MeasValue</i> |       | INTEGER(0..15,...)    | According to mapping in [22]          |
| >Detected PCPCH Access Preambles (FDD only)     | C<br><i>MeasValue</i> |       | INTEGER(0..240,...)   | According to mapping in [22]          |

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

### 9.2.1.12A Common Measurement Value Information

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

| IE/Group Name                                     | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| <b>Common Measurement Value Information</b>       |          | 1     |                       |                       | –           |                      |
| >CHOICE <i>Measurement Availability Indicator</i> | M        |       |                       |                       | –           |                      |
| >> <i>Measurement Available</i>                   |          |       |                       |                       | –           |                      |
| >>>Common Measurement value                       | M        |       | 9.2.1.12              |                       | –           |                      |
| >> <i>Measurement not Available</i>               |          |       | NULL                  |                       | –           |                      |

### 9.2.1.13 Common Physical Channel ID

Common Physical Channel ID is the unique identifier for one common physical channel within a cell.

| IE/Group Name              | Presence | Range | IE type and reference | Semantics description |
|----------------------------|----------|-------|-----------------------|-----------------------|
| Common Physical Channel ID |          |       | Integer(0..255)       |                       |

### 9.2.1.13A Common Physical Channel Status Information

| IE/Group Name                                     | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|---|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| <b>Common Physical Channel Status Information</b> |          | 1     |                       |                       | –           |                      |
| >Common Physical Channel ID                       | M        |       | 9.2.1.13              |                       | –           |                      |
| >Resource Operational State                       | M        |       | 9.2.1.52              |                       | –           |                      |
| >Availability Status                              | M        |       | 9.2.1.2               |                       | –           |                      |

### 9.2.1.14 Common Transport Channel ID

Common Transport Channel ID is the unique identifier for one common transport channel within a cell.

| IE/Group Name               | Presence | Range | IE type and reference | Semantics description |
|-----------------------------|----------|-------|-----------------------|-----------------------|
| Common Transport Channel ID |          |       | Integer(0..255)       |                       |

### 9.2.1.14A Common Transport Channel Information Response

The *Common Transport Channel Information Response* IE provides information for Common Transport Channels that have been established or modified.

| IE/Group Name  | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| <b>Common Transport Channel Information Response</b> |          | 1     |                       |                       | –           |                      |
| >Common Transport Channel ID                         | M        |       | 9.2.1.14              |                       | –           |                      |
| >Binding ID  | O        |       | 9.2.1.4               |                       | –           |                      |
| >Transport Layer Address                             | O        |       | 9.2.1.63              |                       | –           |                      |

### 9.2.1.14B Common Transport Channel Status Information

| IE/Group Name                                      | Presence | Range | IE Type and Reference | Semantics Description | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|-----------------------|-------------|----------------------|
| <b>Common Transport Channel Status Information</b> |          | 1     |                       |                       | –           |                      |
| >Common Transport Channel ID                       | M        |       | 9.2.1.14              |                       | –           |                      |
| >Resource Operational State                        | M        |       | 9.2.1.52              |                       | –           |                      |
| >Availability Status                               | M        |       | 9.2.1.2               |                       | –           |                      |

### 9.2.1.15 Communication Control Port ID

A Communication Control Port corresponds to one signalling bearer between the RNC and Node B for the control of Node B Communication Contexts. Node B may have multiple Communication Control Ports (one per Traffic Termination Point). The Communication Control Port is selected at creation of the Node B Communication Context. The Communication Control Port ID is the identifier of the Communication Control Port.

| IE/Group Name                 | Presence | Range | IE type and reference | Semantics description |
|-------------------------------|----------|-------|-----------------------|-----------------------|
| Communication Control Port ID |          |       | INTEGER (0..65535)    |                       |

### 9.2.1.16 Configuration Generation ID

The Configuration Generation ID describes the generation of the configuration of logical resources in a cell.

| IE/Group Name               | Presence | Range | IE type and reference | Semantics description  |
|-----------------------------|----------|-------|-----------------------|--|
| Configuration Generation ID |          |       | Integer(0..255)       | Value '0' means "No configuration".<br>At possible wraparound of the ID counter in CRNC the value '0' shall not be used. |

### 9.2.1.17 Criticality Diagnostics

The *Criticality Diagnostics* IE is sent by a Node B or the CRNC when parts of a received message have not been comprehended or are missing. It contains information about which IE was not comprehended or is missing.

| IE/Group Name  | Presence | Range                 | IE type and reference   | Semantics description  |
|--|----------|-----------------------|---|--|
| <b>Criticality Diagnostics</b>                         |          |                       |   |  |
| >Procedure ID  |          | 0..1                  |   | Procedure ID is to be used if Criticality Diagnostics is part of Error Indication procedure, and not within the response message of the same procedure that caused the error |
| >>Procedure Code                                       | M        |                       | INTEGER (0..255)  |  |
| >>Ddmode   | M        |                       | ENUMERATED (FDD, TDD, Common)   | Common = common to FDD and TDD.  |
| >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.  |
| > Procedure Criticality                                | O        |                       | ENUMERATED (reject, ignore, notify)                                       | This Procedure Criticality is used for reporting the Criticality of the Triggering message (Procedure). The value 'ignore' shall never be used.                              |
| >Transaction ID  | O        |                       | Transaction ID<br>9.2.1.62  |  |
| <b>&gt;Information Element Criticality Diagnostics</b> |          |                       |   |  |
| >>IE Criticality                                       | M        | 0 to <maxnoof errors> | ENUMERATED (reject, ignore, notify)                                       | The IE Criticality 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 or missing IE  |
| >>Repetition Number                                    | O        |                       | INTEGER (1..256)  | The repetition number of the not understood IE if applicable   |

| Range bound          | Explanation  |
|----------------------|--|
| <i>Maxnooferrors</i> | Maximum no. of IE errors allowed to be reported with a single message. |

### 9.2.1.18 CRNC Communication Context ID

The CRNC Communication Context ID is the identifier of the Communication Context in the CRNC.

| IE/Group Name                 | Presence | Range | IE type and reference            | Semantics description  |
|-------------------------------|----------|-------|----------------------------------|--|
| CRNC Communication Context ID |          |       | INTEGER (0..2 <sup>20</sup> - 1) | 2 <sup>20</sup> -1 is reserved value to indicate all the CRNC communication contexts that can be reached by the communication control port (All CRNCCC). |

### 9.2.1.19 DCH Combination Indicator

Void

### 9.2.1.20 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<br>(0..255)   |                       |

### 9.2.1.20A Dedicated Channels Capacity Consumption Law

The capacity consumption law indicates the CRNC how the Capacity Credit is consumed by NBAP set of procedures, depending on the allocated Spreading Factor and the RL/RLS situation.

This capacity consumption law indicates the consumption law to be used with the following procedures :

- Radio Link Setup
- Radio Link Addition
- Radio Link Reconfiguration (case of increase of the SF)

In case of usage of the Radio Link Deletion or of the Radio Link Reconfiguration (case of decrease of the SF) procedure, the consumption cost given in the consumption law shall be credited to the Capacity Credit.

If the modelling of the internal resource capability of the B is modelled independently for the Uplink and Downlink, the DL cost shall be applied to the DL or Global Capacity Credit and the UL Cost shall be applied to the UL Capacity Credit. If it is modelled as shared resources, both the DL costs" and the UL costs shall be applied to the DL or Global Capacity Credit.

For a Radio Link creating a Radio Link Set (first RL of a RLS), the cost for the RL and RLS shall be taken into account. When adding a Radio Link to a Radio Link Set, only the RL cost shall be taken into account.

In the case of multiple Radio Links are established in one procedure, for every created Radio Link Set the first Radio Link is always the Radio Link with the lowest repetition number.

| IE/Group Name                                      | Presence | Range               | IE type and reference | Semantics description  |
|--|----------|---------------------|-----------------------|--|
| <b>Dedicated Channels Capacity Consumption Law</b> |          |                     |                       |  |
| >SF allocation law                                 |          | 1..<maxNumberOf SF> |                       | For each SF, cost of its allocation: the first instance corresponds to SF = 4, the second to SF = 8, the third to SF = 16 and so on. |
| >>DL cost RLS                                      | M        |                     | INTEGER<br>(0..65535) |  |
| >>DL cost RL                                       | M        |                     | INTEGER<br>(0..65535) |  |
| >>UL cost RLS                                      | M        |                     | INTEGER<br>(0..65535) |  |
| >>UL cost RL                                       | M        |                     | INTEGER<br>(0..65535) |  |

### 9.2.1.20B DL or Global Capacity Credit

The capacity credit indicates to the CRNC the Downlink or global capacity of a Local Cell or a Local Cell Group.

| IE/Group Name                | Presence | Range | IE type and reference | Semantics description |
|------------------------------|----------|-------|-----------------------|-----------------------|
| DL or Global Capacity Credit |          |       | INTEGER (0..65535)    |                       |

### 9.2.1.20C DCH Information Response

The *DCH Information Response* IE provides information for DCHs that have been established or modified.

| IE/Group Name                   | Presence | Range               | IE type and reference | Semantics descriptions                                    | Criticality | Assigned Criticality |
|---------------------------------|----------|---------------------|-----------------------|---|-------------|----------------------|
| <b>DCH Information Response</b> |          | 1 to <maxnoofDC Hs> |                       | Only one DCH per set of coordinated DCH shall be included | –           |                      |
| >DCH ID                         | M        |                     | 9.2.1.20              |   | –           |                      |
| >Binding ID                     | O        |                     | 9.2.1.4               |   | –           |                      |
| >Transport Layer Address        | O        |                     | 9.2.1.63              |   | –           |                      |

| Range bound | Explanation                   |
|-------------|-------------------------------|
| MaxnoofDCHs | Maximum number of DCH per UE. |

### 9.2.1.21 DL Power

The DL Power IE indicates a power level relative to the [FDD-primary CPICH power] [TDD-primary CCPCH power] configured in a cell [FDD-If referred to a DPCH, it indicates the power of the DPDCH symbols].

| IE/Group Name | Presence | Range | IE type and reference  | Semantics description |
|---------------|----------|-------|------------------------|-----------------------|
| DL Power      |          |       | Enumerated(-35..+15dB) | Step 0.1dB            |

### 9.2.1.22 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, RLS, ALL RL, ALL RLS,...) |                       |

### 9.2.1.23 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, Rx Timing Deviation, Round Trip Time,...) | RSCP, Rx Timing Deviation are used by TDD only, Round Trip Time, SIR Error are used by FDD only. |

Note: For definitions of the measurement types refer to [4] and [5].

### 9.2.1.24 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                         | C<br><i>MeasValue</i> |       | INTEGER(0..63)        | According to mapping in [22] and [23]    |
| >SIR error Value                   | C<br><i>MeasValue</i> |       | INTEGER(0..125)       | According to mapping in [22], (FDD only) |
| >Transmitted Code Power Value      | C<br><i>MeasValue</i> |       | INTEGER(0..127)       | According to mapping in [22] and [23]    |
| >RSCP                              | C<br><i>MeasValue</i> |       | INTEGER(0..81)        | According to mapping in [23], (TDD only) |
| >Rx Timing Deviation               | C<br><i>MeasValue</i> |       | INTEGER(0..2047)      | According to mapping in [23], (TDD only) |
| >Round Trip Time                   | C<br><i>MeasValue</i> |       | INTEGER(0..32767)     | According to mapping in [22], (FDD only) |

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

### 9.2.1.24A Dedicated Measurement Value Information

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



| IE/Group Name                                     | Presence | Range | IE Type and Reference | Semantics Description                | Criticality | Assigned Criticality |
|---|----------|-------|-----------------------|--------------------------------------|-------------|----------------------|
| <b>Dedicated Measurement Value Information</b>    |          | 1     |                       |                                      | –           |                      |
| >CHOICE <i>Measurement Availability Indicator</i> | M        |       |                       |                                      | –           |                      |
| >> <i>Measurement Available</i>                   |          |       |                       |                                      | –           |                      |
| >>>Dedicated Measurement Value                    | M        |       | 9.2.1.24              |                                      | –           |                      |
| >>>CFN  | O        |       | 9.2.1.7               | Dedicated Measurement Time Reference | –           |                      |
| >> <i>Measurement not Available</i>               |          |       | NULL                  |                                      | –           |                      |

### 9.2.1.25 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) |                       |

### 9.2.1.26 Diversity Indication

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 |
|----------------------|----------|-------|------------------------------------|-----------------------|
| Diversity Indication |          |       | ENUMERATED(Combined, not combined) |                       |

### 9.2.1.27 DSCH ID

The DSCH ID uniquely identifies a DSCH within a Node B Communication Context.

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

### 9.2.1.27A DSCH Information Response

The *DSCH Information Response* IE provides information for DSCHs that have been established or modified.

| IE/Group Name                    | Presence | Range             | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|----------------------------------|----------|-------------------|-----------------------|------------------------|-------------|----------------------|
| <b>DSCH Information Response</b> |          | 1 to <Numof DSCH> |                       |                        | –           |                      |
| >DSCH ID                         | M        |                   | 9.2.1.27              |                        | –           |                      |
| >Binding ID                      | O        |                   | 9.2.1.4               |                        | –           |                      |
| >Transport Layer Address         | O        |                   | 9.2.1.63              |                        | –           |                      |

| Range bound         | Explanation                         |
|---------------------|-------------------------------------|
| <i>MaxnoofDSCHs</i> | Maximum number of DSCHs for one UE. |

### 9.2.1.28 DSCH Transport Format Set

Void

### 9.2.1.29 DSCH Transport Format Combination Set

Void

### 9.2.1.29A End Of Audit Sequence Indicator

Indicates if the AUDIT RESPONSE message ends an audit sequence or not.

| IE/Group Name                   | Presence | Range | IE type and reference  | Semantics description  |
|---------------------------------|----------|-------|--|--|
| End Of Audit Sequence Indicator |          |       | ENUMERATED(end of audit sequence, not end of audit sequence) | End of audit sequence = all audit information has been provided by the Node B;<br>Not end of audit sequence = more audit information is available; |

### 9.2.1.29B FN reporting indicator

Frame Number reporting indicator.

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

| IE/Group Name          | Presence | Range | IE type and reference  | Semantics description |
|------------------------|----------|-------|--|-----------------------|
| FN reporting indicator |          |       | ENUMERATED(FN Reporting Required, FN Reporting Not Required) |                       |

### 9.2.1.30 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=lower priority, 15=higher priority |

### 9.2.1.31 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 lub/lur 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                |

### 9.2.1.31A IB\_OC\_ID

The IB OC ID identifies the occurrence of a specific Information Block.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| IB OC ID      |          |       | INTEGER (1..16)       |                       |

### 9.2.1.32 IB\_SG\_DATA

Segment as defined in [18].

| IE/Group Name | Presence | Range | IE type and reference | Semantics description  |
|---------------|----------|-------|-----------------------|--|
| IB SG DATA    |          |       | Bit String            | Contains "SIB data fixed" or "SIB data variable" in segment as encoded in ref: [18]. |

### 9.2.1.33 IB\_SG\_POS

First position of an Information Block segment in the SFN cycle ( $IB\_SG\_POS < IB\_SG\_REP$ ).

| IE/Group Name | Presence | Range | IE type and reference | Semantics description                       |
|---------------|----------|-------|-----------------------|---|
| IB SG POS     |          |       | INTEGER (0.. 4094)    | Only even positions allowed. Reference [18] |

### 9.2.1.34 IB\_SG\_REP

Repetition distance for an Information Block segment. The segment shall be transmitted when  $SFN \bmod IB\_SG\_REP = IB\_SG\_POS$ .

| IE/Group Name | Presence | Range | IE type and reference  | Semantics description                          |
|---------------|----------|-------|--|--|
| IB SG REP     |          |       | ENUMERATED (4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096) | Repetition period for the IB segment in frames |

### 9.2.1.35 IB Type

The IB Type identifies a specific system information block.

| IE/Group Name | Presence | Range | IE type and reference   | Semantics description |
|---------------|----------|-------|---|-----------------------|
| IB Type       |          |       | Enumerated (MIB, SB1, SB2, SIB1, SIB2, SIB3, SIB4, SIB5, SIB6, SIB7, SIB8, SIB9, SIB10, SIB11, SIB12, SIB13, SIB13.1, SIB13.2, SIB13.3, SIB13.4, SIB14, SIB15, SIB15.1, SIB15.2, SIB15.3, SIB16, ...) |                       |

### 9.2.1.36 Indication Type

The indication type shall indicate the category of a failure with respect to its impact on the logical resources supported at Node B.

| IE/Group Name   | Presence | Range | IE type and reference                           | Semantics description  |
|-----------------|----------|-------|---|--|
| Indication Type |          |       | ENUMERATED (No Failure, Service Impacting, ...) | Service Impacting – The failure has impacted on the logical resources supported at Node B. |

### 9.2.1.37 Limited Power Increase

Void.

### 9.2.1.37A Local Cell Group ID

The Local Cell Group ID represents resources in the Node B, which has been pooled from a capacity point of view.

| IE/Group Name       | Presence | Range | IE type and reference     | Semantics description |
|---------------------|----------|-------|---------------------------|-----------------------|
| Local Cell Group ID |          |       | Local Cell ID<br>9.2.1.38 |                       |

### 9.2.1.38 Local Cell ID

The local cell ID represents resources in Node B that can be used for the configuration of a cell.

| IE/Group Name | Presence | Range | IE Type and Reference          | Semantics Description |
|---------------|----------|-------|--------------------------------|-----------------------|
| Local Cell ID |          |       | INTEGER(0<br>...26843545<br>5) |                       |

### 9.2.1.39 Maximum DL Power Capability

This parameter indicates the maximum DL power capability for a local cell within Node B. The reference point is the antenna connector.

| IE/Group Name               | Presence | Range | IE type and reference | Semantics description  |
|-----------------------------|----------|-------|-----------------------|--|
| Maximum DL Power Capability |          |       | ENUMERATED(0...500)   | dBm, granularity 0.1 dB<br>0: 0 dBm<br>1: 0.1 dBm<br>...<br>499: 49.9 dBm<br>500: 50.0 dBm |

### 9.2.1.40 Maximum Transmission Power

Maximum Transmission Power is maximum power for all downlink channels added together, that is allowed to be used simultaneously in a cell. The reference point is the antenna connector.

| IE/Group Name              | Presence | Range | IE Type and Reference | Semantics Description   |
|----------------------------|----------|-------|-----------------------|---|
| Maximum transmission Power |          |       | ENUMERATED(0,..500)   | Unit dBm<br>Granularity 0.1 dB<br>0: 0 dBm<br>1: 0.1 dBm<br>...<br>499: 49.9 dBm<br>500: 50.0 dBm |

### 9.2.1.40A Measurement Availability Indicator

Indicates if measurement is available or not.

| IE/Group Name                      | Presence | Range | IE type and reference  | Semantics description |
|------------------------------------|----------|-------|--|-----------------------|
| Measurement Availability Indicator |          |       | ENUMERATED(measurement available, measurement not available) |                       |

### 9.2.1.41 Measurement Filter Coefficient

The Measurement Filter Coefficient determines the amount of filtering to be applied for measurements.

| IE/Group Name                  | Presence | Range | IE type and reference   | Semantics description |
|--------------------------------|----------|-------|---|-----------------------|
| Measurement Filter Coefficient |          |       | ENUMERATED (0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15, 17, 19) |                       |

### 9.2.1.42 Measurement ID

The Measurement ID uniquely identifies any measurement per (Node B- or communication) control port.

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

### 9.2.1.43 Measurement Increase/Decrease Threshold

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

| Information Element / Group Name    | Presence             | Range | IE Type and Reference | Semantics Description  |
|-------------------------------------|----------------------|-------|-----------------------|--|
| Received total wide band power      | <i>C – Threshold</i> |       | INTEGER(0..620)       | 0: 0 dB<br>1: 0.1 dB<br>2: 0.2 dB<br>...<br>620: 62dB  |
| Transmitted Carrier Power           | <i>C – Threshold</i> |       | INTEGER(0..100)       | According to mapping in [22] and [23]  |
| Acknowledged PRACH Preambles        | <i>C – Threshold</i> |       | INTEGER(0..240,...)   | According to mapping in [22], (FDD only)   |
| UL Timeslot ISCP                    | <i>C – Threshold</i> |       | INTEGER(0..80)        | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>80: 40dB, (TDD only)                               |
| SIR                                 | <i>C – Threshold</i> |       | INTEGER(0..62)        | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>62: 31dB   |
| SIR Error                           | <i>C – Threshold</i> |       | INTEGER(0..124)       | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>124: 62 dB, (FDD only)                             |
| Transmitted Code Power              | <i>C – Threshold</i> |       | INTEGER(0..112,...)   | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>112: 56 dB   |
| RSCP                                | <i>C – Threshold</i> |       | INTEGER(0..80)        | 0: 0 dB<br>1: 0.5 dB<br>2: 1 dB<br>...<br>80: 40dB, (TDD only)                               |
| Round Trip Time                     | <i>C – Threshold</i> |       | INTEGER(0..32766)     | 0: 0 chips<br>1: 0.0625 chips<br>2: 0.1250 chips<br>...<br>32766: 2047.875 chips, (FDD only) |
| Acknowledged PCPCH Access Preambles | <i>C – Threshold</i> |       | INTEGER(0..15,...)    | According to mapping in [22] (FDD only)  |
| Detected PCPCH Access Preambles     | <i>C – Threshold</i> |       | INTEGER(0..240,...)   | According to mapping in [22] (FDD only)  |

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

#### 9.2.1.44 Measurement Threshold

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

| Information Element / Group Name    | Presence             | Range | IE Type and Reference | Semantics Description                    |
|-------------------------------------|----------------------|-------|-----------------------|--|
| Received total wide band power      | <i>C – Threshold</i> |       | INTEGER(0..621)       | According to mapping in [22] and [23]    |
| Transmitted Carrier Power           | <i>C – Threshold</i> |       | INTEGER(0..100)       | According to mapping in [22] and [23]    |
| Acknowledged PRACH Preambles        | <i>C – Threshold</i> |       | INTEGER(0..240,...)   | According to mapping in [22], (FDD only) |
| UL Timeslot ISCP                    | <i>C – Threshold</i> |       | INTEGER(0..81)        | According to mapping in [23] (TDD only)  |
| SIR                                 | <i>C – Threshold</i> |       | INTEGER(0..63)        | According to mapping in [22] and [23]    |
| SIR Error                           | <i>C – Threshold</i> |       | INTEGER(0..125)       | According to mapping in [22], (FDD only) |
| Transmitted Code Power              | <i>C – Threshold</i> |       | INTEGER(0..127)       | According to mapping in [22] and [23]    |
| RSCP                                | <i>C – Threshold</i> |       | INTEGER(0..81)        | According to mapping in [23] (TDD only)  |
| Rx Timing Deviation                 | <i>C – Threshold</i> |       | INTEGER(0..2047)      | According to mapping in [23] (TDD only)  |
| Round Trip Time                     | <i>C – Threshold</i> |       | INTEGER(0..32767)     | According to mapping in [22] (FDD only)  |
| Acknowledged PCPCH Access Preambles | <i>C – Threshold</i> |       | INTEGER(0..15,...)    | According to mapping in [22] (FDD only)  |
| Detected PCPCH Access Preambles     | <i>C – Threshold</i> |       | INTEGER(0..240,...)   | According to mapping in [22] (FDD only)  |

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

### 9.2.1.45 Message Discriminator

This field is used to discriminate between Dedicated NBAP and Common NBAP messages.

| IE/Group Name         | Presence | Range | IE type and reference         | Semantics description |
|-----------------------|----------|-------|-------------------------------|-----------------------|
| Message Discriminator |          |       | ENUMERATED(Common, Dedicated) |                       |

### 9.2.1.46 Message Type

The Message Type uniquely identifies the message being sent.



| IE/Group Name       | Presence | Range | IE type and reference   | Semantics description           |
|---------------------|----------|-------|---|---------------------------------|
| <b>Message Type</b> |          |       |   |                                 |
| >Procedure ID       | M        | 1     |   |                                 |
| >>Procedure Code    | M        |       | ENUMERATED ( COMMON TRANSPORT CHANNEL SETUP, COMMON TRANSPORT CHANNEL RECONFIGURATION, COMMON TRANSPORT CHANNEL DELETION, BLOCK RESOURCE, UNBLOCK RESOURCE, AUDIT REQUIRED, AUDIT, COMMON MEASUREMENT INITIATION, COMMON MEASUREMENT REPORTING, COMMON MEASUREMENT TERMINATION, COMMON MEASUREMENT FAILURE, CELL SETUP, CELL RECONFIGURATION, CELL DELETION, RESOURCE STATUS INDICATION, SYSTEM INFORMATION UPDATE, RL SETUP, RL ADDITION, SYNCHRONISED RL RECONFIGURATION PREPARATION, SYNCHRONISED RL RECONFIGURATION COMMIT, SYNCHRONISED RL RECONFIGURATION CANCELLATION, UNSYNCHRONISED RL RECONFIGURATION, RL DELETION, DL POWER CONTROL, DL POWER TIMESLOT CONTROL, DEDICATED MEASUREMENT INITIATION, DEDICATED MEASUREMENT REPORTING, DEDICATED MEASUREMENT TERMINATION, DEDICATED MEASUREMENT FAILURE, RL FAILURE, RL RESTORATION, COMPRESSED MODE COMMAND, ERROR INDICATION, PHYSICAL SHARED CHANNEL RECONFIGURATION, RESET, ...) |                                 |
| >>Ddmode            | M        |       | ENUMERATED (FDD, TDD, Common, ...)  | Common = common to FDD and TDD. |
| >Type of Message    | M        |       | ENUMERATED (Initiating Message, Successful Outcome, Unsuccessful Outcome, Outcome)  |                                 |

### 9.2.1.46A Minimum DL Power Capability

This parameter indicates the minimum DL power capability for a local cell within Node B. The reference point is the antenna connector.

| IE/Group Name               | Presence | Range | IE type and reference | Semantics description  |
|-----------------------------|----------|-------|-----------------------|--|
| Minimum DL Power Capability |          |       | ENUMERATED(0..800)    | dBm, granularity 0.1 dB<br>0: -30.0 dBm<br>1: -29.9 dBm<br>...<br>799: 49.9 dBm<br>800: 50.0 dBm |

### 9.2.1.47 Minimum Spreading Factor

This parameter indicates the minimum spreading factor supported at a cell within the Node B.

| IE/Group Name            | Presence | Range | IE type and reference                       | Semantics description |
|--------------------------|----------|-------|---|-----------------------|
| Minimum Spreading Factor |          |       | Enumerated(4, 8, 16, 32, 64, 128, 256, 512) |                       |

### 9.2.1.47A N\_INSYNC\_IND

This parameter defines the number of successive in-sync indications after which the Node B shall trigger the Radio Link Restore procedure (see also [10] and [21]).

| Information Element/Group Name | Presence | Range | IE type and reference    | Semantics description |
|--------------------------------|----------|-------|--------------------------|-----------------------|
| N_INSYNC_IND                   |          |       | Integer (1, 2, ..., 256) |                       |

### 9.2.1.47B N\_OUTSYNC\_IND

This parameter defines the number of consecutive out-of-sync indications after which the timer T\_RLFFAILURE shall be started (see also [10] and [21]).

| Information Element/Group Name | Presence | Range | IE type and reference    | Semantics description |
|--------------------------------|----------|-------|--------------------------|-----------------------|
| N_OUTSYNC_IND                  |          |       | Integer (1, 2, ..., 256) |                       |

### 9.2.1.48 Node B Communication Context ID

The Node B Communication Context ID is the identifier of the Communication Context in the Node B, it corresponds to the dedicated resources which are necessary for an UE using one or more dedicated channels in a given Node B.

| IE/Group Name                   | Presence | Range | IE type and reference           | Semantics description  |
|---------------------------------|----------|-------|---------------------------------|--|
| Node B Communication Context ID |          |       | INTEGER (0..2 <sup>20</sup> -1) | 2 <sup>20</sup> -1 is reserved value to indicate all the existing and future Node B communication contexts that can be reached by the communication control port (All NBCC). |

### 9.2.1.49 Payload CRC Presence 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) |                       |

### 9.2.1.49A PICH Power

The PICH Power IE indicates a power level relative to the [FDD-primary CPICH power] [TDD-primary CCPCH power] configured in a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| PICH Power    |          |       | Enumerated(-10..+5dB) | Step 1dB              |

### 9.2.1.50 Puncture Limit

The Puncture limit limits the amount of puncturing that can be applied in order to minimise the number of dedicated physical channels.

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description                           |
|----------------|----------|-------|-----------------------|---|
| Puncture limit |          |       | INTEGER (0..15)       | 0: 40%<br>1: 44 %<br>...<br>14: 96%<br>15: 100% |

### 9.2.1.50A QE-Selector

The QE-Selector indicates from which source the value for the quality estimate (QE) shall be taken.

| IE/Group Name | Presence | Range | IE type and reference              | Semantics description |
|---------------|----------|-------|------------------------------------|-----------------------|
| QE-Selector   |          |       | ENUMERATED(selected, non-selected) |                       |

### 9.2.1.51 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>&gt;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.                              |
| <b>&gt;Event A</b>                        | C – Event A  |       |   |  |
| >>Measurement Threshold                   | M            |       | Measurement Threshold 9.2.1.44  | The threshold for which the Node B shall trigger a measurement report.                           |
| >>Measurement Hysteresis Time             | O            |       | ENUMERATED (10ms...1min,...) step 10ms,...  |  |
| <b>&gt;Event B</b>                        | C – Event B  |       |   |  |
| >>Measurement Threshold                   | M            |       | Measurement Threshold 9.2.1.44  | The threshold for which the Node B shall trigger a measurement report.                           |
| >>Measurement Hysteresis Time             | O            |       | ENUMERATED (10ms...1min,...) step 10ms,...  |  |
| <b>&gt;Event C</b>                        | C – Event C  |       |   |  |
| >>Measurement Increase/Decrease Threshold | M            |       | Measurement Increase/Decrease Threshold 9.2.1.43  |  |
| >>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>&gt;Event D</b>                        | C – Event D  |       |   |  |
| >>Measurement Increase/Decrease Threshold | M            |       | Measurement Increase/Decrease Threshold 9.2.1.43  |  |
| >>Measurement Change Time                 | M            |       | ENUMERATED (10ms...1min,...)  | The time the measurement entity shall fall (in ms), in order to trigger a measurement report.    |

|                                  |                |  |  |   |
|----------------------------------|----------------|--|--|---|
|                                  |                |  | step<br>10ms,...   |   |
| <b>&gt;Event E</b>               | C – Event<br>E |  |  |   |
| >>Measurement<br>Threshold 1     | M              |  | Measureme<br>nt Threshold<br>9.2.1.44  |   |
| >>Measurement<br>Threshold 2     | O              |  | Measureme<br>nt Threshold<br>9.2.1.44  |   |
| >>Measurement<br>Hysteresis Time | O              |  | ENUMERAT<br>ED<br>(10ms...1mi<br>n,...)<br>step<br>10ms,...                                    | The hysteresis time in ms   |
| >>Report Periodicity             | O              |  | ENUMERAT<br>ED<br>(10ms...1mi<br>n,...) step<br>10ms,<br>(1min...1hr,<br>...) step<br>1min,... | The frequency with which the<br>Node B shall send<br>measurement reports. |
| <b>&gt;Event F</b>               | C – Event<br>F |  |  |   |
| >>Measurement<br>Threshold 1     | M              |  | Measureme<br>nt Threshold<br>9.2.1.44  |   |
| >>Measurement<br>Threshold 2     | O              |  | Measureme<br>nt Threshold<br>9.2.1.44  |   |
| >>Measurement<br>Hysteresis Time | O              |  | ENUMERAT<br>ED<br>(10ms...1mi<br>n,...)<br>step<br>10ms,...                                    | The hysteresis time in ms   |
| >>Report Periodicity             | O              |  | ENUMERAT<br>ED<br>(10ms...1mi<br>n,...) step<br>10ms,<br>(1min...1hr,<br>...) step<br>1min,... | The frequency with which the<br>Node B shall send<br>measurement reports. |

| 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"  |

### 9.2.1.52 Resource Operational State

The resource operational state is used to indicate the current operational state of the associated resource following a Node B failure.

| IE/Group Name              | Presence | Range | IE type and reference         | Semantics description  |
|----------------------------|----------|-------|-------------------------------|--|
| Resource Operational State |          |       | ENUMERATED(Enabled, Disabled) | When a resource is marked as disabled, then its child resources are implicitly disabled. Cell Resource hierarchy can be referred to [6]. |

### 9.2.1.52A Retention Priority

Void.

### 9.2.1.53 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)       |                       |

### 9.2.1.53A SFN

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

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| SFN           |          |       | Integer (0..4095)     |                       |

### 9.2.1.53B Segment type

Segment type as defined in [18].

| IE/Group Name | Presence | Range | IE type and reference  | Semantics description |
|---------------|----------|-------|--|-----------------------|
| Segment type  |          |       | Enumerated(First segment, First segment short, Subsequent segment, Last segment, Last segment short, Complete SIB, Complete SIB short,...) |                       |

### 9.2.1.54 SIB Deletion Indicator

Void.

### 9.2.1.55 SIB Originator

Indicates if the Node B shall fill in the SIB information or not.

| IE/Group Name  | Presence | Range | IE type and reference        | Semantics description |
|----------------|----------|-------|------------------------------|-----------------------|
| SIB Originator |          |       | Enumerated(Node B, CRNC,...) |                       |

### 9.2.1.56 Shutdown Timer

The shutdown timer shall indicate the length of time available to the CRNC to perform the block of a resource when a Normal priority block is requested.

| IE/Group Name  | Presence | Range | IE type and reference | Semantics description |
|----------------|----------|-------|-----------------------|-----------------------|
| Shutdown Timer |          |       | INTEGER(1..3600)      | Value in seconds      |

### 9.2.1.56A T\_RLFAILURE

The Radio Link Failure procedure shall be triggered after a period of time T\_RLFAILURE has elapsed with a persisting out-of-sync indication (see also [10] and [21]).

| Information Element/Group Name | Presence | Range | IE type and reference              | Semantics description |
|--------------------------------|----------|-------|------------------------------------|-----------------------|
| T_RLFAILURE                    |          |       | ENUMERATED (0, 0.1, 0.2, .., 25.5) | In seconds            |

### 9.2.1.56B Start Of Audit Sequence Indicator

Indicates if the AUDIT REQUEST message initiates a new audit sequence or not.

| IE/Group Name                     | Presence | Range | IE type and reference  | Semantics description |
|-----------------------------------|----------|-------|--|-----------------------|
| Start Of Audit Sequence Indicator |          |       | ENUMERATED(start of audit sequence, not start of audit sequence) |                       |

### 9.2.1.57 TFCI Presence

The TFCI Presence parameter indicates whether the TFCI shall be included. In TDD if it is present in the timeslot, it will be included within the first Channelization code listed.

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

### 9.2.1.58 TFCS (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.

[FDD - Where the UE is assigned access to one or more DSCH transport channels then the UTRAN has the choice of two methods for signalling the mapping between TFCI(field 2) values and the corresponding TFC:

#### Method #1 - TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given transport format combination (value of CTFC(field2)). The CTFC(field2) value specified in the first group applies for all values of TFCI(field 2) between 0 and the specified 'Max TFCI(field2) value'. The CTFC(field2) value specified in the second group applies for all values of TFCI(field 2) between the 'Max TFCI(field2) value' specified in the last group plus one and the specified 'Max TFCI(field2) value' in the second group. The process continues in the same way for the following groups with the TFCI(field 2) value used by the UE in constructing its mapping table starting at the largest value reached in the previous group plus one.

#### Method #2 - Explicit

The mapping between TFCI(field 2) value and CTFC(field2) is spelt out explicitly for each value of TFCI (field2) ]



| IE/Group Name                                   | Presence   | Range                     | IE type and reference | Semantics description   |
|---|------------|---------------------------|-----------------------|---|
| CHOICE <i>DSCH</i><br>> <i>No split in TFCI</i> |            |                           |                       | This choice is made if :<br>a) The TFCS refers to the uplink<br>OR<br>b) The mode is FDD and none of the Node B communication contexts are assigned any DSCH transport channels<br>OR<br>c) The mode is TDD |
| >>TFCS  |            | 1 to<br><maxnoofTFCs>     |                       | The first instance of the parameter corresponds to TFC zero, the second to 1 and so on.   |
| >>>CTFC   | M          |                           | INTEGER(0..MaxCTFC)   | Integer number calculated according to [18]   |
| >>>CHOICE Gain Factors                          | C-PhysChan |                           |                       |   |
| >>>>Signalled Gain Factors                      |            |                           |                       |   |
| >>>>CHOICE mode                                 |            |                           |                       |   |
| >>>>>FDD  |            |                           |                       |   |
| >>>>>>Gain Factor $\beta_c$                     | M          |                           | Integer (0..15)       | For UL DPCH or control part of PRACH or control part of PCPCH in FDD; mapping in accordance to [9]  |
| >>>>>>Gain Factor $\beta_d$                     | M          |                           | Integer (0..15)       | For UL DPCH or data part of PRACH or data part of PCPCH in FDD; mapping in accordance to [9]  |
| >>>>>TDD  |            |                           |                       |   |
| >>>>>>Gain Factor $\beta$                       | M          |                           | Integer (0..15)       | For UL DPCH in TDD; mapping in accordance to [20]   |
| >>>>>Reference TFC nr                           | O          |                           | Integer (0..3)        | If this TFC is a reference TFC, this IE indicates the reference number  |
| >>>>Computed Gain Factors                       |            |                           |                       |   |
| >>>>>Reference TFC nr                           | M          |                           | Integer (0..3)        | Indicates the reference TFC to be used to calculate the gain factors for this TFC   |
| > <i>There is a split in the TFCI</i>           |            |                           |                       | This choice is made if :<br>a) The TFCS refers to the downlink<br>AND<br>b) The mode is FDD and one of the Node B communication contexts is assigned one or more DSCH transport channels                    |
| >>Transport format combination_DCH              |            | 1 to<br><MaxTFCI_1_Comb>  |                       | The first instance of the parameter <i>Transport format combination_DCH</i> corresponds to TFCI (field 1) = 0, the second to TFCI (field 1) = 1 and so on.  |
| >>>CTFC(field1)                                 | M          |                           | Integer(0..MaxCTFC)   | Integer number calculated according to [18]. The calculation of CTFC ignores any DSCH transport channels which may be assigned  |
| >>Choice Signalling method                      |            |                           |                       |   |
| >>>TFCI range                                   |            |                           |                       |   |
| >>>>TFC mapping on DSCH                         |            | 1 to<br><MaxNoTFCIGroups> |                       |   |

|                                       |   |                        |                     |  |
|---------------------------------------|---|------------------------|---------------------|--|
| >>>>Max TFCI(field2) value            | M |                        | Integer(1..1023)    | This is the Maximum value in the range of TFCI(field2) values for which the specified CTFC(field2) applies   |
| >>>>>CTFC(field 2)                    | M |                        | Integer(0..MaxCTFC) | Integer number calculated according to [18]. The calculation of CTFC ignores any DCH transport channels which may be assigned                              |
| >>>Explicit                           |   |                        |                     |  |
| >>>>Transport format combination_DSCH |   | 1 to <MaxTFCI_2_Combs> |                     | The first instance of the parameter <i>Transport format combination_DSCH</i> corresponds to TFCI (field2) = 0, the second to TFCI (field 2) = 1 and so on. |
| >>>>>CTFC(field2)                     | M |                        | Integer(0..MaxCTFC) | Integer number calculated according to [18]. The calculation of CTFC ignores any DCH transport channels which may be assigned                              |

| Condition | Explanation   |
|-----------|---|
| PhysChan  | The choice shall be present if the TFCS concerns a UL DPCH or PRACH channel or PCPCH channel in FDD, not when the TFCS is used for other physical channels. |

| Range bound     | Explanation   |
|-----------------|---|
| MaxnoofTFCs     | The maximum number of Transport Format Combinations.  |
| MaxTFCI_1_Combs | Maximum number of TFCI (field 1) combinations (given by 2 raised to the power of the length of the TFCI (field 1))                            |
| MaxTFCI_2_Combs | Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI (field 2))                            |
| MaxNoTFCIGroups | Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single value of CTFC(field2) applies   |
| 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 [18] |

### 9.2.1.59 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>                         |              |                    |  |                                    |
| <b>&gt;Dynamic Transport Format Information</b>     |              | 1 to <maxTFcount>  |  |                                    |
| >>Number of Transport blocks                        | M            |                    | INTEGER (0..512)                                 |                                    |
| >>Transport Block Size                              | C – Blocks   |                    | INTEGER (0..5000)                                | Bits                               |
| >>CHOICE <i>mode</i>                                | M            |                    |  |                                    |
| >>>TDD  |              |                    |  |                                    |
| >>>>Transmission Time interval Information          | C-TTIdynamic | 1 to <maxTTIcount> |  |                                    |
| >>>>>Transmission time interval                     | M            |                    | Enumerated(10, 20, 40, 80,...)                   | ms                                 |
| <b>&gt;Semi-static Transport Format Information</b> |              | 1                  |  |                                    |
| >>Transmission time interval                        | M            |                    | ENUMERATED (10, 20, 40, 80, dynamic,...)         | ms<br>Value “dynamic” for TDD only |
| >>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,...)                |                                    |
| >>CHOICE <i>mode</i>                                | M            |                    |  |                                    |
| >>>TDD  |              |                    |  |                                    |
| >>>>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"   |
| <i>TTIdynamic</i> | This IE is mandatory if the “Transmission Time Interval” of the “Semi-static Transport Format Information” is “dynamic”. Otherwise it is absent. |

| Range bound        | Explanation   |
|--------------------|---|
| MaxTFcount         | Maximum number of different transport formats that can be included in the Transport format set for one transport channel. |
| MaxRM              | Maximum number that could be set as rate matching attribute for a transport channel.                                      |
| <i>MaxTTIcount</i> | The amount of different TTI that are possible for that transport format.  |

### 9.2.1.60 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 TOAWE gives a Timing Adjustment Control frame response.

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

### 9.2.1.61 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)     | ms.                   |

### 9.2.1.62 Transaction ID

The transaction ID is used to associate all the messages belonging to the same procedure. Messages belonging to the same procedure shall use the same transaction ID.

The transaction ID is determined by the initiating peer of a procedure. For common procedures the transaction ID shall uniquely identify a procedure within all ongoing parallel procedures initiated by one protocol peer, using the same procedure code and signalled over the same Node B control port. For dedicated procedures the transaction ID shall uniquely identify a procedure within all ongoing parallel procedures initiated by one protocol peer, using the same procedure code and initiated towards the same Node B/CRNC context.

| IE/Group Name  | Presence | Range | IE type and reference                               | Semantics description |
|----------------|----------|-------|---|-----------------------|
| Transaction ID |          |       | CHOICE<br>INTEGER (0..127) or<br>INTEGER (0..32767) |                       |

### 9.2.1.62A Transport Bearer Request Indicator

Indicates whether a new transport bearer needs to be established for carrying the concerning transport channel.

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

### 9.2.1.63 Transport Layer Address

Transport Layer Address defines the transport address of the Node B. For details on the Transport Address used see [2].

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

### 9.2.1.64 TSTD Indicator

Indicates if TSTD shall be active or not.

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

### 9.2.1.65 UARFCN

Designate the central frequency of the channel number.

| Information Element / Group Name | Presence | Range | IE Type and Reference   | Semantics Description  |
|----------------------------------|----------|-------|-------------------------|--|
| UARFCN                           |          |       | INTEGER (0..16383, ...) | corresponds to 0.0Hz.. 3276.6MHz ([15] section 5.4 and [15]) |

[Editor's Note: in RRC they have additional attributes such as the "raster" included in the IE ]

### 9.2.1.65A UL Capacity Credit

The capacity credit indicates to the CRNC the Uplink capacity of a Local Cell or a Local Cell Group.

| IE/Group Name      | Presence | Range | IE type and reference | Semantics description |
|--------------------|----------|-------|-----------------------|-----------------------|
| UL Capacity Credit |          |       | INTEGER (0..65535)    |                       |

### 9.2.1.66 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,...) |                       |

### 9.2.1.67 UL interference level

Void.

## 9.2.2 FDD specific parameters

### 9.2.2.A Active Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence activation. For details see [18].

| IE/Group Name                                   | Presence | Range          | IE type and reference | Semantics description  |
|---|----------|----------------|-----------------------|--|
| CM Configuration Change CFN                     | M        |                | CFN<br>9.2.1.7        | Defines when the old Active pattern sequences, if active, shall be terminated. From this moment on, the new sequences are activated at the given TGCFN . |
| <b>Transmission Gap Pattern Sequence Status</b> |          | 0 to <MaxTGPS> |                       |  |
| >TGPSI Identifier                               | M        |                | Integer(1..<MaxTGPS>) | If the group is not present, none of the pattern sequences are activated. References an already defined sequence.  |
| >TGPRC  | M        |                | Integer<br>(0..63)    | The number of transmission gap patterns within the Transmission Gap Pattern Sequence.<br><br>0=Infinity  |
| >TGCFN  | M        |                | CFN<br>9.2.1.7        | Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.  |

| Range bound | Explanation  |
|-------------|--|
| MaxTGPS     | Maximum number of active pattern sequences. Value 6. |

### 9.2.2.B Adjustment Period

*Adjustment Period* IE defines the period to be used for power balancing.

| IE/Group Name     | Presence | Range | IE type and reference | Semantics description |
|-------------------|----------|-------|-----------------------|-----------------------|
| Adjustment Period |          |       | INTEGER<br>(1 .. 256) | Frames                |

### 9.2.2.C Adjustment Ratio

*Adjustment Ratio* IE (*Radj*) defines the convergence rate used for the associated Adjustment Period.

| IE/Group Name    | Presence | Range | IE type and reference | Semantics description  |
|------------------|----------|-------|-----------------------|--|
| Adjustment Ratio |          |       | INTEGER<br>(0 .. 100) | The Adjustment Ratio is given with a granularity of 0.01<br><br>0 -> 0.00<br>1 -> 0.01<br>...<br>100 -> 1.00 |

### 9.2.2.D AICH Power

The AICH Power IE indicates a power level relative to the primary CPICH power configured in a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| AICH Power    |          |       | Integer(-22..+5)      | Offset in dB          |

### 9.2.2.1 AICH Transmission Timing

| IE/Group Name            | Presence | Range | IE type and reference | Semantics description                               |
|--------------------------|----------|-------|-----------------------|---|
| AICH Transmission Timing |          |       | ENUMERATED (0, 1)     | See parameter AICH_Transmission_Timing in ref. [7]. |

### 9.2.2.1A AP Preamble Signature

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|--------------------------------|----------|-------|-----------------------|-----------------------|
| AP Preamble Signature          |          |       | INTEGER (0..15)       | Described in [9]      |

### 9.2.2.1B AP Sub Channel Number

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|--------------------------------|----------|-------|-----------------------|-----------------------|
| AP Sub Channel Number          |          |       | INTEGER (0..11)       | Described in [10]     |

### 9.2.2.1C CD Sub Channel Numbers

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description   |
|--------------------------------|----------|-------|-----------------------|---|
| CD Sub Channel Numbers         |          |       | BIT STRING (12)       | Bit 0=Sub Channel Number 0<br>Bit 1=Sub Channel Number 1<br>...<br>Bit 11=Sub Channel Number 11<br>[10] |

### 9.2.2.1D Channel Assignment Indication

The Channel Assignment Indication indicates whether CA is active or inactive. When CA is active, CPCH is in Versatile Channel Assignment Method (VCAM) mode and when CA is inactive, CPCH is in UE Channel Selection Method (UCSM) mode. In VCAM mode (CA active), CA message in CD/CA-ICH shall be sent.

| IE/Group Name                 | Presence | Range | IE type and reference               | Semantics description |
|-------------------------------|----------|-------|-------------------------------------|-----------------------|
| Channel Assignment Indication |          |       | ENUMERATED (CA Active, CA Inactive) |                       |

### 9.2.2.2 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                 |

### 9.2.2.2A Closed Loop Timing Adjustment Mode

Indicates when the phase/amplitude adjustment is performed in the DL in relation to the receipt of the UL feedback command in case of closed loop mode transmit diversity on DPCH.

| Information Element/Group Name     | Presence | Range | IE type and reference             | Semantics description  |
|------------------------------------|----------|-------|-----------------------------------|--|
| Closed Loop Timing Adjustment Mode |          |       | ENUMERATED (Offset1, Offset2,...) | According to [10] chapter 7.1:<br>Offset1 = slot(j+1)mod15<br>Offset2 = slot(j+2)mod15 |

### 9.2.2.3 Common Channels Capacity Consumption Law

Void

### 9.2.2.3A Compressed Mode Deactivation Flag

Compressed Mode Deactivation Flag indicates whether Compressed Mode shall be deactivated or not in the new RL.

| IE/Group Name                     | Presence | Range | IE type and reference | Semantics description |
|-----------------------------------|----------|-------|-----------------------|-----------------------|
| Compressed Mode Deactivation flag |          |       | ENUMERATED (On, Off)  | On = deactivate.      |

### 9.2.2.4 Compressed Mode Method

Void.

### 9.2.2.4A CPCH Allowed Total Rate

| IE/Group Name           | Presence | Range | IE type and reference   | Semantics description      |
|-------------------------|----------|-------|---|----------------------------|
| CPCH Allowed Total Rate |          |       | ENUMERATED (15, 30, 60, 120, 240, 480, 960, 1920, 2880, 3840, 4800, 5760,...) | Channel Symbol Rate (ksps) |

### 9.2.2.4B CPCH Scrambling Code Number

| Information Element/Group Name | Presence | Range | IE type and reference | Semantics description |
|--------------------------------|----------|-------|-----------------------|-----------------------|
| CPCH Scrambling Code Number    |          |       | INTEGER (0..79)       | Described in [9]      |

### 9.2.2.4C CPCH UL DPCH Slot Format

Indicates the slot format used in UL CPCH message control part, accordingly to [7]



| IE/Group Name             | Presence | Range | IE type and reference | Semantics description |
|---------------------------|----------|-------|-----------------------|-----------------------|
| CPCH UL DPCCH slot format |          |       | INTEGER (0..2,...)    |                       |

#### 9.2.2.4D DCH FDD Information

The *DCH FDD Information* IE provides information for DCHs to be established.

| IE/Group Name                   | Presence | Range               | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---------------------------------|----------|---------------------|-----------------------|------------------------|-------------|----------------------|
| <b>DCH FDD Information</b>      |          | 1 to <maxnoof DCHs> |                       |                        | –           |                      |
| >Payload CRC Presence Indicator | M        |                     | 9.2.1.49              |                        | –           |                      |
| >UL FP mode                     | M        |                     | 9.2.1.66              |                        | –           |                      |
| >ToAWS                          | M        |                     | 9.2.1.61              |                        | –           |                      |
| >ToAWE                          | M        |                     | 9.2.1.60              |                        | –           |                      |
| <b>&gt;DCH Specific Info</b>    |          | 1..<maxno ofDCHs>   |                       |                        | –           |                      |
| >>DCH ID                        | M        |                     | 9.2.1.20              |                        | –           |                      |
| >>Transport Format Set          | M        |                     | 9.2.1.59              | For UL                 | –           |                      |
| >>Transport Format Set          | M        |                     | 9.2.1.59              | For DL                 | –           |                      |
| >>Allocation/Retention Priority | M        |                     | 9.2.1.1A              |                        | –           |                      |
| >>Frame Handling Priority       | M        |                     | 9.2.1.30              |                        | –           |                      |
| >>QE-Selector                   | M        |                     | 9.2.1.50A             |                        | –           |                      |

| Range bound        | Explanation                        |
|--------------------|------------------------------------|
| <i>MaxnoofDCHs</i> | Maximum number of DCHs for one UE. |

#### 9.2.2.4E DCHs FDD to Modify

The *DCHs FDD to Modify* IE provides information for DCHs to be modified.

| IE/Group Name                       | Presence | Range              | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|-------------------------------------|----------|--------------------|-----------------------|------------------------|-------------|----------------------|
| <b>DCHs FDD to Modify</b>           |          | 1..<max noofDC Hs> |                       |                        | –           |                      |
| >UL FP Mode                         | O        |                    | 9.2.1.66              |                        | –           |                      |
| >ToAWS                              | O        |                    | 9.2.1.61              |                        | –           |                      |
| >ToAWE                              | O        |                    | 9.2.1.60              |                        | –           |                      |
| >Transport Bearer Request Indicator | M        |                    | 9.2.1.62A             |                        | –           |                      |
| <b>&gt;DCH Specific Info</b>        |          | 1..<max noofDC Hs> |                       |                        | –           |                      |
| >>DCH ID                            | M        |                    | 9.2.1.20              |                        | –           |                      |
| >>Transport Format Set              | O        |                    | 9.2.1.59              | For the UL.            | –           |                      |
| >>Transport Format Set              | O        |                    | 9.2.1.59              | For the DL.            | –           |                      |
| >>Allocation/Retention Priority     | O        |                    | 9.2.1.1A              |                        | –           |                      |
| >>Frame Handling Priority           | O        |                    | 9.2.1.20              |                        | –           |                      |

| Range bound        | Explanation                        |
|--------------------|------------------------------------|
| <i>MaxnoofDCHs</i> | Maximum number of DCHs for one UE. |

### 9.2.2.5 D-Field Length

Void.

### 9.2.2.6 Dedicated Channels Capacity Consumption Law

Void

### 9.2.2.7 Diversity Control Field

Void.

### 9.2.2.8 Diversity Indication

Void.

### 9.2.2.9 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,...) |                       |

### 9.2.2.10 DL DPCH Slot Format

Indicates the slot format used in DPCH in DL, accordingly to [7].

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

### 9.2.2.11 DL frame type

Void.

### 9.2.2.12 DL or Global Capacity Credit

Void

### 9.2.2.12A DL\_power\_averaging\_window\_size

| IE/Group Name                  | Presence | Range | IE type and reference | Semantics description             |
|--------------------------------|----------|-------|-----------------------|-----------------------------------|
| DL_power_averaging_window_size |          |       | INTEGER (1..60)       | 1-60 time slots, step size 1 slot |

### 9.2.2.13 DL Scrambling Code

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

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

### 9.2.2.13A DL TPC pattern 01 count

The *DL TPC pattern 01 count* IE contains the value of the parameter n, which is used for determining the DL TPC pattern on Radio Links marked with “first RLS” by the *First RLS indicator* IE before UL synchronisation is achieved.

| IE/Group Name           | Presence | Range | IE type and reference | Semantics description |
|-------------------------|----------|-------|-----------------------|-----------------------|
| DL TPC pattern 01 count |          |       | INTEGER(0..30,...)    |                       |

### 9.2.2.13B DSCH FDD Information

The *DSCH FDD Information* IE provides information for DSCHs to be established.

| IE/Group Name                  | Presence | Range                | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|--------------------------------|----------|----------------------|-----------------------|------------------------|-------------|----------------------|
| <b>DSCH FDD Information</b>    |          | 1 to <maxnoof DSCHs> |                       |                        | –           |                      |
| >DSCH ID                       | M        |                      | 9.2.1.27              |                        | –           |                      |
| >Transport Format Set          | M        |                      | 9.2.1.59              | For DSCH               | –           |                      |
| >Allocation/Retention Priority | M        |                      | 9.2.1.1A              |                        | –           |                      |
| >Frame Handling Priority       | M        |                      | 9.2.1.30              |                        | –           |                      |
| >ToAWS                         | M        |                      | 9.2.1.61              |                        | –           |                      |
| >ToAWE                         | M        |                      | 9.2.1.60              |                        | –           |                      |

| Range bound         | Explanation                         |
|---------------------|-------------------------------------|
| <i>MaxnoofDSCHs</i> | Maximum number of DSCHs for one UE. |

### 9.2.2.14 FDD DL Channelisation Code Number

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

| IE/Group Name                    | Presence | Range | IE type and reference | Semantics description   |
|----------------------------------|----------|-------|-----------------------|---|
| FDD DL ChannelisationCode Number |          |       | INTEGER(0.. 511)      | According to the mapping in [9]. The maximum value is equal to the DL spreading factor –1 |

### 9.2.2.14A FDD DL Code Information

The *FDD DL Code Information* IE provides DL Code information for the RL.

| IE/Group Name                                       | Presence | Range                  | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|---|----------|------------------------|-----------------------|------------------------|-------------|----------------------|
| <b>FDD DL Code Information</b>                      |          | 1 to <maxnoof-DLCodes> |                       |                        | –           |                      |
| >DL Scrambling Code                                 | M        |                        | 9.2.2.13              |                        | –           |                      |
| >FDD DL Channelisation Code Number                  | M        |                        | 9.2.2.14              |                        | –           |                      |
| >Transmission Gap Pattern Sequence Code Information | O        |                        | 9.2.2.53B             |                        | –           |                      |

| Range bound           | Explanation                            |
|-----------------------|--|
| <i>MaxnoofDLCodes</i> | Maximum number of DL code information. |

### 9.2.2.15 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>[7] |

### 9.2.2.16 FDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

| IE/Group Name              | Presence | Range | IE type and reference           | Semantics description |
|----------------------------|----------|-------|---------------------------------|-----------------------|
| FDD TPC Downlink step size |          |       | ENUMERATED (0.5, 1, 1.5, 2,...) |                       |

### 9.2.2.16A First RLS Indicator

The First *RLS Indicator* IE indicates if a specific Radio Link and all Radio Links which are part of the same Radio Link Set, shall be considered as the first radio links established towards the UE or not.

| IE/Group Name       | Presence | Range | IE type and reference                 | Semantics description |
|---------------------|----------|-------|---------------------------------------|-----------------------|
| First RLS Indicator |          |       | ENUMERATED (first RLS, not first RLS) |                       |

### 9.2.2.17 Gap Period

Void.

### 9.2.2.18 Gap Position Mode

Void.

### 9.2.2.18A Limited Power Increase

The parameter is used for a more efficient use of the inner loop DL power control for non real time data.

If the limited power increase is used, Node B shall use the limited power increase algorithm as specified in [10], Chapter 5.2.

| IE/Group Name          | Presence | Range | IE type and reference       | Semantics description |
|------------------------|----------|-------|-----------------------------|-----------------------|
| Limited Power Increase |          |       | ENUMERATED (Used, Not used) |                       |

### 9.2.2.18B Inner Loop DL PC Status

The *Inner Loop DL PC Status* IE indicates whether inner loop DL control shall be active or inactive for all radio links associated with the context identified by the *Node B Communication Context Id* IE.

| IE/Group Name           | Presence | Range | IE type and reference        | Semantics description |
|-------------------------|----------|-------|------------------------------|-----------------------|
| Inner Loop DL PC Status |          |       | ENUMERATED(Active, Inactive) |                       |

### 9.2.2.19 Max Adjustment Period

Void.

### 9.2.2.20 Max Adjustment Step

Defines the maximum allowed value for the change of DL power level during a certain number of slots that can be utilised by the downlink power balancing algorithm. *Max Adjustment Step* IE defines a time period, in terms of number of slots, in which the accumulated power adjustment shall be maximum 1dB. This value does not include the DL inner loop PC adjustment.

| IE/Group Name       | Presence | Range | IE type and reference | Semantics description |
|---------------------|----------|-------|-----------------------|-----------------------|
| Max Adjustment Step |          |       | INTEGER (1 .. 10)     | Slots                 |

### 9.2.2.20A Max Number of PCPCHes

| IE/Group Name         | Presence | Range | IE type and reference | Semantics description |
|-----------------------|----------|-------|-----------------------|-----------------------|
| Max Number of PCPCHes |          |       | INTEGER(1..64, ...)   |                       |

### 9.2.2.21 Maximum 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)        |                       |

### 9.2.2.22 Minimum 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) |                       |

### 9.2.2.23 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) |                       |

### 9.2.2.23A N\_EOT

The N\_EOT is defined as number of End of Transmission for release of PCPCH transmission.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| N_EOT         |          |       | INTEGER (0..8)        | TTI                   |

### 9.2.2.23B NF\_max

The NF\_max is defined as maximum number of Frame in a PCPCH message data part.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| NF_max        |          |       | INTEGER (1..64,...)   |                       |

### 9.2.2.23C N\_Start\_Message

The N\_Start\_Message is defined as number of Frames for start message of DL DPDCHes for a CPCH.

| IE/Group Name   | Presence | Range | IE type and reference | Semantics description |
|-----------------|----------|-------|-----------------------|-----------------------|
| N_Start_Message |          |       | INTEGER (1..8)        |                       |

### 9.2.2.24 Pattern Duration (PD)

| IE/Group Name | Presence | Range | IE type and reference | Semantics description   |
|---------------|----------|-------|-----------------------|---|
| PD            |          |       | INTEGER(0..2047, ...) | Frames<br>If the value is set to '0', the Pattern Duration shall be interpreted as 'infinite' |

### 9.2.2.24A PCP Length

Indicates CPCH power control preamble length.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| PCP Length    |          |       | ENUMERATED(0,8)       |                       |

### 9.2.2.25 PDSCH code mapping

This IE indicates the association between each possible value of TFCI(field 2) and the corresponding PDSCH channelisation code(s). There are three fundamentally different ways that the UTRAN must choose between in order to signal the mapping information, these are described below. The signalling capacity consumed by the different methods will vary depending on the way in which the UTRAN configures usage of the DSCH. A fourth option is also provided

which allows the UTRAN to replace individual entries in the TFCI(field 2) to PDSCH code mapping table with new PDSCH code values.

#### Method #1 - Using code range

The mapping is described in terms of a number of groups, each group associated with a given spreading factor. The UE maps TFCI(field2) values to PDSCH codes in the following way. The PDSCH code used for TFCI(field 2) = 0, is given by the SF and code number = 'PDSCH code start' of Group = 1. The PDSCH code used for TFCI( field 2) = 1, is given by the SF and code number = 'PDSCH code start' + 1. This continues, with unit increments in the value of TFC mapping to unit increments in code number up until the point that code number = 'PDSCH code stop'. The process continues in the same way for the next group with the TFCI(field 2) value used by the UE when constructing its mapping table starting at the largest value reached in the previous group plus one. In the event that 'PDSCH code start' = 'PDSCH code stop' (as may occur when mapping the PDSCH root code to a TFCI (field 2) value) then this is to be interpreted as defining the mapping between the channelisation code and a single TFCI (ie. TFCI(field 2) should not be incremented twice).

Note that each value of TFCI (field 2) maps to a given code number and when the 'multi-code info' parameter is greater than 1, then each value of TFCI (field 2) actually maps to a set of PDSCH codes. In this case contiguous codes are assigned, starting at the channelisation code denoted by the 'code number' parameter and including all codes with code numbers up to and including 'code number' - 1 + the value given in the parameter 'multi-code info'.

#### Method #2 - Using TFCI range

The mapping is described in terms of a number of groups, each group corresponding to a given PDSCH channelisation code or codes for multicode. The PDSCH code specified in the first group applies for all values of TFCI(field 2) between 0 and the specified 'Max TFCI(field2)'. The PDSCH code specified in the second group applies for all values of TFCI(field 2) between the 'Max TFCI(field2) value' specified in the last group plus one and the specified 'Max TFCI(field2)' in the second group. The process continues in the same way for the following groups with the TFCI(field 2) value starting at the largest value reached in the previous group plus one.

#### Method #3 - Explicit

The mapping between TFCI(field 2) value and PDSCH channelisation code is spelt out explicitly for each value of TFCI (field2)

| Information Element/Group name | Presence | Range | IE type and reference | Semantics description  |
|--------------------------------|----------|-------|-----------------------|--|
| DL Scrambling Code             | M        |       | INTEGER (0..15)       | Scrambling code on which PDSCH is transmitted.<br>0= Primary scrambling code of the cell<br>1...15 = Secondary scrambling code |



|                                 |   |                           |  |  |
|---------------------------------|---|---------------------------|--|--|
| <i>Choice signalling method</i> |   |                           |  |  |
| <i>&gt;code range</i>           |   |                           |  |  |
| >>PDSCH code mapping            |   | 1 to<br><MaxNoCodeGroups> |  |  |
| >>Spreading factor              | M |                           | Enumerated(4, 8, 16, 32, 64, 128, 256) |  |
| >>multi-code info               | M |                           | Integer(1..16)                         | This parameter indicates the number of PDSCH transmitted to the UE. The PDSCH codes all have the same SF as denoted by the Spreading factor parameter. Contiguous codes are assigned, starting at the channelisation code denoted by the spreading factor and code number parameter and including all codes, with code numbers up to and including 'code number' - 1 + 'multi-code info'. Note that 'code number'-1+'multi-code info' will not be allowed to exceed 'maxCodeNumComp'-1 |
| >>Code number                   | M |                           | Integer(0..maxCodeNumComp-1)           | PDSCH code start, Numbering as described in [18]   |
| >>Code number                   | M |                           | Integer(0..maxCodeNumComp-1)           | PDSCH code stop, Numbering as described in [18]  |
| <i>&gt;TFCI range</i>           |   |                           |  |  |
| >>DSCH mapping                  |   | 1 to<br><MaxNoTFCIGroups> |  |  |
| >>>Max TFCI(field2) value       | M |                           | Integer(1..1023)                       | This is the maximum value in the range of TFCI(field 2) values for which the specified PDSCH code applies  |
| >>>Spreading factor             | M |                           | Enumerated(4, 8, 16, 32, 64, 128, 256) | SF of PDSCH code   |
| >>>multi-code info              | M |                           | Integer(1..16)                         | Semantics as described for this parameter above  |
| >>>Code number                  | M |                           | Integer(0..maxCodeNumComp-1)           | Code number of PDSCH code. Numbering as described in [18]  |
| <i>&gt;Explicit</i>             |   |                           |  |  |
| >>PDSCH code                    |   | 1 to<br>MaxTFCI_2_Combs   |  | The first instance of the parameter PDSCH code corresponds to TFCI (field2) = 0, the second to TFCI(field 2) = 1 and so on.  |
| >>>Spreading factor             | M |                           | Enumerated(4, 8, 16, 32, 64, 128, 256) | SF of PDSCH code   |
| >>>multi-code info              | M |                           | Integer(1..16)                         | Semantics as described for this parameter above  |
| >>>Code number                  | M |                           | Integer(0..maxCodeNumComp-1)           | Code number of PDSCH code. Numbering as described in [18]  |

| Range Bound     | Explanation   |
|-----------------|---|
| MaxCodeNumComp  | Maximum number of codes at the defined spreading factor, within the complete code tree.   |
| MaxTFCI_2_Combs | Maximum number of TFCI (field 2) combinations (given by 2 raised to the power of the length of the TFCI field 2)                                    |
| MaxNoTFCIGroups | Maximum number of groups, each group described in terms of a range of TFCI(field 2) values for which a single PDSCH code applies.                   |
| MaxNoCodeGroups | Maximum number of groups, each group described in terms of a range of PDSCH channelisation code values for which a single spreading factor applies. |

### 9.2.2.26 PICH Mode

The number of paging indicators (PIs) in a PICH frame.

| IE/Group Name | Presence | Range | IE type and reference       | Semantics description  |
|---------------|----------|-------|-----------------------------|------------------------|
| PICH Mode     |          |       | Enumerated(18, 36, 72, 144) | Number of PI per frame |

### 9.2.2.27 Power Adjustment Type

Defines the characteristic of the power adjustment.

| IE/Group Name         | Presence | Range | IE type and reference                 | Semantics description |
|-----------------------|----------|-------|---------------------------------------|-----------------------|
| Power Adjustment Type |          |       | ENUMERATED (None, Common, Individual) |                       |

### 9.2.2.28 Power Control Mode

Void.

### 9.2.2.29 Power Offset

This IE defines a power offset relative to the Downlink transmission power of a DPCH or a Secondary CCPCH.

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

### 9.2.2.29A Power\_Raise\_Limit

| IE/Group Name     | Presence | Range | IE type and reference | Semantics description   |
|-------------------|----------|-------|-----------------------|-------------------------|
| Power_Raise_Limit |          |       | INTEGER (0..10)       | 0-10 dB, step size 1 dB |

## 9.2.2.30 Power Resume Mode

Void.

## 9.2.2.31 Preamble Signature

| IE/Group Name       | Presence | Range | IE type and reference | Semantics description                           |
|---------------------|----------|-------|-----------------------|---|
| Preamble Signatures |          |       | BIT STRING (16)       | Bit 0=P0<br>Bit 1=P1<br>..<br>Bit 15=P15<br>[9] |

## 9.2.2.32 Preamble Threshold

The IE sets the threshold for preamble detection. The ratio between received preamble power during the preamble period and interference level shall be above this threshold in order to be acknowledged.

| Information Element/Group Name | Presence | Range | IE type and reference   | Semantics description  |
|--------------------------------|----------|-------|-------------------------|--|
| Preamble Threshold             |          |       | INTEGER (0 , 1, ...,72) | 0: - 36.0 dB<br>1: - 35.5 dB<br>2: - 35.0 dB<br>..<br>72: 0.0 dB |

## 9.2.2.33 Primary CPICH Power

Primary CPICH power is the power that shall be used for transmitting the P-CPICH in a cell. The reference point is the antenna connector.

| IE/Group Name       | Presence | Range | IE type and reference     | Semantics description          |
|---------------------|----------|-------|---------------------------|--------------------------------|
| Primary CPICH power |          |       | Enumerated (-10, ..., 50) | Unit dBm<br>Granularity 0.1 dB |

## 9.2.2.34 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)    |                       |

## 9.2.2.35 Propagation Delay

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.<br>0=0 chips,<br>1=3 chips, ... |

## 9.2.2.36 QE-Selector

Void.

## 9.2.2.37 RACH Slot Format

| IE/Group Name    | Presence | Range | IE type and reference | Semantics description |
|------------------|----------|-------|-----------------------|-----------------------|
| RACH Slot Format |          |       | ENUMERATED(0..3, ...) | See [7].              |

## 9.2.2.38 RACH sub Channel numbers

| IE/Group Name            | Presence | Range | IE type and reference | Semantics description   |
|--------------------------|----------|-------|-----------------------|---|
| RACH Sub Channel Numbers |          |       | BIT STRING (12)       | Bit 0=Sub Channel Number 0<br>Bit 1=Sub Channel Number 1<br>...<br>Bit 11=Sub Channel Number 11 |

## 9.2.2.39 RL Set ID

The RL Set ID uniquely identifies one RL Set within a Node B Communication Context.

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

## 9.2.2.39A Received total wide band power

The Received total wide band power indicates the UL interference at a certain cell under CRNC, see ref. [4].

| IE/Group Name                  | Presence | Range | IE type and reference | Semantics description         |
|--------------------------------|----------|-------|-----------------------|-------------------------------|
| Received total wide band power |          |       | INTEGER(0..621)       | According to mapping in [22]. |

## 9.2.2.40 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,...) |                       |

## 9.2.2.41 Scrambling Code Change

Void.

## 9.2.2.42 Scrambling Code Number

| IE/Group Name               | Presence | Range | IE type and reference | Semantics description                           |
|-----------------------------|----------|-------|-----------------------|---|
| Scrambling Code Word Number |          |       | INTEGER (0..15)       | Identification of scrambling code see Ref. [9]. |

## 9.2.2.43 Secondary CCPCH Slot Format

| IE/Group Name               | Presence | Range | IE type and reference | Semantics description |
|-----------------------------|----------|-------|-----------------------|-----------------------|
| Secondary CCPCH Slot Format |          |       | INTEGER(0..17,...)    |                       |

## 9.2.2.44 SSdT Cell Identity

The SSdT Cell ID is a temporary ID for SSdT assigned to a cell.

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

## 9.2.2.45 SSdT Cell ID Length

The SSdT Cell ID Length parameter shows the length of the SSdT Cell ID.

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

## 9.2.2.46 SSdT Support Indicator

The SSdT Support Indicator indicates whether a RL supports SSdT or not.

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

## 9.2.2.47 SSdT Indication

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

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

### 9.2.2.48 STTD Indicator

Indicates if STTD shall be active or not.

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

### 9.2.2.49 T\_Cell

Timing delay used for defining start of SCH, CPICH and the DL scrambling code(s) in a cell relative BFN. Resolution 256 chips.

| IE/Group Name | Presence | Range | IE type and reference        | Semantics description                                  |
|---------------|----------|-------|------------------------------|--|
| T Cell        |          |       | Enumerated<br>(0 , 1, ...,9) | 0: 0 chip<br>1: 256 chip<br>..<br>9: 2304 chip<br>[17] |

### 9.2.2.49A TFCI2 Bearer Information Response

The *TFCI2 Bearer Information Response* IE provides information for TFCI2 bearer that have been established or modified.

| IE/Group Name                            | Presence | Range | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|--|----------|-------|-----------------------|------------------------|-------------|----------------------|
| <b>TFCI2 Bearer Information Response</b> |          | 1     |                       |                        |             |                      |
| >Binding ID                              | M        |       | 9.2.1.4               |                        | -           |                      |
| >Transport Layer Address                 | M        |       | 9.2.1.63              |                        | -           |                      |

### 9.2.2.50 TFCI signalling mode

This parameter indicates if the normal or split mode is used for the TFCI. In the event that the split mode is to be used then the IE indicates whether the split is 'Hard' or 'Logical', and in the event that the split is 'Logical' the IE indicates the number of bits in TFCI (field 2).

| IE/Group Name          | Presence    | Range | IE type and reference      | Semantics description   |
|------------------------|-------------|-------|----------------------------|---|
| TFCI signalling option | M           |       | ENUMERATED (Normal, Split) | 'Normal' : meaning no split in the TFCI field (either 'Logical' or 'Hard')<br>'Split' : meaning there is a split in the TFCI field (either 'Logical' or 'Hard')   |
| Split type             | C-IfSplit   |       | Enumerated (Hard, Logical) | 'Hard' : meaning that TFCI (field 1) and TFCI (field 2) are each 5 bits long and each field is block coded separately.<br><br>'Logical' : meaning that on the physical layer TFCI (field 1) and TFCI (field 2) are concatenated, field 1 taking the most significant bits and field 2 taking the least significant bits). The whole is then encoded with a single block code. |
| Length of TFCI2        | C-SplitType |       | Integer (1..10)            | This IE indicates the length measured in number of bits of TFCI (field2).   |

| Condition | Explanation   |
|-----------|---|
| IfSplit   | This IE is only present if 'TFCI signalling option' = 'split' |
| SplitType | This IE is only present if 'Split type' = 'Logical'           |

### 9.2.2.51 TGD

Void.

### 9.2.2.52 TGL

Void.

### 9.2.2.53 Transmit Diversity Indicator

The Transmit Diversity Indicator indicates whether transmit diversity shall be active or not.

| IE/Group Name                | Presence | Range | IE type and reference        | Semantics description |
|------------------------------|----------|-------|------------------------------|-----------------------|
| Transmit Diversity Indicator |          |       | ENUMERATED(active, inactive) |                       |

### 9.2.2.53A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see [18].

| IE/Group Name  | Presence | Range          | IE type and reference                                       | Semantics description  |
|--|----------|----------------|---|--|
| <b>Transmission gap pattern Sequence Information</b> |          | 1 to <MaxTGPS> |   |  |
| >TGPSI Identifier                                    | M        |                | Integer(1..<MaxTGPS>)                                       | Transmission Gap Pattern Sequence Identifier<br>Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.   |
| >TGSN  | M        |                | Integer (0..14)   | Transmission Gap Starting Slot Number<br>The slot number of the first transmission gap slot within the TGCFN.  |
| >TGL1  | M        |                | Integer(1..14)  | The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.   |
| >TGL2  | O        |                | Integer (1..14)   | The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.   |
| >TGD   | M        |                | Integer (0, 15.. 269)                                       | Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined). |
| >TGPL1   | M        |                | Integer (1..144,...)  | The duration of transmission gap pattern 1 in frames.  |
| >TGPL2   | O        |                | Integer (1..144,...)  | The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.  |
| >UL/DL mode  | M        |                | Enumerated (UL only, DL only, UL/DL)                        | Defines whether only DL, only UL, or combined UL/DL compressed mode is used.   |
| >Downlink compressed mode method                     | C-DL     |                | Enumerated (puncturing, SF/2, higher layer scheduling, ...) | Method for generating downlink compressed mode gap<br>None means that compressed mode pattern is stopped.  |
| >Uplink compressed mode method                       | C-UL     |                | Enumerated (SF/2, higher layer scheduling, ...)             | Method for generating uplink compressed mode gap.  |
| >Downlink frame type                                 | M        |                | Enumerated (A, B,...)                                       | Defines if frame structure type 'A' or 'B' shall be used in downlink compressed mode.  |
| >DeltaSIR1   | M        |                | Integer (0..30)   | Delta in UL SIR target value to be set in the Node B during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)<br><br>Step 0.1 dB, Range 0-3dB                                   |
| >DeltaSIRafter1                                      | M        |                | Integer   | Delta in UL SIR target value to  |



|                 |   |  |                 |   |
|-----------------|---|--|-----------------|---|
|                 |   |  | (0..30)         | be set in the Node B one frame after the frame containing the start of the first transmission gap in the transmission gap pattern,<br><br>Step 0.1 dB, Range 0-3dB  |
| >DeltaSIR2      | O |  | Integer (0..30) | Delta in UL SIR target value to be set in the Node B during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)<br>When omitted, DeltaSIR2 = DeltaSIR1.<br><br>Step 0.1 dB, Range 0-3dB |
| >DeltaSIRafter2 | O |  | Integer (0..30) | Delta in UL SIR target value to be set in the Node B one frame after the frame containing the start of the second transmission gap in the transmission gap pattern.<br>When omitted, DeltaSIRafter2 = DeltaSIRafter1.<br><br>Step 0.1 dB, Range 0-3dB                                     |

| Condition | Explanation  |
|-----------|--|
| C-UL      | This information element is only sent when the value of the "UL/DL mode" IE is "UL only" or "UL/DL". |
| C-DL      | This information element is only sent when the value of the "UL/DL mode" IE is "DL only" or "UL/DL". |

| Range bound | Explanation   |
|-------------|---|
| MaxTGPS     | Maximum number of transmission gap pattern sequences. |

### 9.2.2.53B Transmission Gap Pattern Sequence Code Information

This IE indicates whether the alternative scrambling code shall be used for the Downlink compressed mode method or not in the Transmission Gap Pattern Sequence. For details see [18].

| IE/Group Name          | Presence | Range | IE type and reference                    | Semantics description  |
|------------------------|----------|-------|--|--|
| Scrambling code change |          |       | Enumerated (code change, no code change) | Indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'. |

### 9.2.2.54 UL/DL compressed mode selection:

Void.

### 9.2.2.55 UL delta SIR

Void.

### 9.2.2.56 UL delta SIR after

Void.

### 9.2.2.57 UL DPCCH Slot Format

Indicates the slot format used in DPCCH in UL, accordingly to 25.211

| IE/Group Name        | Presence | Range | IE type and reference | Semantics description |
|----------------------|----------|-------|-----------------------|-----------------------|
| UL DPCCH slot format |          |       | INTEGER<br>(0..5,...) |                       |

### 9.2.2.58 UL SIR

The UL SIR indicates a received UL SIR.

| IE/Group Name | Presence | Range | IE type and reference           | Semantics description |
|---------------|----------|-------|---------------------------------|-----------------------|
| UL SIR        |          |       | ENUMERATED<br>(-8.2 ..<br>17.3) | Step 0.1 dB           |

### 9.2.2.59 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<br>(0.. $2^{24}-1$ )   |                       |
| >UL scrambling code length | M        |       | ENUMERATED<br>(Short,<br>Long) |                       |

### 9.2.2.60 UL Capacity Credit

Void

## 9.2.3 TDD specific Parameters

### 9.2.3.1 Block STTD Indicator

Indicates if Block STTD antenna diversity is applied or not to the PCCPCH.

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

### 9.2.3.2 Burst Type

Void.

### 9.2.3.3 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)       |                       |

### 9.2.3.4 Cell Parameter ID

The Cell Parameter ID identifies unambiguously the Code Groups, Scrambling Codes, Midambles and Toffset (see [20]).

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

### 9.2.3.4A Constant Value

The Constant Value is the power margin used by a UE to set the proper uplink power for a DCH, USCH, or a RACH .

| IE/Group Name  | Presence | Range | IE type and reference  | Semantics description        |
|----------------|----------|-------|------------------------|------------------------------|
| Constant Value |          |       | INTEGER (-10...10,...) | Unit dB<br>Granularity 1 dB. |

### 9.2.3.4B DL Timeslot ISCP

DL Timeslot ISCP is the measured interference in a downlink timeslot at the UE, see ref. [5].

| IE/Group Name    | Presence | Range | IE type and reference | Semantics description        |
|------------------|----------|-------|-----------------------|------------------------------|
| DL Timeslot ISCP |          |       | INTEGER (0..91)       | According to mapping in [5]. |

### 9.2.3.4C DCH TDD Information

The *DCH TDD Information* IE provides information for DCHs to be established.

| IE/Group Name                   | Presence   | Range               | IE type and reference | Semantics descriptions               | Criticality | Assigned Criticality |
|---------------------------------|------------|---------------------|-----------------------|--------------------------------------|-------------|----------------------|
| <b>DCH TDD Information</b>      |            | 1 to <maxnoof DCHs> |                       |                                      | –           |                      |
| >Payload CRC Presence Indicator | M          |                     | 9.2.1.49              |                                      | –           |                      |
| >UL FP mode                     | M          |                     | 9.2.1.66              |                                      | –           |                      |
| >ToAWS                          | M          |                     | 9.2.1.61              |                                      | –           |                      |
| >ToAWE                          | M          |                     | 9.2.1.60              |                                      | –           |                      |
| <b>&gt;DCH Specific Info</b>    |            | 1..<maxno ofDCHs>   |                       |                                      | –           |                      |
| >>DCH ID                        | M          |                     | 9.2.1.20              |                                      | –           |                      |
| >>CCTrCH ID                     | M          |                     | 9.2.3.3               | UL CCTrCH in which the DCH is mapped | –           |                      |
| >>CCTrCH ID                     | M          |                     | 9.2.3.3               | DL CCTrCH in which the DCH is mapped | –           |                      |
| >>Transport Format Set          | M          |                     | 9.2.1.59              | For UL                               | –           |                      |
| >>Transport Format Set          | M          |                     | 9.2.1.59              | For DL                               | –           |                      |
| >>Allocation/Retention Priority | M          |                     | 9.2.1.1A              |                                      | –           |                      |
| >>Frame Handling Priority       | O          |                     | 9.2.1.30              |                                      | –           |                      |
| >>QE-Selector                   | C-CoordDCH |                     | 9.2.1.50A             |                                      | –           |                      |

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

| Range bound | Explanation                       |
|-------------|-----------------------------------|
| MaxnoofDCHs | Maximum number of DCHs for one UE |

#### 9.2.3.4D DCHs TDD to Modify

The *DCHs TDD to Modify* IE provides information for DCHs to be modified.

| IE/Group Name                       | Presence | Range            | IE type and reference | Semantics descriptions                | Criticality | Assigned Criticality |
|-------------------------------------|----------|------------------|-----------------------|---------------------------------------|-------------|----------------------|
| <b>DCHs TDD to Modify</b>           |          | 1..<maxnoofDCHs> |                       |                                       | GLOBAL      | reject               |
| >UL FP Mode                         | O        |                  | 9.2.1.66              |                                       | –           |                      |
| >ToAWS                              | O        |                  | 9.2.1.61              |                                       | –           |                      |
| >ToAWE                              | O        |                  | 9.2.1.60              |                                       | –           |                      |
| >Transport Bearer Request Indicator | M        |                  | 9.2.1.62A             |                                       | –           |                      |
| <b>&gt;DCH Specific Info</b>        |          | 1..<maxnoofDCHs> |                       |                                       | –           |                      |
| >>DCH ID                            | M        |                  | 9.2.1.20              |                                       | –           |                      |
| >>CCTrCH ID                         | O        |                  | 9.2.3.3               | UL CCTrCH in which the DCH is mapped. | –           |                      |
| >>CCTrCH ID                         | O        |                  | 9.2.3.3               | DL CCTrCH in which the DCH is mapped  | –           |                      |
| >>Transport Format Set              | O        |                  | 9.2.1.59              | For the UL.                           | –           |                      |
| >>Transport Format Set              | O        |                  | 9.2.1.59              | For the DL.                           | –           |                      |
| >>Allocation/Retention Priority     | O        |                  | 9.2.1.1A              |                                       | –           |                      |
| >>Frame Handling Priority           | O        |                  | 9.2.1.30              |                                       | –           |                      |

| Range bound        | Explanation                       |
|--------------------|-----------------------------------|
| <i>MaxnoofDCHs</i> | Maximum number of DCHs for one UE |

### 9.2.3.4E DL Timeslot Information

The *DL Timeslot Information* IE provides information for DL Time slot to be established.

| IE/Group Name                  | Presence | Range              | IE type and reference              | Semantics descriptions | Criticality | Assigned Criticality |
|--------------------------------|----------|--------------------|------------------------------------|------------------------|-------------|----------------------|
| <b>DL Timeslot Information</b> |          | 1 .. <maxnoofDLts> |                                    |                        | –           |                      |
| >Time Slot                     | M        |                    | 9.2.3.23                           |                        | –           |                      |
| >Midamble Shift and Burst Type | M        |                    | 9.2.3.7                            |                        | –           |                      |
| >TFCI Presence                 | M        |                    | 9.2.1.57                           |                        | –           |                      |
| >DL Code Information           | M        |                    | TDD DL Code Information<br>9.2.3.x |                        | –           |                      |

| Range bound        | Explanation  |
|--------------------|--|
| <i>MaxnoofDLts</i> | Maximum number of Downlink time slots per Radio Link |

### 9.2.3.4F DL Time Slot ISCP Info

The *DL Time Slot ISCP Info* IE provides information for DL Interference level for each time slot within the Radio Link.

| IE/Group Name                 | Presence | Range                 | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|-------------------------------|----------|-----------------------|-----------------------|------------------------|-------------|----------------------|
| <b>DL Time Slot ISCP Info</b> |          | 1 ..<br><maxnoofDLts> |                       |                        | –           |                      |
| >Time Slot                    | M        |                       | 9.2.3.23              |                        | –           |                      |
| >DL Timeslot ISCP             | M        |                       | 9.2.3.4B              |                        | –           |                      |

| Range bound        | Explanation  |
|--------------------|--|
| <i>MaxnoofDLts</i> | Maximum number of Downlink time slots per Radio Link |

### 9.2.3.5 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       | M        |       | INTEGER (0..239)      |                       |

### 9.2.3.5A DSCH TDD Information

The *DSCH TDD Information* IE provides information for DSCHs to be established.

| IE/Group Name                  | Presence | Range                  | IE type and reference | Semantics descriptions                | Criticality | Assigned Criticality |
|--------------------------------|----------|------------------------|-----------------------|---------------------------------------|-------------|----------------------|
| <b>DSCH TDD Information</b>    |          | 1 to<br><MaxnoofDSCHs> |                       |                                       | –           |                      |
| >DSCH ID                       | M        |                        | 9.2.1.27              |                                       | –           |                      |
| >CCTrCH ID                     | M        |                        | 9.2.3.2               | DL CCTrCH in which the DSCH is mapped | –           |                      |
| >Transport Format Set          | M        |                        | 9.2.1.59              | For DSCH                              | –           |                      |
| >Allocation/Retention Priority | M        |                        | 9.2.1.1A              |                                       | –           |                      |
| >Frame handling Priority       | M        |                        | 9.2.1.30              |                                       | –           |                      |
| >ToAWS                         | M        |                        | 9.2.1.61              |                                       | –           |                      |
| >ToAWE                         | M        |                        | 9.2.1.60              |                                       | –           |                      |

| Range bound         | Explanation                       |
|---------------------|-----------------------------------|
| <i>MaxnoofDSCHs</i> | Maximum number of DSCH for one UE |

### 9.2.3.6 Max PRACH Midamble shift

Indicates the maximum number of Midamble shifts to be used in a cell.

| IE/Group Name             | Presence | Range | IE type and reference | Semantics description |
|---------------------------|----------|-------|-----------------------|-----------------------|
| Max PRACH Midamble Shifts |          |       | ENUMERATED (4, 8,...) |                       |

### 9.2.3.7 Midamble shift and burst type

This information element indicates burst type and midamble allocation.

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

Three different midamble allocation schemes exist:

Default midamble: the midamble shift is selected by layer 1 depending on the associated channelisation code (DL and UL)

Common midamble: the midamble shift is chosen by layer 1 depending on the number of channelisation codes (possible in DL only)

UE specific midamble: a UE specific midamble is explicitly assigned (DL and UL)

| IE/Group Name              | Presence | Range | IE type and reference  | Semantics description |
|----------------------------|----------|-------|--|-----------------------|
| CHOICE Burst Type          |          |       |  |                       |
| >"Type 1"                  |          |       |  |                       |
| >>Midamble Allocation Mode | M        |       | Enumerated (Default midamble, Common midamble, UE specific midamble) |                       |
| >>Midamble Shift           | C-UE     |       | Integer(0..15)   |                       |
| >"Type 2"                  |          |       |  |                       |
| >>Midamble Allocation Mode | M        |       | Enumerated (Default midamble, Common midamble, UE specific midamble) |                       |
| >>Midamble Shift           | C-UE     |       | INTEGER (0..5)   |                       |
| >"Type 3"                  |          |       |  | UL only               |
| >>Midamble Allocation Mode | M        |       | Enumerated (Default midamble, UE specific midamble)                  |                       |
| >>Midamble Shift           | C-UE     |       | Integer(0..15)   |                       |
| > "..."                    |          |       |  |                       |

| Condition | Explanation  |
|-----------|--|
| C-UE      | This information element is only sent when the value of the "Midamble Allocation Mode" IE is "UE-specific midamble". |

### 9.2.3.8 Paging Indicator Length

The Paging Indicator Length indicates the number of symbols for Page Indication transmitted in one timeslot (see [19]).

| IE/Group Name           | Presence | Range | IE type and reference    | Semantics description |
|-------------------------|----------|-------|--------------------------|-----------------------|
| Paging Indicator Length |          |       | ENUMERATED (2, 4, 8,...) |                       |

### 9.2.3.9 PCCPCH Power

Primary CCPCH power is the power that shall be used for transmitting the P CCPCH in a cell. The P CCPCH power is the reference power in a TDD-cell. The reference point is the antenna connector.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description          |
|---------------|----------|-------|-----------------------|--------------------------------|
| PCCPCH Power  |          |       | INTEGER(-15..+40,...) | Unit dBm<br>Granularity 0.1 dB |

### 9.2.3.10 PDSCH ID

The PDSCH ID identifies unambiguously a PDSCH inside a cell.

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

### 9.2.3.11 PDSCH Set ID

The PDSCH Set Id identifies unambiguously a PDSCH Set inside a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| PDSCH Set ID  |          |       | INTEGER (0..255)      | See [6]               |

### 9.2.3.12 PUSCH ID

The PUSCH ID identifies unambiguously a PUSCH inside a cell.

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

### 9.2.3.13 PUSCH Set ID

The PUSCH Set ID identifies unambiguously a PUSCH Set inside a cell.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| PUSCH Set ID  |          |       | INTEGER (0..255)      | See [6]               |

### 9.2.3.14 PRACH Midamble

The PRACH Midamble indicates if only the Basic Midamble Sequence or also the time-inverted Midamble Sequence is used.

| IE/Group Name  | Presence | Range | IE type and reference               | Semantics description |
|----------------|----------|-------|-------------------------------------|-----------------------|
| PRACH Midamble |          |       | ENUMERATED<br>(Inverted,<br>Direct) |                       |



### 9.2.3.15 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 [see 18].

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

### 9.2.3.16 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) [see 18].

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

### 9.2.3.17 SCH Time Slot

The SCH Time Slot is only applicable if the value of Sync Case IE is Case 2.

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

### 9.2.3.18 Sync case

The SCH and PCCPCH are mapped on one or two downlink slots per frame. There are two cases of SCH and PCCPCH allocation as follows:

- Case 1) SCH and PCCPCH allocated in a single TS#k
- Case 2) SCH allocated in two TS: TS#k and TS#k+8  
PCCPCH allocated in TS#k

| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
|---------------|----------|-------|-----------------------|-----------------------|
| Sync Case     |          |       | Integer (1..2,...)    |                       |

### 9.2.3.19 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 ((1/1), (2/1), (2/2), (4/1),... (4/4), (8/1), (8/8), (16/1)... (16/16), ...) |                       |

### 9.2.3.19A TDD DPCH Offset

The Offset represents the phase information for the allocation of a group of dedicated physical channels. The first range is used when a starting offset is not required and the TDD Physical channel offset for each DPCH in the CCTrCH shall be directly determined from the TDD DPCH Offset. The second range is used when a starting offset is required. The TDD DPCH Offset shall map to the CFN and the TDD Physical Channel Offset for each DPCH in this CCTrCH shall be calculated by TDD DPCH Offset *mod* Repetition period, see [18].

| IE/Group Name   | Presence | Range | IE type and reference                      | Semantics description |
|-----------------|----------|-------|--|-----------------------|
| TDD DPCH Offset |          |       | CHOICE INTEGER (0..63) or INTEGER (0..255) |                       |

### 9.2.3.19B TDD DL Code Information

The *TDD DL Code Information* IE provides DL Code information for the RL.

| IE/Group Name                  | Presence | Range              | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|--------------------------------|----------|--------------------|-----------------------|------------------------|-------------|----------------------|
| <b>TDD DL Code Information</b> |          | 1 .. <maxnoOfDPCH> |                       |                        | –           |                      |
| >DPCH ID                       | M        |                    | 9.2.3.5               |                        | –           |                      |
| >TDD Channelisation Code       | M        |                    | 9.2.3.19              |                        | –           |                      |

| Range bound        | Explanation                          |
|--------------------|--------------------------------------|
| <i>maxnoOfDPCH</i> | Maximum number of DPCH in one CCTrCH |

### 9.2.3.20 TDD Physical Channel Offset

The Offset represents the phase information for the allocation of a physical channel. (SFN mod Repetition Period = Offset) [see 18].

| IE/Group Name               | Presence | Range | IE type and reference | Semantics description |
|-----------------------------|----------|-------|-----------------------|-----------------------|
| TDD Physical Channel Offset |          |       | INTEGER (0..63)       |                       |

### 9.2.3.21 TDD TPC DL step size

This parameter indicates step size for the DL power adjustment.

| IE/Group Name              | Presence | Range | IE type and reference    | Semantics description |
|----------------------------|----------|-------|--------------------------|-----------------------|
| TDD TPC Downlink step size |          |       | ENUMERATED (1, 2, 3,...) |                       |

### 9.2.3.21A TDD UL Code Information

The *TDD UL Code Information* IE provides information for UL Code to be established.

| IE/Group Name                  | Presence | Range                         | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|--------------------------------|----------|-------------------------------|-----------------------|------------------------|-------------|----------------------|
| <b>TDD UL Code Information</b> |          | 1 ..<br><maxno<br>OfDPCH<br>> |                       |                        | –           |                      |
| >DPCH ID                       | M        |                               | 9.2.3.5               |                        | –           |                      |
| >TDD Channelisation Code       | M        |                               | 9.2.3.19              |                        | –           |                      |

| Range bound        | Explanation                          |
|--------------------|--------------------------------------|
| <i>MaxnoOfDPCH</i> | Maximum number of DPCH in one CCTrCH |

### 9.2.3.22 TFCI Coding

The TFCI Coding describes the way 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   |          |       | Enumerated (4, 8, 16, 32,...) |                       |

### 9.2.3.22A Timing Advance Applied

Defines the need for Rx Timing Deviation measurement results to be reported in a particular cell.

| IE/Group Name          | Presence | Range | IE type and reference | Semantics description |
|------------------------|----------|-------|-----------------------|-----------------------|
| Timing Advance Applied |          |       | ENUMERATED (Yes, No)  |                       |

### 9.2.3.23 Time Slot

The Time Slot represents the minimum time interval inside a Radio Frame that can be assigned to a Physical Channel.

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

### 9.2.3.24 Time Slot Direction

This parameter indicates whether the TS in the cell is used in Uplink or Downlink direction.

| IE/Group Name       | Presence | Range | IE type and reference   | Semantics description |
|---------------------|----------|-------|-------------------------|-----------------------|
| Time Slot Direction |          |       | Enumerated (UL, DL,...) |                       |

### 9.2.3.25 Time Slot Status

This parameter indicates whether the TS in the cell is active or not.

| IE/Group Name    | Presence | Range | IE type and reference              | Semantics description |
|------------------|----------|-------|------------------------------------|-----------------------|
| Time Slot Status |          |       | Enumerated (active, notActive,...) |                       |

### 9.2.3.26 Transmission Diversity Applied

Defines if Transmission Diversity on DCHs to be applied in a cell (see[19]).

| IE/Group Name                  | Presence | Range | IE type and reference | Semantics description |
|--------------------------------|----------|-------|-----------------------|-----------------------|
| Transmission Diversity Applied |          |       | Boolean               |                       |

### 9.2.3.26A UL Timeslot ISCP

UL Timeslot ISCP is the measured interference in a uplink timeslot at the Node B, see ref. [5].

| IE/Group Name    | Presence | Range | IE type and reference | Semantics description         |
|------------------|----------|-------|-----------------------|-------------------------------|
| UL Timeslot ISCP |          |       | INTEGER (0..81)       | According to mapping in [23]. |

### 9.2.3.26B UL PhysCH SF Variation

Indicates whether variation of SF in UL is supported by Radio Link or not.

| IE/Group Name          | Presence | Range | IE type and reference   | Semantics description |
|------------------------|----------|-------|---|-----------------------|
| UL PhysCH SF Variation |          |       | ENUMERATED (SF_Variation_supported, SF_Variation_NOT_supported) |                       |

### 9.2.3.26C UL Timeslot Information

The *UL Timeslot Information* IE provides information on the time slot allocation for an UL DPCH.

| IE/Group Name                  | Presence | Range                 | IE type and reference              | Semantics descriptions | Criticality | Assigned Criticality |
|--------------------------------|----------|-----------------------|------------------------------------|------------------------|-------------|----------------------|
| <b>UL Timeslot Information</b> |          | 1 ..<br><maxnoofULts> |                                    |                        | –           |                      |
| >Time Slot                     | M        |                       | 9.2.3.23                           |                        | –           |                      |
| >Midamble Shift and Burst Type | M        |                       | 9.2.3.7                            |                        | –           |                      |
| >TFCI Presence                 | M        |                       | 9.2.1.57                           |                        | –           |                      |
| > UL Code Information          | M        |                       | TDD UL Code Information<br>9.2.3.x |                        |             |                      |

| Range bound        | Explanation  |
|--------------------|--|
| <i>MaxnoofULts</i> | Maximum number of Uplink time slots per Radio Link |

### 9.2.3.26D UL Time Slot ISCP Info

The *UL Time Slot ISCP Info* IE provides information for UL Interference level for each time slot within the Radio Link.

| IE/Group Name                 | Presence | Range                 | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|-------------------------------|----------|-----------------------|-----------------------|------------------------|-------------|----------------------|
| <b>UL Time Slot ISCP Info</b> |          | 1 ..<br><maxnoofULts> |                       |                        |             |                      |
| >Time Slot                    | M        |                       | 9.2.3.23              |                        |             |                      |
| >UL Timeslot ISCP             | M        |                       | 9.2.3.26A             |                        |             |                      |

| Range bound        | Explanation  |
|--------------------|--|
| <i>MaxnoofULts</i> | Maximum number of Uplink time slots per Radio Link |

### 9.2.3.27 USCH ID

The USCH ID uniquely identifies a USCH within a Node B Communication Context.

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

### 9.2.3.28 USCH Information

The *USCH Information* IE provides information for USCHs to be established.

| IE/Group Name                  | Presence | Range                | IE type and reference | Semantics descriptions                | Criticality | Assigned Criticality |
|--------------------------------|----------|----------------------|-----------------------|---------------------------------------|-------------|----------------------|
| <b>USCH Information</b>        |          | 1 to <Maxnoof USCHs> |                       |                                       | –           |                      |
| >USCH ID                       | M        |                      | 9.2.3.27              |                                       | –           |                      |
| >CCTrCH ID                     | M        |                      | 9.2.3.3               | UL CCTrCH in which the USCH is mapped | –           |                      |
| >Transport Format Set          | M        |                      | 9.2.1.59              | For USCH                              | –           |                      |
| >Allocation/Retention Priority | M        |                      | 9.2.1.1A              |                                       | –           |                      |

| Range bound  | Explanation                       |
|--------------|-----------------------------------|
| MaxnoofUSCHs | Maximum number of USCH for one UE |

### 9.2.3.29 USCH Information Response

The *USCH Information Response* IE provides information for USCHs that have been established or modified.

| IE/Group Name                    | Presence | Range                | IE type and reference | Semantics descriptions | Criticality | Assigned Criticality |
|----------------------------------|----------|----------------------|-----------------------|------------------------|-------------|----------------------|
| <b>USCH Information Response</b> |          | 1 .. <Maxnoof USCHs> |                       |                        | –           |                      |
| >USCH ID                         | M        |                      | 9.2.3.27              |                        | –           |                      |
| >Binding ID                      | O        |                      | 9.2.1.4               |                        | –           |                      |
| >Transport Layer Address         | O        |                      | 9.2.1.63              |                        | –           |                      |

| Range bound  | Explanation                        |
|--------------|------------------------------------|
| MaxnoofUSCHs | Maximum number of USCHs for one UE |

## 9.3 Message and Information element abstract syntax (with ASN.1)

### 9.3.0 General

Section 9.3 presents the Abstract Syntax of NBAP protocol with ASN.1. In case there is contradiction between the ASN.1 definition in this section and the tabular format in sections 9.1 and 9.2, the ASN.1 shall take precedence, except for the definition of conditions for the presence of conditional elements, where the tabular format shall take precedence.

The ASN.1 definition specifies the structure and content of NBAP messages. NBAP messages can contain any IEs specified in the object set definitions for that message without the order or number of occurrence being restricted by ASN.1. However, for this version of the standard, a sending entity shall construct a NBAP message according to the PDU definitions module and with the following additional rules (Note that in the following IE means an IE in the object set with an explicit id. If one IE needed to appear more than once in one object set, then the different occurrences have different IE ids):

- IEs shall be ordered (in an IE container) in the order they appear in object set definitions.
- Object set definitions specify how many times IEs may appear. An IE shall appear exactly once if the presence field in an object has value "mandatory". An IE may appear at most once if the presence field in an object has value "optional" or "conditional". If in a tabular format there is multiplicity specified for an IE (i.e. an IE list) then in the corresponding ASN.1 definition the list definition is separated into two parts. The first part defines an IE container list where the list elements reside. The second part defines list elements. The IE container list appears as an IE of its own. For this version of the standard an IE container list may contain only one kind of list elements.

If a NBAP message that is not constructed as defined above is received, this shall be considered as Abstract Syntax Error, and the message shall be handled as defined for Abstract Syntax Error in section 10.3.6.

### 9.3.1 Usage of Private Message mechanism for non-standard use

The private message 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 inter-operability.
- By vendors for research purposes, e.g. to implement and evaluate new algorithms/features before such features are proposed for standardisation

The private message mechanism shall not be used for basic functionality. Such functionality shall be standardised.

### 9.3.2 Elementary Procedure Definitions

```
-- *****
--
-- Elementary Procedure definitions
--
-- *****
```

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

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

```
BEGIN
```

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

```
IMPORTS
```

```
    Criticality,
    ProcedureID,
    MessageDiscriminator,
    TransactionID
```

```
FROM NBAP-CommonDataTypes
```

```
    CommonTransportChannelSetupRequestFDD,
    CommonTransportChannelSetupRequestTDD,
    CommonTransportChannelSetupResponse,
    CommonTransportChannelSetupFailure,
    CommonTransportChannelReconfigurationRequestFDD,
    CommonTransportChannelReconfigurationRequestTDD,
    CommonTransportChannelReconfigurationResponse,
    CommonTransportChannelReconfigurationFailure,
    CommonTransportChannelDeletionRequest,
    CommonTransportChannelDeletionResponse,
    BlockResourceRequest,
    BlockResourceResponse,
    BlockResourceFailure,
    UnblockResourceIndication,
    AuditFailure,
    AuditRequiredIndication,
    AuditRequest,
    AuditResponse,
    CommonMeasurementInitiationRequest,
    CommonMeasurementInitiationResponse,
    CommonMeasurementInitiationFailure,
    CommonMeasurementReport,
    CommonMeasurementTerminationRequest,
    CommonMeasurementFailureIndication,
    CellSetupRequestFDD,
    CellSetupRequestTDD,
    CellSetupResponse,
    CellSetupFailure,
    CellReconfigurationRequestFDD,
    CellReconfigurationRequestTDD,
    CellReconfigurationResponse,
```



CellReconfigurationFailure,  
CellDeletionRequest,  
CellDeletionResponse,  
ResourceStatusIndication,  
SystemInformationUpdateRequest,  
SystemInformationUpdateResponse,  
SystemInformationUpdateFailure,  
ResetRequest,  
ResetResponse,  
RadioLinkPreemptionRequiredIndication,  
RadioLinkSetupRequestFDD,  
RadioLinkSetupRequestTDD,  
RadioLinkSetupResponseFDD,  
RadioLinkSetupResponseTDD,  
RadioLinkSetupFailureFDD,  
RadioLinkSetupFailureTDD,  
RadioLinkAdditionRequestFDD,  
RadioLinkAdditionRequestTDD,  
RadioLinkAdditionResponseFDD,  
RadioLinkAdditionResponseTDD,  
RadioLinkAdditionFailureFDD,  
RadioLinkAdditionFailureTDD,  
RadioLinkReconfigurationPrepareFDD,  
RadioLinkReconfigurationPrepareTDD,  
RadioLinkReconfigurationReady,  
RadioLinkReconfigurationFailure,  
RadioLinkReconfigurationCommit,  
RadioLinkReconfigurationCancel,  
RadioLinkReconfigurationRequestFDD,  
RadioLinkReconfigurationRequestTDD,  
RadioLinkReconfigurationResponse,  
RadioLinkDeletionRequest,  
RadioLinkDeletionResponse,  
DL-PowerControlRequest,  
DL-PowerTimeslotControlRequest,  
DedicatedMeasurementInitiationRequest,  
DedicatedMeasurementInitiationResponse,  
DedicatedMeasurementInitiationFailure,  
DedicatedMeasurementReport,  
DedicatedMeasurementTerminationRequest,  
DedicatedMeasurementFailureIndication,  
RadioLinkFailureIndication,  
RadioLinkRestoreIndication,  
CompressedModeCommand,  
ErrorIndication,  
PrivateMessage,  
PhysicalSharedChannelReconfigurationRequestTDD,  
PhysicalSharedChannelReconfigurationResponseTDD,  
PhysicalSharedChannelReconfigurationFailureTDD

FROM NBAP-PDU-Contents

id-audit,  
id-auditRequired,

```

id-blockResource,
id-cellDeletion,
id-cellReconfiguration,
id-cellSetup,
id-commonMeasurementFailure,
id-commonMeasurementInitiation,
id-commonMeasurementReport,
id-commonMeasurementTermination,
id-commonTransportChannelDelete,
id-commonTransportChannelReconfigure,
id-commonTransportChannelSetup,
id-compressedModeCommand,
id-dedicatedMeasurementFailure,
id-dedicatedMeasurementInitiation,
id-dedicatedMeasurementReport,
id-dedicatedMeasurementTermination,
id-downlinkPowerControl,
id-downlinkPowerTimeslotControl,
id-errorIndicationForDedicated,
id-errorIndicationForCommon,
id-physicalSharedChannelReconfiguration,
id-privateMessageForDedicated,
id-privateMessageForCommon,
id-radioLinkAddition,
id-radioLinkDeletion,
id-radioLinkFailure,
id-radioLinkPreemption,
id-radioLinkRestoration,
id-radioLinkSetup,
id-reset,
id-resourceStatusIndication,
id-synchronisedRadioLinkReconfigurationCancellation,
id-synchronisedRadioLinkReconfigurationCommit,
id-synchronisedRadioLinkReconfigurationPreparation,
id-systemInformationUpdate,
id-unblockResource,
id-unSynchronisedRadioLinkReconfiguration
FROM NBAP-Constants;

-- *****
--
-- Interface Elementary Procedure Class
--
-- *****

NBAP-ELEMENTARY-PROCEDURE ::= CLASS {
    &InitiatingMessage           ,
    &SuccessfulOutcome           OPTIONAL,
    &UnsuccessfulOutcome        OPTIONAL,
    &Outcome                     OPTIONAL,
    &messageDiscriminator       MessageDiscriminator,
    &procedureID                 ProcedureID    UNIQUE,
    &criticality                 Criticality     DEFAULT ignore

```

```

}

WITH SYNTAX {
    INITIATING MESSAGE                &InitiatingMessage
    [SUCCESSFUL OUTCOME                &SuccessfulOutcome]
    [UNSUCCESSFUL OUTCOME              &UnsuccessfulOutcome]
    [OUTCOME                            &Outcome]
    MESSAGE DISCRIMINATOR              &messageDiscriminator
    PROCEDURE ID                       &procedureID
    [CRITICALITY                       &criticality]
}

-- *****
--
-- Interface PDU Definition
--
-- *****

NBAP-PDU ::= CHOICE {
    initiatingMessage      InitiatingMessage,
    succesfulOutcome       SuccessfulOutcome,
    unsuccessfulOutcome    UnsuccessfulOutcome,
    outcome                Outcome,
    ...
}

InitiatingMessage ::= SEQUENCE {
    procedureID             NBAP-ELEMENTARY-PROCEDURE.&procedureID    ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality             NBAP-ELEMENTARY-PROCEDURE.&criticality    ( {NBAP-ELEMENTARY-PROCEDURES}{@procedureID} ),
    messageDiscriminator   NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator ( {NBAP-ELEMENTARY-PROCEDURES}{@procedureID} ),
    transactionID          TransactionID,
    value                  NBAP-ELEMENTARY-PROCEDURE.&InitiatingMessage ( {NBAP-ELEMENTARY-PROCEDURES}{@procedureID} )
}

SuccessfulOutcome ::= SEQUENCE {
    procedureID             NBAP-ELEMENTARY-PROCEDURE.&procedureID    ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality             NBAP-ELEMENTARY-PROCEDURE.&criticality    ( {NBAP-ELEMENTARY-PROCEDURES}{@procedureID} ),
    messageDiscriminator   NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator ( {NBAP-ELEMENTARY-PROCEDURES}{@procedureID} ),
    transactionID          TransactionID,
    value                  NBAP-ELEMENTARY-PROCEDURE.&SuccessfulOutcome ( {NBAP-ELEMENTARY-PROCEDURES}{@procedureID} )
}

UnsuccessfulOutcome ::= SEQUENCE {
    procedureID             NBAP-ELEMENTARY-PROCEDURE.&procedureID    ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality             NBAP-ELEMENTARY-PROCEDURE.&criticality    ( {NBAP-ELEMENTARY-PROCEDURES}{@procedureID} ),
    messageDiscriminator   NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator ( {NBAP-ELEMENTARY-PROCEDURES}{@procedureID} ),
    transactionID          TransactionID,
    value                  NBAP-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ( {NBAP-ELEMENTARY-PROCEDURES}{@procedureID} )
}

Outcome ::= SEQUENCE {
    procedureID             NBAP-ELEMENTARY-PROCEDURE.&procedureID    ( {NBAP-ELEMENTARY-PROCEDURES} ),
    criticality             NBAP-ELEMENTARY-PROCEDURE.&criticality    ( {NBAP-ELEMENTARY-PROCEDURES}{@procedureID} ),
}

```

```

messageDiscriminator    NBAP-ELEMENTARY-PROCEDURE.&messageDiscriminator({NBAP-ELEMENTARY-PROCEDURES}{@procedureID}),
transactionID           TransactionID,
value                   NBAP-ELEMENTARY-PROCEDURE.&Outcome  ({NBAP-ELEMENTARY-PROCEDURES}{@procedureID})
}

```

```

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

```

```

NBAP-ELEMENTARY-PROCEDURES NBAP-ELEMENTARY-PROCEDURE ::= {
  NBAP-ELEMENTARY-PROCEDURES-CLASS-1      |
  NBAP-ELEMENTARY-PROCEDURES-CLASS-2      ,
  ...
}

```

```

NBAP-ELEMENTARY-PROCEDURES-CLASS-1 NBAP-ELEMENTARY-PROCEDURE ::= {
  cellSetupFDD
  cellSetupTDD
  cellReconfigurationFDD
  cellReconfigurationTDD
  cellDeletion
  commonTransportChannelSetupFDD
  commonTransportChannelSetupTDD
  commonTransportChannelReconfigureFDD
  commonTransportChannelReconfigureTDD
  commonTransportChannelDelete
  audit
  blockResource
  radioLinkSetupFDD
  radioLinkSetupTDD
  systemInformationUpdate
  commonMeasurementInitiation
  radioLinkAdditionFDD
  radioLinkAdditionTDD
  radioLinkDeletion
  reset
  synchronisedRadioLinkReconfigurationPreparationFDD
  synchronisedRadioLinkReconfigurationPreparationTDD
  unSynchronisedRadioLinkReconfigurationFDD
  unSynchronisedRadioLinkReconfigurationTDD
  dedicatedMeasurementInitiation
  physicalSharedChannelReconfiguration
  ...
}

```

```

NBAP-ELEMENTARY-PROCEDURES-CLASS-2 NBAP-ELEMENTARY-PROCEDURE ::= {
  resourceStatusIndication
  auditRequired
  commonMeasurementReport
  commonMeasurementTermination
  commonMeasurementFailure
}

```

```

synchronisedRadioLinkReconfigurationCommit
synchronisedRadioLinkReconfigurationCancellation
radioLinkFailure
radioLinkPreemption
radioLinkRestoration
dedicatedMeasurementReport
dedicatedMeasurementTermination
dedicatedMeasurementFailure
downlinkPowerControlFDD
downlinkPowerTimeslotControl
compressedModeCommand
unblockResource
errorIndicationForDedicated
errorIndicationForCommon
privateMessageForDedicated
privateMessageForCommon
...
}

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

-- Class 1

-- *** CellSetup (FDD) ***
cellSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CellSetupRequestFDD
  SUCCESSFUL OUTCOME      CellSetupResponse
  UNSUCCESSFUL OUTCOME    CellSetupFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-cellSetup, ddMode fdd }
  CRITICALITY              reject
}

-- *** CellSetup (TDD) ***
cellSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CellSetupRequestTDD
  SUCCESSFUL OUTCOME      CellSetupResponse
  UNSUCCESSFUL OUTCOME    CellSetupFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-cellSetup, ddMode tdd }
  CRITICALITY              reject
}

-- *** CellReconfiguration(FDD) ***
cellReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CellReconfigurationRequestFDD
  SUCCESSFUL OUTCOME      CellReconfigurationResponse
  UNSUCCESSFUL OUTCOME    CellReconfigurationFailure
  MESSAGE DISCRIMINATOR   common
}

```

```
    PROCEDURE ID          { procedureCode id-cellReconfiguration, ddMode fdd }
    CRITICALITY           reject
}

-- *** CellReconfiguration(TDD) ***
cellReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    CellReconfigurationRequestTDD
    SUCCESSFUL OUTCOME    CellReconfigurationResponse
    UNSUCCESSFUL OUTCOME  CellReconfigurationFailure
    MESSAGE DISCRIMINATOR common
    PROCEDURE ID          { procedureCode id-cellReconfiguration, ddMode tdd }
    CRITICALITY           reject
}

-- *** CellDeletion ***
cellDeletion NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    CellDeletionRequest
    SUCCESSFUL OUTCOME    CellDeletionResponse
    MESSAGE DISCRIMINATOR common
    PROCEDURE ID          { procedureCode id-cellDeletion, ddMode common }
    CRITICALITY           reject
}

-- *** CommonTransportChannelSetup (FDD) ***
commonTransportChannelSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    CommonTransportChannelSetupRequestFDD
    SUCCESSFUL OUTCOME    CommonTransportChannelSetupResponse
    UNSUCCESSFUL OUTCOME  CommonTransportChannelSetupFailure
    MESSAGE DISCRIMINATOR common
    PROCEDURE ID          { procedureCode id-commonTransportChannelSetup, ddMode fdd }
    CRITICALITY           reject
}

-- *** CommonTransportChannelSetup (TDD) ***
commonTransportChannelSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    CommonTransportChannelSetupRequestTDD
    SUCCESSFUL OUTCOME    CommonTransportChannelSetupResponse
    UNSUCCESSFUL OUTCOME  CommonTransportChannelSetupFailure
    MESSAGE DISCRIMINATOR common
    PROCEDURE ID          { procedureCode id-commonTransportChannelSetup, ddMode tdd }
    CRITICALITY           reject
}

-- *** CommonTransportChannelReconfigure (FDD) ***
commonTransportChannelReconfigureFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    CommonTransportChannelReconfigurationRequestFDD
    SUCCESSFUL OUTCOME    CommonTransportChannelReconfigurationResponse
    UNSUCCESSFUL OUTCOME  CommonTransportChannelReconfigurationFailure
    MESSAGE DISCRIMINATOR common
    PROCEDURE ID          { procedureCode id-commonTransportChannelReconfigure, ddMode fdd }
    CRITICALITY           reject
}
```

```
-- *** CommonTransportChannelReconfigure (TDD) ***
commonTransportChannelReconfigureTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonTransportChannelReconfigurationRequestTDD
  SUCCESSFUL OUTCOME      CommonTransportChannelReconfigurationResponse
  UNSUCCESSFUL OUTCOME    CommonTransportChannelReconfigurationFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonTransportChannelReconfigure, ddMode tdd }
  CRITICALITY             reject
}

-- *** CommonTransportChannelDelete ***
commonTransportChannelDelete NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonTransportChannelDeletionRequest
  SUCCESSFUL OUTCOME      CommonTransportChannelDeletionResponse
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonTransportChannelDelete, ddMode common }
  CRITICALITY             reject
}

-- *** Audit ***
audit NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      AuditRequest
  SUCCESSFUL OUTCOME      AuditResponse
  UNSUCCESSFUL OUTCOME    AuditFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-audit, ddMode common }
  CRITICALITY             reject
}

-- *** BlockResourceRequest ***
blockResource NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      BlockResourceRequest
  SUCCESSFUL OUTCOME      BlockResourceResponse
  UNSUCCESSFUL OUTCOME    BlockResourceFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-blockResource, ddMode common }
  CRITICALITY             reject
}

-- *** RadioLinkSetup (FDD) ***
radioLinkSetupFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkSetupRequestFDD
  SUCCESSFUL OUTCOME      RadioLinkSetupResponseFDD
  UNSUCCESSFUL OUTCOME    RadioLinkSetupFailureFDD
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-radioLinkSetup, ddMode fdd }
  CRITICALITY             reject
}

-- *** RadioLinkSetup (TDD) ***
radioLinkSetupTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkSetupRequestTDD
  SUCCESSFUL OUTCOME      RadioLinkSetupResponseTDD
```

```
UNSUCCESSFUL OUTCOME      RadioLinkSetupFailureTDD
MESSAGE DISCRIMINATOR     common
PROCEDURE ID              { procedureCode id-radioLinkSetup, ddMode tdd }
CRITICALITY               reject
}

-- *** SystemInformationUpdate ***
systemInformationUpdate NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      SystemInformationUpdateRequest
  SUCCESSFUL OUTCOME      SystemInformationUpdateResponse
  UNSUCCESSFUL OUTCOME    SystemInformationUpdateFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-systemInformationUpdate, ddMode common }
  CRITICALITY             reject
}

-- *** Reset ***
reset NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      ResetRequest
  SUCCESSFUL OUTCOME      ResetResponse
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-reset, ddMode common }
  CRITICALITY             reject
}

-- *** CommonMeasurementInitiation ***
commonMeasurementInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonMeasurementInitiationRequest
  SUCCESSFUL OUTCOME      CommonMeasurementInitiationResponse
  UNSUCCESSFUL OUTCOME    CommonMeasurementInitiationFailure
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonMeasurementInitiation, ddMode common }
  CRITICALITY             reject
}

-- *** RadioLinkAddition (FDD) ***
radioLinkAdditionFDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkAdditionRequestFDD
  SUCCESSFUL OUTCOME      RadioLinkAdditionResponseFDD
  UNSUCCESSFUL OUTCOME    RadioLinkAdditionFailureFDD
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-radioLinkAddition, ddMode fdd }
  CRITICALITY             reject
}

-- *** RadioLinkAddition (TDD) ***
radioLinkAdditionTDD NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      RadioLinkAdditionRequestTDD
  SUCCESSFUL OUTCOME      RadioLinkAdditionResponseTDD
  UNSUCCESSFUL OUTCOME    RadioLinkAdditionFailureTDD
  MESSAGE DISCRIMINATOR   dedicated
}
```



```
    PROCEDURE ID          { procedureCode id-radioLinkAddition, ddMode tdd }
    CRITICALITY           reject
}

-- *** RadioLinkDeletion ***
radioLinkDeletion NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    RadioLinkDeletionRequest
    SUCCESSFUL OUTCOME    RadioLinkDeletionResponse
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-radioLinkDeletion, ddMode common }
    CRITICALITY           reject
}

-- *** SynchronisedRadioLinkReconfigurationPreparation (FDD) ***
synchronisedRadioLinkReconfigurationPreparationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    RadioLinkReconfigurationPrepareFDD
    SUCCESSFUL OUTCOME    RadioLinkReconfigurationReady
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode fdd }
    CRITICALITY           reject
}

-- *** SynchronisedRadioLinkReconfigurationPreparation (TDD) ***
synchronisedRadioLinkReconfigurationPreparationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    RadioLinkReconfigurationPrepareTDD
    SUCCESSFUL OUTCOME    RadioLinkReconfigurationReady
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-synchronisedRadioLinkReconfigurationPreparation, ddMode tdd }
    CRITICALITY           reject
}

-- *** UnSynchronisedRadioLinkReconfiguration (FDD) ***
unSynchronisedRadioLinkReconfigurationFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    RadioLinkReconfigurationRequestFDD
    SUCCESSFUL OUTCOME    RadioLinkReconfigurationResponse
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode fdd }
    CRITICALITY           reject
}

-- *** UnSynchronisedRadioLinkReconfiguration (TDD) ***
unSynchronisedRadioLinkReconfigurationTDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    RadioLinkReconfigurationRequestTDD
    SUCCESSFUL OUTCOME    RadioLinkReconfigurationResponse
    UNSUCCESSFUL OUTCOME RadioLinkReconfigurationFailure
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-unSynchronisedRadioLinkReconfiguration, ddMode tdd }
    CRITICALITY           reject
}
```

```
-- *** DedicatedMeasurementInitiation ***
dedicatedMeasurementInitiation NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      DedicatedMeasurementInitiationRequest
  SUCCESSFUL OUTCOME      DedicatedMeasurementInitiationResponse
  UNSUCCESSFUL OUTCOME    DedicatedMeasurementInitiationFailure
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-dedicatedMeasurementInitiation, ddMode common }
  CRITICALITY             reject
}

-- *** PhysicalSharedChannelReconfiguration (TDD only) ***
physicalSharedChannelReconfiguration NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      PhysicalSharedChannelReconfigurationRequestTDD
  SUCCESSFUL OUTCOME      PhysicalSharedChannelReconfigurationResponseTDD
  UNSUCCESSFUL OUTCOME    PhysicalSharedChannelReconfigurationFailureTDD
  MESSAGE DISCRIMINATOR   dedicated
  PROCEDURE ID            { procedureCode id-physicalSharedChannelReconfiguration, ddMode tdd }
  CRITICALITY             reject
}

-- Class 2

-- *** ResourceStatusIndication ***
resourceStatusIndication NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      ResourceStatusIndication
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-resourceStatusIndication, ddMode common }
  CRITICALITY             ignore
}

-- *** AuditRequired ***
auditRequired NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      AuditRequiredIndication
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-auditRequired, ddMode common }
  CRITICALITY             ignore
}

-- *** CommonMeasurementReport ***
commonMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonMeasurementReport
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonMeasurementReport, ddMode common }
  CRITICALITY             ignore
}

-- *** CommonMeasurementTermination ***
commonMeasurementTermination NBAP-ELEMENTARY-PROCEDURE ::= {
  INITIATING MESSAGE      CommonMeasurementTerminationRequest
  MESSAGE DISCRIMINATOR   common
  PROCEDURE ID            { procedureCode id-commonMeasurementTermination, ddMode common }
  CRITICALITY             ignore
}
```

```
-- *** CommonMeasurementFailure ***
commonMeasurementFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      CommonMeasurementFailureIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-commonMeasurementFailure, ddMode common }
    CRITICALITY             ignore
}

-- *** SynchronisedRadioLinkReconfirurationCommit ***
synchronisedRadioLinkReconfigurationCommit NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationCommit
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationCommit, ddMode common }
    CRITICALITY             ignore
}

-- *** SynchronisedRadioReconfigurationCancellation ***
synchronisedRadioLinkReconfigurationCancellation NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkReconfigurationCancel
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-synchronisedRadioLinkReconfigurationCancellation, ddMode common }
    CRITICALITY             ignore
}

-- *** RadioLinkFailure ***
radioLinkFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkFailureIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkFailure, ddMode common }
    CRITICALITY             ignore
}

-- *** RadioLinkPreemption ***
radioLinkPreemption NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkPreemptionRequiredIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkPreemption, ddMode common }
    CRITICALITY             ignore
}

-- *** RadioLinkRestoration ***
radioLinkRestoration NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      RadioLinkRestoreIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-radioLinkRestoration, ddMode common }
    CRITICALITY             ignore
}

-- *** DedicatedMeasurementReport ***
dedicatedMeasurementReport NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      DedicatedMeasurementReport
    MESSAGE DISCRIMINATOR   dedicated
}
```

```
    PROCEDURE ID          { procedureCode id-dedicatedMeasurementReport, ddMode common }
    CRITICALITY           ignore
}

-- *** DedicatedMeasurementTermination ***
dedicatedMeasurementTermination NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    DedicatedMeasurementTerminationRequest
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-dedicatedMeasurementTermination, ddMode common }
    CRITICALITY           ignore
}

-- *** DedicatedMeasurementFailure ***
dedicatedMeasurementFailure NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    DedicatedMeasurementFailureIndication
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-dedicatedMeasurementFailure, ddMode common }
    CRITICALITY           ignore
}

-- *** DLPowerControl (FDD only) ***
downlinkPowerControlFDD NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    DL-PowerControlRequest
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-downlinkPowerControl, ddMode fdd }
    CRITICALITY           ignore
}

-- *** DLPowerTimeslotControl (TDD only) ***
downlinkPowerTimeslotControl NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    DL-PowerTimeslotControlRequest
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-downlinkPowerTimeslotControl, ddMode tdd }
    CRITICALITY           ignore
}

-- *** CompressedModeCommand (FDD only) ***
compressedModeCommand NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    CompressedModeCommand
    MESSAGE DISCRIMINATOR dedicated
    PROCEDURE ID          { procedureCode id-compressedModeCommand, ddMode fdd }
    CRITICALITY           ignore
}

-- *** UnblockResourceIndication ***
unblockResource NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE    UnblockResourceIndication
    MESSAGE DISCRIMINATOR common
    PROCEDURE ID          { procedureCode id-unblockResource, ddMode common }
    CRITICALITY           ignore
}

-- *** ErrorIndication for Dedicated procedures ***
```

```

errorIndicationForDedicated NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ErrorIndication
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-errorIndicationForDedicated, ddMode common }
    CRITICALITY             ignore
}

-- *** ErrorIndication for Common procedures ***
errorIndicationForCommon NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      ErrorIndication
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-errorIndicationForCommon, ddMode common }
    CRITICALITY             ignore
}

-- *** PrivateMessage for Dedicated procedures ***
privateMessageForDedicated NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      PrivateMessage
    MESSAGE DISCRIMINATOR   dedicated
    PROCEDURE ID            { procedureCode id-privateMessageForDedicated, ddMode common }
    CRITICALITY             ignore
}

-- *** PrivateMessage for Common procedures ***
privateMessageForCommon NBAP-ELEMENTARY-PROCEDURE ::= {
    INITIATING MESSAGE      PrivateMessage
    MESSAGE DISCRIMINATOR   common
    PROCEDURE ID            { procedureCode id-privateMessageForCommon, ddMode common }
    CRITICALITY             ignore
}

END

```

### 9.3.3 PDU Definitions

```

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- *****

```

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

## IMPORTS

```
Active-Pattern-Sequence-Information,  
AddorDeleteIndicator,  
AICH-Power,  
AICH-TransmissionTiming,  
AllocationRetentionPriority,  
APPreambleSignature,  
APSubChannelNumber,  
AvailabilityStatus,  
BCCH-ModificationTime,  
BindingID,  
BlockingPriorityIndicator,  
BlockSTTD-Indicator,  
Cause,  
CCTrCH-ID,  
CDSubChannelNumbers,  
CellParameterID,  
CFN,  
Channel-Assignment-Indication,  
ChipOffset,  
C-ID,  
Closedlooptimingadjustmentmode,  
CommonChannelsCapacityConsumptionLaw,  
Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD,  
CommonMeasurementType,  
CommonMeasurementValue,  
CommonMeasurementValueInformation,  
CommonPhysicalChannelID,  
Common-PhysicalChannel-Status-Information,  
Common-TransportChannel-Status-Information,  
CommonTransportChannelID,  
CommonTransportChannel-InformationResponse,  
CommunicationControlPortID,  
ConfigurationGenerationID,  
ConstantValue,  
CriticalityDiagnostics,  
CPCH-Allowed-Total-Rate,  
CPCHScramblingCodeNumber,  
CPCH-UL-DPCCH-SlotFormat,  
CRNC-CommunicationContextID,  
DCH-FDD-Information,  
DCH-InformationResponse,  
DCH-ID,  
FDD-DCHs-to-Modify,  
TDD-DCHs-to-Modify,  
DCH-TDD-Information,  
DedicatedChannelsCapacityConsumptionLaw,  
DedicatedMeasurementType,
```

DedicatedMeasurementValue,  
DedicatedMeasurementValueInformation,  
DiversityControlField,  
DiversityMode,  
DL-DPCH-SlotFormat,  
DL-or-Global-CapacityCredit,  
DL-Power,  
DLPowerAveragingWindowSize,  
DL-ScramblingCode,  
DL-TimeslotISCP,  
DL-Timeslot-Information,  
DL-TimeslotISCPInfo,  
DL-TPC-Pattern01Count,  
DPCH-ID,  
DSCH-ID,  
DSCH-FDD-Information,  
DSCH-InformationResponse,  
DSCH-TDD-Information,  
End-Of-Audit-Sequence-Indicator,  
FDD-DL-ChannelisationCodeNumber,  
FDD-DL-CodeInformation,  
FDD-S-CCPCH-Offset,  
FDD-TPC-DownlinkStepSize,  
FirstRLS-Indicator,  
FNReportingIndicator,  
FrameHandlingPriority,  
FrameOffset,  
IB-OC-ID,  
IB-SG-DATA,  
IB-SG-POS,  
IB-SG-REP,  
IB-Type,  
IndicationType,  
InnerLoopDLPCStatus,  
LimitedPowerIncrease,  
Local-Cell-ID,  
MaximumDL-PowerCapability,  
MaximumTransmissionPower,  
Max-Number-of-PCPCHes,  
MaxNrOfUL-DPDCHs,  
MaxPRACH-MidambleShifts,  
MeasurementFilterCoefficient,  
MeasurementID,  
MidambleShiftAndBurstType,  
MinimumDL-PowerCapability,  
MinSpreadingFactor,  
MinUL-ChannelisationCodeLength,  
MultiplexingPosition,  
NEOT,  
NFmax,  
N-INSYNC-IND,  
N-OUTSYNC-IND,  
NodeB-CommunicationContextID,

NStartMessage,  
PagingIndicatorLength,  
PayloadCRC-PresenceIndicator,  
PCCPCH-Power,  
PCP-Length,  
PDSCH-CodeMapping,  
PDSCHSet-ID,  
PDSCH-ID,  
PICH-Mode,  
PICH-Power,  
PowerAdjustmentType,  
PowerOffset,  
PowerRaiseLimit,  
PRACH-Midamble,  
PreambleSignatures,  
PreambleThreshold,  
PrimaryCPICH-Power,  
PrimaryScramblingCode,  
PropagationDelay,  
SCH-TimeSlot,  
PunctureLimit,  
PUSCHSet-ID,  
PUSCH-ID,  
QE-Selector,  
RACH-SlotFormat,  
RACH-SubChannelNumbers,  
RepetitionLength,  
RepetitionPeriod,  
ReportCharacteristics,  
ResourceOperationalState,  
RL-Set-ID,  
RL-ID,  
Received-total-wide-band-power-Value,  
AdjustmentPeriod,  
ScaledAdjustmentRatio,  
MaxAdjustmentStep,  
ScramblingCodeNumber,  
SecondaryCCPCH-SlotFormat,  
Segment-Type,  
S-FieldLength,  
SFN,  
ShutdownTimer,  
SIB-Originator,  
SSDT-Cell-Identity,  
SSDT-CellID-Length,  
SSDT-Indication,  
Start-Of-Audit-Sequence-Indicator,  
STTD-Indicator,  
SSDT-SupportIndicator,  
SyncCase,  
T-Cell,  
T-RLFAILURE,  
TDD-ChannelisationCode,



```
TDD-DPCHOffset,  
TDD-TPC-DownlinkStepSize,  
TDD-PhysicalChannelOffset,  
TFCI2-BearerInformationResponse,  
TFCI-Coding,  
TFCI-Presence,  
TFCI-SignallingMode,  
TFCS,  
TimeSlot,  
TimeSlotDirection,  
TimeSlotStatus,  
TimingAdvanceApplied,  
ToAWE,  
ToAWS,  
TransmissionDiversityApplied,  
TransmitDiversityIndicator,  
  
TransmissionGapPatternSequenceCodeInformation,  
Transmission-Gap-Pattern-Sequence-Information,  
TransportBearerRequestIndicator,  
TransportFormatSet,  
TransportLayerAddress,  
TSTD-Indicator,  
UARFCN,  
USCH-Information,  
USCH-InformationResponse,  
UL-CapacityCredit,  
UL-DPCCH-SlotFormat,  
UL-SIR,  
UL-FP-Mode,  
UL-PhysCH-SF-Variation,  
UL-ScramblingCode,  
UL-Timeslot-Information,  
UL-TimeSlot-ISCP-Info,  
UL-TimeslotISCP-Value,  
UL-TimeslotISCP-Value-IncrDecrThres,  
USCH-ID  
FROM NBAP-IEs  
  
PrivateIE-Container{ },  
ProtocolExtensionContainer{ },  
ProtocolIE-Container{ },  
ProtocolIE-Single-Container{ },  
ProtocolIE-ContainerList{ },  
NBAP-PRIVATE-IES,  
NBAP-PROTOCOL-IES,  
NBAP-PROTOCOL-EXTENSION  
FROM NBAP-Containers  
  
id-Active-Pattern-Sequence-Information,  
id-AdjustmentRatio,  
id-AICH-Information,  
id-AICH-ParametersListIE-CTCH-ReconfRqstFDD,
```

id-AP-AICH-Information,  
id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD,  
id-BCH-Information,  
id-BCCH-ModificationTime,  
id-BlockingPriorityIndicator,  
id-Cause,  
id-CauseLevel-PSCH-ReconfFailureTDD,  
id-CauseLevel-RL-AdditionFailureFDD,  
id-CauseLevel-RL-AdditionFailureTDD,  
id-CauseLevel-RL-ReconfFailure,  
id-CauseLevel-RL-SetupFailureFDD,  
id-CauseLevel-RL-SetupFailureTDD,  
id-CCP-InformationItem-AuditRsp,  
id-CCP-InformationList-AuditRsp,  
id-CCP-InformationItem-ResourceStatusInd,  
id-CDCA-ICH-Information,  
id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD,  
id-Cell-InformationItem-AuditRsp,  
id-Cell-InformationItem-ResourceStatusInd,  
id-Cell-InformationList-AuditRsp,  
id-CellParameterID,  
id-CFN,  
id-CFNReportingIndicator,  
id-C-ID,  
id-Closed-Loop-Timing-Adjustment-Mode,  
id-CommonMeasurementObjectType-CM-Rprt,  
id-CommonMeasurementObjectType-CM-Rqst,  
id-CommonMeasurementObjectType-CM-Rsp,  
id-CommonMeasurementType,  
id-CommonPhysicalChannelID,  
id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD,  
id-CommonPhysicalChannelType-CTCH-SetupRqstFDD,  
id-CommonPhysicalChannelType-CTCH-SetupRqstTDD,  
id-CommonTransportChannelType-CTCH-ReconfRqstTDD,  
id-CommunicationContextInfoItem-Reset,  
id-CommunicationControlPortID,  
id-CommunicationControlPortInfoItem-Reset,  
id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD,  
id-ConfigurationGenerationID,  
id-CPCH-Information,  
id-CPCH-Parameters-CTCH-SetupRsp,  
id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD,  
id-CRNC-CommunicationContextID,  
id-CriticalityDiagnostics,  
id-DCHs-to-Add-FDD,  
id-DCHs-to-Add-TDD,  
id-DCH-AddList-RL-ReconfPrepTDD,  
id-DCH-DeleteList-RL-ReconfPrepFDD,  
id-DCH-DeleteList-RL-ReconfPrepTDD,  
id-DCH-DeleteList-RL-ReconfRqstFDD,  
id-DCH-DeleteList-RL-ReconfRqstTDD,  
id-DCH-FDD-Information,  
id-DCH-TDD-Information,

id-DCH-InformationResponse,  
id-FDD-DCHs-to-Modify,  
id-TDD-DCHs-to-Modify,  
id-DedicatedMeasurementObjectType-DM-Rprt,  
id-DedicatedMeasurementObjectType-DM-Rqst,  
id-DedicatedMeasurementObjectType-DM-Rsp,  
id-DedicatedMeasurementType,  
id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD,  
id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD,  
id-DL-CCTrCH-InformationList-RL-SetupRqstTDD,  
id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,  
id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,  
id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,  
id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,  
id-DL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD,  
id-DL-DPCH-InformationItem-RL-AdditionRqstTDD,  
id-DL-DPCH-InformationList-RL-SetupRqstTDD,  
id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,  
id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,  
id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,  
id-DL-DPCH-Information-RL-ReconfPrepFDD,  
id-DL-DPCH-Information-RL-ReconfRqstFDD,  
id-DL-DPCH-Information-RL-SetupRqstFDD,  
id-DL-ReferencePowerInformationItem-DL-PC-Rqst,  
id-DLReferencePower,  
id-DLReferencePowerList-DL-PC-Rqst,  
id-DL-TPC-Pattern01Count,  
id-DPCHConstant,  
id-DSCH-AddItem-RL-ReconfPrepFDD,  
id-DSCH-AddItem-RL-ReconfRqstFDD,  
id-DSCHs-to-Add-FDD,  
id-DSCH-DeleteItem-RL-ReconfPrepFDD,  
id-DSCH-DeleteItem-RL-ReconfRqstFDD,  
id-DSCH-DeleteList-RL-ReconfPrepFDD,  
id-DSCH-ID,  
id-DSCHs-to-Add-TDD,  
id-DSCH-Information-DeleteList-RL-ReconfPrepTDD,  
id-DSCH-Information-ModifyList-RL-ReconfPrepTDD,  
id-DSCH-InformationResponse,  
id-DSCH-FDD-Information,  
id-DSCH-TDD-Information,  
id-DSCH-ModifyItem-RL-ReconfPrepFDD,  
id-DSCH-ModifyItem-RL-ReconfRqstFDD,  
id-DSCH-ModifyList-RL-ReconfPrepFDD,  
id-End-Of-Audit-Sequence-Indicator,  
id-FACH-Information,  
id-FACHItem-CTCH-SetupRsp,  
id-FACH-ParametersList-CTCH-ReconfRqstTDD,  
id-FACH-ParametersList-CTCH-SetupRsp,

id-FACH-ParametersListIE-CTCH-ReconfRqstFDD,  
id-FACH-ParametersListIE-CTCH-SetupRqstFDD,  
id-FACH-ParametersListIE-CTCH-SetupRqstTDD,  
id-IndicationType-ResourceStatusInd,  
id-InnerLoopDLPCStatus,  
id-Limited-power-increase-information-Cell-SetupRqstFDD,  
id-Local-Cell-ID,  
id-Local-Cell-Group-InformationItem-AuditRsp,  
id-Local-Cell-Group-InformationItem-ResourceStatusInd,  
id-Local-Cell-Group-InformationItem2-ResourceStatusInd,  
id-Local-Cell-Group-InformationList-AuditRsp,  
id-Local-Cell-InformationItem-AuditRsp,  
id-Local-Cell-InformationItem-ResourceStatusInd,  
id-Local-Cell-InformationItem2-ResourceStatusInd,  
id-Local-Cell-InformationList-AuditRsp,  
id-AdjustmentPeriod,  
id-MaxAdjustmentStep,  
id-MaximumTransmissionPower,  
id-MeasurementFilterCoefficient,  
id-MeasurementID,  
id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst,  
id-NodeB-CommunicationContextID,  
id-P-CCPCH-Information,  
id-P-CPICH-Information,  
id-P-SCH-Information,  
id-PCCPCH-Information-Cell-ReconfRqstTDD,  
id-PCCPCH-Information-Cell-SetupRqstTDD,  
id-PCH-Parameters-CTCH-ReconfRqstTDD,  
id-PCH-Parameters-CTCH-SetupRsp,  
id-PCH-ParametersItem-CTCH-ReconfRqstFDD,  
id-PCH-ParametersItem-CTCH-SetupRqstFDD,  
id-PCH-ParametersItem-CTCH-SetupRqstTDD,  
id-PCH-Information,  
id-PCPCH-Information,  
id-PCPCH-ParametersList-CTCH-ReconfRqstFDD,  
id-PICH-ParametersItem-CTCH-ReconfRqstFDD,  
id-PD,  
id-PDSCH-Information-AddListIE-PSCH-ReconfRqst,  
id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst,  
id-PDSCHSets-AddList-PSCH-ReconfRqst,  
id-PDSCHSets-DeleteList-PSCH-ReconfRqst,  
id-PDSCHSets-ModifyList-PSCH-ReconfRqst,  
id-PICH-Information,  
id-PICH-Parameters-CTCH-ReconfRqstTDD,  
id-PICH-ParametersItem-CTCH-SetupRqstTDD,  
id-PowerAdjustmentType,  
id-PRACH-Information,  
id-PRACHConstant,  
id-PRACH-ParametersItem-CTCH-SetupRqstTDD,  
id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD,  
id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD,  
id-PrimaryCCPCH-Information-Cell-SetupRqstFDD,  
id-PrimaryCPICH-Information-Cell-ReconfRqstFDD,

id-PrimaryCPICH-Information-Cell-SetupRqstFDD,  
id-PrimarySCH-Information-Cell-ReconfRqstFDD,  
id-PrimarySCH-Information-Cell-SetupRqstFDD,  
id-PrimaryScramblingCode,  
id-ProcedureScopeType-DL-PC-Rqst,  
id-SCH-Information-Cell-ReconfRqstTDD,  
id-SCH-Information-Cell-SetupRqstTDD,  
id-PUSCH-Information-AddListIE-PSCH-ReconfRqst,  
id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst,  
id-PUSCHConstant,  
id-PUSCHSets-AddList-PSCH-ReconfRqst,  
id-PUSCHSets-DeleteList-PSCH-ReconfRqst,  
id-PUSCHSets-ModifyList-PSCH-ReconfRqst,  
id-RACH-Information,  
id-RACHItem-CTCH-SetupRsp,  
id-RACH-Parameters-CTCH-SetupRsp,  
id-RACH-ParametersItem-CTCH-SetupRqstFDD,  
id-RACH-ParameterItem-CTCH-SetupRqstTDD,  
id-ReportCharacteristics,  
id-Reporting-Object-RL-FailureInd,  
id-Reporting-Object-RL-RestoreInd,  
id-ResetIndicator,  
id-RL-ID,  
id-RL-InformationItem-DM-Rprt,  
id-RL-InformationItem-DM-Rqst,  
id-RL-InformationItem-DM-Rsp,  
id-RL-InformationItem-RL-AdditionRqstFDD,  
id-RL-informationItem-RL-DeletionRqst,  
id-RL-InformationItem-RL-FailureInd,  
id-RL-InformationItem-RL-PreemptRequiredInd,  
id-RL-InformationItem-RL-ReconfPrepFDD,  
id-RL-InformationItem-RL-ReconfRqstFDD,  
id-RL-InformationItem-RL-RestoreInd,  
id-RL-InformationItem-RL-SetupRqstFDD,  
id-RL-InformationList-RL-AdditionRqstFDD,  
id-RL-informationList-RL-DeletionRqst,  
id-RL-InformationList-RL-PreemptRequiredInd,  
id-RL-InformationList-RL-ReconfPrepFDD,  
id-RL-InformationList-RL-ReconfRqstFDD,  
id-RL-InformationList-RL-SetupRqstFDD,  
id-RL-InformationResponseItem-RL-AdditionRspFDD,  
id-RL-InformationResponseItem-RL-ReconfReady,  
id-RL-InformationResponseItem-RL-ReconfRsp,  
id-RL-InformationResponseItem-RL-SetupRspFDD,  
id-RL-InformationResponseList-RL-AdditionRspFDD,  
id-RL-InformationResponseList-RL-ReconfReady,  
id-RL-InformationResponseList-RL-ReconfRsp,  
id-RL-InformationResponseList-RL-SetupRspFDD,  
id-RL-InformationResponse-RL-AdditionRspTDD,  
id-RL-InformationResponse-RL-SetupRspTDD,  
id-RL-Information-RL-AdditionRqstTDD,  
id-RL-Information-RL-ReconfRqstTDD,  
id-RL-Information-RL-ReconfPrepTDD,

id-RL-Information-RL-SetupRqstTDD,  
id-RL-ReconfigurationFailureItem-RL-ReconfFailure,  
id-RL-Set-InformationItem-DM-Rprt,  
id-RL-Set-InformationItem-DM-Rsp,  
id-RL-Set-InformationItem-RL-FailureInd,  
id-RL-Set-InformationItem-RL-RestoreInd,  
id-S-CCPCH-Information,  
id-S-CPICH-Information,  
id-SCH-Information,  
id-S-SCH-Information,  
id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD,  
id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD,  
id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD,  
id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD,  
id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD,  
id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD,  
id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD,  
id-SecondarySCH-Information-Cell-ReconfRqstFDD,  
id-SecondarySCH-Information-Cell-SetupRqstFDD,  
id-SegmentInformationListIE-SystemInfoUpdate,  
id-SFN,  
id-SFNReportingIndicator,  
id-ShutdownTimer,  
id-Start-Of-Audit-Sequence-Indicator,  
id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD,  
id-Successful-RL-InformationRespItem-RL-SetupFailureFDD,  
id-Successful-RL-InformationRespList-RL-AdditionFailureFDD,  
id-Successful-RL-InformationRespList-RL-SetupFailureFDD,  
id-Synchronisation-Configuration-Cell-ReconfRqst,  
id-Synchronisation-Configuration-Cell-SetupRqst,  
id-SyncCase,  
id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH,  
id-T-Cell,  
id-TFCI2-Bearer-Information-RL-SetupRqstFDD,  
id-TFCI2-BearerInformationResponse,  
id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD,  
id-Transmission-Gap-Pattern-Sequence-Information,  
id-TimeSlotConfigurationList-Cell-ReconfRqstTDD,  
id-TimeSlotConfigurationList-Cell-SetupRqstTDD,  
id-TimeslotISCPInfoList-DL-PC-RqstTDD,  
id-TimingAdvanceApplied,  
id-TransmissionDiversityApplied,  
id-UARFCNforNt,  
id-UARFCNforNd,  
id-UARFCNforNu,  
id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD,  
id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD,  
id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD,  
id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD,  
id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD,  
id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD,  
id-UL-CCTrCH-InformationList-RL-SetupRqstTDD,  
id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD,

id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD,  
id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD,  
id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD,  
id-UL-DPCH-InformationItem-RL-AdditionRqstTDD,  
id-UL-DPCH-InformationList-RL-SetupRqstTDD,  
id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD,  
id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD,  
id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD,  
id-UL-DPCH-Information-RL-ReconfPrepFDD,  
id-UL-DPCH-Information-RL-ReconfRqstFDD,  
id-UL-DPCH-Information-RL-SetupRqstFDD,  
id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD,  
id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD,  
id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD,  
id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD,  
id-Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD,  
id-Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD,  
id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD,  
id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD,  
id-USCH-Information-Add,  
id-USCH-Information-AddList-RL-ReconfRqstTDD,  
id-USCH-Information-DeleteList-RL-ReconfPrepTDD,  
id-USCH-Information-DeleteList-RL-ReconfRqstTDD,  
id-USCH-Information-ModifyList-RL-ReconfPrepTDD,  
id-USCH-Information-ModifyList-RL-ReconfRqstTDD,  
id-USCH-InformationResponse,  
id-USCH-Information,

maxNrOfCCTrCHs,  
maxNrOfCodes,  
maxNrOfCPCHs,  
maxNrOfDCHs,  
maxNrOfDLCodes,  
maxNrOfDLTSs,  
maxNrOfDPCHs,  
maxNrOfDSCHs,  
maxNrOfFACHs,  
maxNrOfRLs,  
maxNrOfRLSets,  
maxNrOfPCPCHs,  
maxNrOfPDSCHs,  
maxNrOfPUSCHs,  
maxNrOfPDSCHSets,  
maxNrOfPUSCHSets,  
maxNrOfSCCPCHs,  
maxNrOfULTSs,  
maxNrOfUSCHs,  
maxAPSigNum,  
maxCPCHCell,  
maxFACHCell,  
maxNoofLen,  
maxRACHCell,  
maxPCPCHCell,

```

maxPRACHCell,
maxSCCPCHCell,
maxSCPICHCell,
maxCellinNodeB,
maxCCPinNodeB,
maxCommunicationContext,
maxLocalCellinNodeB,
maxNrOfSlotFormatsPRACH,
maxIB,
maxIBSEG
FROM NBAP-Constants;

-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP REQUEST FDD
--
-- *****

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

CommonTransportChannelSetupRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID                CRITICALITY   reject          TYPE  C-ID                PRESENCE
    mandatory }|
    { ID      id-ConfigurationGenerationID    CRITICALITY   reject          TYPE  ConfigurationGenerationID    PRESENCE
    mandatory }|
    { ID      id-CommonPhysicalChannelType-CTCH-SetupRqstFDD    CRITICALITY   ignore          TYPE  CommonPhysicalChannelType-CTCH-SetupRqstFDD
    PRESENCE  mandatory }|,
    ...
}

CommonPhysicalChannelType-CTCH-SetupRqstFDD ::= CHOICE {
    secondary-CCPCH-parameters    Secondary-CCPCH-CTCH-SetupRqstFDD,
    pRACH-parameters              PRACH-CTCH-SetupRqstFDD,
    pCPCHes-parameters            PCPCH-CTCH-SetupRqstFDD,
    ...
}

Secondary-CCPCH-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID        CommonPhysicalChannelID,
    fdd-S-CCPCH-Offset             FDD-S-CCPCH-Offset,
    dl-ScramblingCode              DL-ScramblingCode    OPTIONAL,
    -- This IE is present only if the PCH parameters IE group is not present
    fdd-DL-ChannelisationCodeNumber    FDD-DL-ChannelisationCodeNumber,
    tFCS                            TFCS,
    secondary-CCPCH-SlotFormat        SecondaryCCPCH-SlotFormat,

```



```

tFCI-Presence                TFCI-Presence    OPTIONAL,
-- This IE is present only if the Secondary CCPCH Slot Format is equal to any value 8 to 17
multiplexingPosition          MultiplexingPosition,
powerOffsetInformation         PowerOffsetInformation-CTCH-SetupRqstFDD,
sTTD-Indicator                STTD-Indicator,
FACH-Parameters               FACH-ParametersList-CTCH-SetupRqstFDD    OPTIONAL,
-- One of the channels FACH or PCH or both must be present
pCH-Parameters               PCH-Parameters-CTCH-SetupRqstFDD        OPTIONAL,
-- One of the channels FACH or PCH or both must be present
iE-Extensions                 ProtocolExtensionContainer { { Secondary-CCPCHItem-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
...
}

Secondary-CCPCHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

PowerOffsetInformation-CTCH-SetupRqstFDD ::= SEQUENCE {
p01-ForTFCI-Bits             PowerOffset,
p03-ForPilotBits             PowerOffset,
iE-Extensions                 ProtocolExtensionContainer { { PowerOffsetInformation-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
...
}

PowerOffsetInformation-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

FACH-ParametersList-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-SetupRqstFDD }}

FACH-ParametersListIEs-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
{ ID id-FACH-ParametersListIE-CTCH-SetupRqstFDD    CRITICALITY reject    TYPE FACH-ParametersListIE-CTCH-SetupRqstFDD    PRESENCE mandatory }
}

FACH-ParametersListIE-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-SetupRqstFDD

FACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
commonTransportChannelID      CommonTransportChannelID,
transportFormatSet            TransportFormatSet,
toAWS                          ToAWS,
toAWE                          ToAWE,
maxFACH-Power                 DL-Power,
iE-Extensions                 ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs} }    OPTIONAL,
...
}

FACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

PCH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-SetupRqstFDD }}

PCH-ParametersIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-PCH-ParametersItem-CTCH-SetupRqstFDD    CRITICALITY reject    TYPE PCH-ParametersItem-CTCH-SetupRqstFDD    PRESENCE mandatory }
  }

PCH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID          CommonTransportChannelID,
    transportFormatSet                TransportFormatSet,
    toAWS                             ToAWS,
    toAWE                             ToAWE,
    pCH-Power                         DL-Power,
    pICH-Parameters                   PICH-Parameters-CTCH-SetupRqstFDD,

    iE-Extensions                    ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

PCH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    pICH-Power                       PICH-Power,
    pICH-Mode                        PICH-Mode,
    sTTD-Indicator                   STTD-Indicator,
    iE-Extensions                    ProtocolExtensionContainer { { PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

PICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    scramblingCodeNumber             ScramblingCodeNumber,
    tFCS                             TFCS,
    preambleSignatures               PreambleSignatures,
    allowedSlotFormatInformationList-CTCH-SetupRqstFDD,
    rACH-SubChannelNumbers           RACH-SubChannelNumbers,
    ul-punctureLimit                 PunctureLimit,
    preambleThreshold                 PreambleThreshold,
    rACH-Parameters                  RACH-Parameters-CTCH-SetupRqstFDD,
    aICH-SubChannelNumbers           AICH-SubChannelNumbers,
    iE-Extensions                    ProtocolExtensionContainer { { PRACHItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

PRACHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

AllowedSlotFormatInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1.. maxNrOfSlotFormatsPRACH)) OF AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD

```
AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    rACHSlotFormat          RACH-SlotFormat,
    iE-Extensions          ProtocolExtensionContainer { { AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD-ExtIEs } }
    OPTIONAL,
    ...
}
```

```
AllowedSlotFormatInformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

RACH-Parameters-CTCH-SetupRqstFDD ::= ProtocolIE-Single-Container {{ RACH-ParametersIE-CTCH-SetupRqstFDD }}

```
RACH-ParametersIE-CTCH-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-ParametersItem-CTCH-SetupRqstFDD    CRITICALITY reject    TYPE RACH-ParametersItem-CTCH-SetupRqstFDD    PRESENCE mandatory }
}
```

```
RACH-ParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportFormatSet           TransportFormatSet,
    iE-Extensions                ProtocolExtensionContainer { { RACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}
```

```
RACH-ParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
AICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    aICH-TransmissionTiming      AICH-TransmissionTiming,
    fdd-dl-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    aICH-Power                   AICH-Power,
    sTTD-Indicator               STTD-Indicator,
    iE-Extensions                ProtocolExtensionContainer { { AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}
```

```
AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
PCPCH-CTCH-SetupRqstFDD ::= SEQUENCE {
    cPCH-Parameters              CPCH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                ProtocolExtensionContainer { { PCPCHItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}
```

```
PCPCHItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```

}

CPCH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    transportFormatSet            TransportFormatSet,
    aPPreambleScramblingCode      CPCHScramblingCodeNumber,
    cDPreambleScramblingCode      CPCHScramblingCodeNumber,
    tFCS                          TFCS,
    cDSignatures                  PreambleSignatures          OPTIONAL,
    cDSubChannelNumbers           CDSUBChannelNumbers         OPTIONAL,
    -- this IE may be present only if the CD Signatures is present --
    punctureLimit                PunctureLimit,
    cPCH-UL-DPCCH-SlotFormat      CPCH-UL-DPCCH-SlotFormat,
    uL-SIR                        UL-SIR,
    initialDL-transmissionPower   DL-Power,
    maximumDLPower               DL-Power,
    minimumDLPower               DL-Power,
    pO2-ForTPC-Bits              PowerOffset,
    pO3-ForPilotBits             PowerOffset,
    fDD-TPC-DownlinkStepSize     FDD-TPC-DownlinkStepSize,
    nStartMessage                NStartMessage,
    nEOT                          NEOT,
    channel-Assignment-Indication Channel-Assignment-Indication,
    cPCH-Allowed-Total-Rate       CPCH-Allowed-Total-Rate,
    pCPCHChannelInformationList-CTCH-SetupRqstFDD,
    vCAMMapping-Information       VCAMMapping-InformationList-CTCH-SetupRqstFDD OPTIONAL,
    -- this IE is only present if the Channel Assignment Indication is equal to CA Active --
    aP-AICH-Parameters           AP-AICH-Parameters-CTCH-SetupRqstFDD,
    cDCA-ICH-Parameters          CDCA-ICH-Parameters-CTCH-SetupRqstFDD,
    iE-Extensions                ProtocolExtensionContainer { { CPCH-Parameters-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

CPCH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCPCHChannelInformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfPCPCHs)) OF PCPCHChannelInformationItem-CTCH-SetupRqstFDD

PCPCHChannelInformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    cPCHScramblingCodeNumber     CPCHScramblingCodeNumber,
    dL-ScramblingCode            DL-ScramblingCode,
    fdd-dl-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    pCP-Length                   PCP-Length,
    uCSM-Information             UCSM-Information-CTCH-SetupRqstFDD OPTIONAL,
    -- this IE is only present if the Channel Assignment Indication is equal to CA Inactive --
    iE-Extensions                ProtocolExtensionContainer { { PCPCHChannelInformationItem-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

PCPCHChannelInformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

UCSM-Information-CTCH-SetupRqstFDD ::= SEQUENCE {
    minUL-ChannelisationCodeLength    MinUL-ChannelisationCodeLength,
    nFmax                               NFmax,
    channelRequestParameters           ChannelRequestParametersList-CTCH-SetupRqstFDD    OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { UCSM-InformationItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

UCSM-InformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ChannelRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF ChannelRequestParametersItem-CTCH-SetupRqstFDD

ChannelRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature                APPreambleSignature,
    aPSubChannelNumber                 APSubChannelNumber    OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { ChannelRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

ChannelRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

VCAMMapping-InformationList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNoofLen)) OF VCAMMapping-InformationItem-CTCH-SetupRqstFDD

VCAMMapping-InformationItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    minUL-ChannelisationCodeLength    MinUL-ChannelisationCodeLength,
    nFmax                               NFmax,
    max-Number-of-PCPCHes             Max-Number-of-PCPCHes,
    sFRequestParameters               SFRequestParametersList-CTCH-SetupRqstFDD,
    iE-Extensions                       ProtocolExtensionContainer { { VCAMMapping-InformationItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

VCAMMapping-InformationItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SFRequestParametersList-CTCH-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxAPSigNum)) OF SFRequestParametersItem-CTCH-SetupRqstFDD

SFRequestParametersItem-CTCH-SetupRqstFDD ::= SEQUENCE {
    aPPreambleSignature                APPreambleSignature,
    aPSubChannelNumber                 APSubChannelNumber    OPTIONAL,
    iE-Extensions                       ProtocolExtensionContainer { { SFRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

SFRequestParametersItem-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

AP-AICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    aP-AICH-Power                    AICH-Power,
    cSICH-Power                      AICH-Power,
    sTTD-Indicator                   STTD-Indicator,
    iE-Extensions                    ProtocolExtensionContainer { { AP-AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

AP-AICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CDCA-ICH-Parameters-CTCH-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    fdd-dl-ChannelisationCodeNumber  FDD-DL-ChannelisationCodeNumber,
    cDCA-ICH-Power                  AICH-Power,
    sTTD-Indicator                   STTD-Indicator,
    iE-Extensions                    ProtocolExtensionContainer { { CDCA-ICH-Parameters-CTCH-SetupRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

CDCA-ICH-Parameters-CTCH-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP REQUEST TDD
--
-- *****

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

CommonTransportChannelSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID          CRITICALITY reject          TYPE C-ID          PRESENCE
      mandatory }|
    { ID      id-ConfigurationGenerationID  CRITICALITY reject          TYPE ConfigurationGenerationID          PRESENCE
      mandatory }|
    { ID      id-CommonPhysicalChannelType-CTCH-SetupRqstTDD  CRITICALITY ignore          TYPE CommonPhysicalChannelType-CTCH-SetupRqstTDD
      PRESENCE mandatory },
    ...
}

CommonTransportChannelSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

CommonPhysicalChannelType-CTCH-SetupRqstTDD ::= CHOICE {
    secondary-CCPCH-parameters      Secondary-CCPCH-CTCH-SetupRqstTDD,
    pRACH-parameters                PRACH-CTCH-SetupRqstTDD,
    ...
}

Secondary-CCPCH-CTCH-SetupRqstTDD ::= SEQUENCE {
    cCTrCH-ID                        CCTrCH-ID,
    tFCS                             TFCS,
    tFCI-Coding                      TFCI-Coding,
    punctureLimit                    PunctureLimit,
    secondaryCCPCH-parameterList     Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD,
    fACH-ParametersList              FACH-ParametersList-CTCH-SetupRqstTDD      OPTIONAL,
    pCH-Parameters                   PCH-Parameters-CTCH-SetupRqstTDD      OPTIONAL,
    -- One of the channels FACH or PCH or both must be present
    iE-Extensions                    ProtocolExtensionContainer {{Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs}} OPTIONAL,
    ...
}

Secondary-CCPCHItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Secondary-CCPCH-parameterList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD }}

Secondary-CCPCH-parameterListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD  CRITICALITY reject  TYPE Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD  PRESENCE
mandatory }
}

Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD

Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    tdd-ChannelisationCode           TDD-ChannelisationCode,
    timeslot                         TimeSlot,
    midambleShiftandBurstType        MidambleShiftAndBurstType,
    tdd-PhysicalChannelOffset        TDD-PhysicalChannelOffset,
    repetitionPeriod                 RepetitionPeriod,
    repetitionLength                 RepetitionLength,
    s-CCPCH-Power                    DL-Power,
    iE-Extensions                    ProtocolExtensionContainer { { Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

Secondary-CCPCH-parameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-ParametersList-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-SetupRqstTDD }}

```

```
FACH-ParametersListIEs-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-ParametersListIE-CTCH-SetupRqstTDD  CRITICALITY reject  TYPE FACH-ParametersListIE-CTCH-SetupRqstTDD  PRESENCE mandatory }
}
```

```
FACH-ParametersListIE-CTCH-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-SetupRqstTDD
```

```
FACH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonTransportChannelID          CommonTransportChannelID,
  cCTrCH-ID                          CCTrCH-ID,
  dl-TransportFormatSet              TransportFormatSet,
  toAWS                               ToAWS,
  toAWE                               ToAWE,
  iE-Extensions                      ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } }  OPTIONAL,
  ...
}
```

```
FACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
PCH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-SetupRqstTDD }}
```

```
PCH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-ParametersItem-CTCH-SetupRqstTDD  CRITICALITY reject  TYPE PCH-ParametersItem-CTCH-SetupRqstTDD  PRESENCE mandatory }
}
```

```
PCH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonTransportChannelID          CommonTransportChannelID,
  cCTrCH-ID                          CCTrCH-ID,
  dl-TransportFormatSet              TransportFormatSet,
  toAWS                               ToAWS,
  toAWE                               ToAWE,
  pICH-Parameters                    PICH-Parameters-CTCH-SetupRqstTDD,
  iE-Extensions                      ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } }  OPTIONAL,
  ...
}
```

```
PCH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
PICH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container {{ PICH-ParametersIE-CTCH-SetupRqstTDD }}
```

```
PICH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-ParametersItem-CTCH-SetupRqstTDD  CRITICALITY reject  TYPE PICH-ParametersItem-CTCH-SetupRqstTDD  PRESENCE mandatory }
}
```

```
PICH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID          CommonPhysicalChannelID,
  tdd-ChannelisationCode            TDD-ChannelisationCode,
  timeSlot                          TimeSlot,
  midambleShiftAndBurstType          MidambleShiftAndBurstType,
  tdd-PhysicalChannelOffset          TDD-PhysicalChannelOffset,
}
```



```

    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    pagingIndicatorLength     PagingIndicatorLength,
    pICH-Power                PICH-Power,
    iE-Extensions             ProtocolExtensionContainer { { PICH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

PICH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-CTCH-SetupRqstTDD ::= SEQUENCE {
    pRACH-Parameters-CTCH-SetupRqstTDD PRACH-Parameters-CTCH-SetupRqstTDD,
    iE-Extensions                      ProtocolExtensionContainer { { PRACH-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

PRACH-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PRACH-Parameters-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container { { PRACH-ParametersIE-CTCH-SetupRqstTDD } }

PRACH-ParametersIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-ParametersItem-CTCH-SetupRqstTDD CRITICALITY reject TYPE PRACH-ParametersItem-CTCH-SetupRqstTDD PRESENCE mandatory }
}

PRACH-ParametersItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    tFCS                     TFCS,
    timeslot                 TimeSlot,
    tdd-ChannelisationCode  TDD-ChannelisationCode,
    maxPRACH-MidambleShifts MaxPRACH-MidambleShifts,
    pRACH-Midamble          PRACH-Midamble,
    rACH                    RACH-Parameter-CTCH-SetupRqstTDD,
    iE-Extensions           ProtocolExtensionContainer { { PRACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

PRACH-ParametersItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RACH-Parameter-CTCH-SetupRqstTDD ::= ProtocolIE-Single-Container { { RACH-ParameterIE-CTCH-SetupRqstTDD } }

RACH-ParameterIE-CTCH-SetupRqstTDD NBAP-PROTOCOL-IES ::= {
    { ID id-RACH-ParameterItem-CTCH-SetupRqstTDD CRITICALITY reject TYPE RACH-ParameterItem-CTCH-SetupRqstTDD PRESENCE mandatory }
}

RACH-ParameterItem-CTCH-SetupRqstTDD ::= SEQUENCE {
    commonTransportChannelID CommonTransportChannelID,
    uL-TransportFormatSet    TransportFormatSet,

```

```

    iE-Extensions          ProtocolExtensionContainer { { RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

RACH-ParameterItem-CTCH-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP RESPONSE
--
-- *****

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

CommonTransportChannelSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-FACH-ParametersList-CTCH-SetupRsp    CRITICALITY ignore    TYPE    FACH-CommonTransportChannel-InformationResponse    PRESENCE
    optional }|
    { ID    id-PCH-Parameters-CTCH-SetupRsp        CRITICALITY ignore    TYPE    CommonTransportChannel-InformationResponse    PRESENCE
    optional }|
    { ID    id-RACH-Parameters-CTCH-SetupRsp       CRITICALITY ignore    TYPE    CommonTransportChannel-InformationResponse    PRESENCE
    optional }|
    { ID    id-CPCH-Parameters-CTCH-SetupRsp       CRITICALITY ignore    TYPE    CommonTransportChannel-InformationResponse
    PRESENCE optional }|
    { ID    id-CriticalityDiagnostics               CRITICALITY ignore    TYPE    CriticalityDiagnostics    PRESENCE
    optional },
    ...
}

CommonTransportChannelSetupResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-CommonTransportChannel-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfFACHs)) OF CommonTransportChannel-InformationResponse

-- *****
--
-- COMMON TRANSPORT CHANNEL SETUP FAILURE
--
-- *****

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

CommonTransportChannelSetupFailure-IEs NBAP-PROTOCOL-IES ::= {

```

```

    { ID      id-Cause                CRITICALITY ignore    TYPE Cause                PRESENCE mandatory }|
    { ID      id-CriticalityDiagnostics CRITICALITY ignore    TYPE CriticalityDiagnostics PRESENCE optional  }|
    ...
}

CommonTransportChannelSetupFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST FDD
--
-- *****

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

CommonTransportChannelReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID                CRITICALITY reject    TYPE C-ID                PRESENCE mandatory }|
    { ID      id-ConfigurationGenerationID CRITICALITY reject    TYPE ConfigurationGenerationID PRESENCE mandatory }|
    { ID      id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD CRITICALITY reject    TYPE CommonPhysicalChannelType-CTCH-ReconfRqstFDD PRESENCE mandatory },
    ...
}

CommonTransportChannelReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonPhysicalChannelType-CTCH-ReconfRqstFDD ::= CHOICE {
    secondary-CCPCH-parameters      Secondary-CCPCHList-CTCH-ReconfRqstFDD,
    pRACH-parameters                PRACHList-CTCH-ReconfRqstFDD,
    cPCH-parameters                 CPCHList-CTCH-ReconfRqstFDD,
    ...
}

Secondary-CCPCHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
    fACH-ParametersList-CTCH-ReconfRqstFDD FACH-ParametersList-CTCH-ReconfRqstFDD OPTIONAL,
    pCH-Parameters-CTCH-ReconfRqstFDD      PCH-Parameters-CTCH-ReconfRqstFDD      OPTIONAL,
    pICH-Parameters-CTCH-ReconfRqstFDD     PICH-Parameters-CTCH-ReconfRqstFDD     OPTIONAL,
    iE-Extensions                        ProtocolExtensionContainer { { Secondary-CCPCH-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

Secondary-CCPCH-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

FACH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ FACH-ParametersListIEs-CTCH-ReconfRqstFDD }}

```

```
FACH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject  TYPE FACH-ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}
```

```
FACH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxFACHCell)) OF FACH-ParametersItem-CTCH-ReconfRqstFDD
```

```
FACH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
  commonTransportChannelID      CommonTransportChannelID,
  maxFACH-Power                 DL-Power           OPTIONAL,
  toAWS                         ToAWS              OPTIONAL,
  toAWE                         ToAWE              OPTIONAL,
  iE-Extensions                 ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
  ...
}
```

```
FACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
PCH-Parameters-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PCH-ParametersIE-CTCH-ReconfRqstFDD }}
```

```
PCH-ParametersIE-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-ParametersItem-CTCH-ReconfRqstFDD    CRITICALITY reject  TYPE PCH-ParametersItem-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}
```

```
PCH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
  commonTransportChannelID      CommonTransportChannelID,
  pCH-Power                    DL-Power           OPTIONAL,
  toAWS                        ToAWS              OPTIONAL,
  toAWE                        ToAWE              OPTIONAL,
  iE-Extensions                 ProtocolExtensionContainer { { PCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
  ...
}
```

```
PCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
PICH-Parameters-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ PICH-ParametersIE-CTCH-ReconfRqstFDD }}
```

```
PICH-ParametersIE-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-ParametersItem-CTCH-ReconfRqstFDD    CRITICALITY reject  TYPE PICH-ParametersItem-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}
```

```
PICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
  commonPhysicalChannelID      CommonPhysicalChannelID,
  pICH-Power                   PICH-Power       OPTIONAL,
  iE-Extensions                 ProtocolExtensionContainer { { PICH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
  ...
}
```

```
PICH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```

}
...
}
PRACHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
    pRACH-ParametersList-CTCH-ReconfRqstFDD PRACH-ParametersList-CTCH-ReconfRqstFDD OPTIONAL,
    aICH-ParametersList-CTCH-ReconfRqstFDD AICH-ParametersList-CTCH-ReconfRqstFDD OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { PRACH-CTCH-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}
PRACH-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
PRACH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container { { PRACH-ParametersListIEs-CTCH-ReconfRqstFDD } }
PRACH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD CRITICALITY reject TYPE PRACH-ParametersListIE-CTCH-ReconfRqstFDD PRESENCE mandatory }
}
PRACH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF PRACH-ParametersItem-CTCH-ReconfRqstFDD
PRACH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID CommonPhysicalChannelID,
    preambleSignatures PreambleSignatures OPTIONAL,
    allowedSlotFormatInformation AllowedSlotFormatInformationList-CTCH-ReconfRqstFDD OPTIONAL,
    rACH-SubChannelNumbers RACH-SubChannelNumbers OPTIONAL,
    iE-Extensions ProtocolExtensionContainer { { PRACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs} } OPTIONAL,
    ...
}
PRACH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
AllowedSlotFormatInformationList-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1.. maxNrOfSlotFormatsPRACH)) OF AllowedSlotFormatInformationItem-CTCH-
ReconfRqstFDD
AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    rACH-SlotFormat RACH-SlotFormat,
    iE-Extensions ProtocolExtensionContainer { { AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
}
AllowedSlotFormatInformationItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
AICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container { { AICH-ParametersListIEs-CTCH-ReconfRqstFDD } }
AICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-AICH-ParametersListIE-CTCH-ReconfRqstFDD CRITICALITY reject TYPE AICH-ParametersListIE-CTCH-ReconfRqstFDD PRESENCE mandatory }
}

```

```

}

AICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF AICH-ParametersItem-CTCH-ReconfRqstFDD

AICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    aICH-Power                   AICH-Power          OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { { AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCHList-CTCH-ReconfRqstFDD ::= SEQUENCE {
    cPCH-ParametersList-CTCH-ReconfRqstFDD      CPCH-ParametersList-CTCH-ReconfRqstFDD          OPTIONAL,
    aP-AICH-ParametersList-CTCH-ReconfRqstFDD    AP-AICH-ParametersList-CTCH-ReconfRqstFDD    OPTIONAL,
    cDCA-ICH-ParametersList-CTCH-ReconfRqstFDD    CDCA-ICH-ParametersList-CTCH-ReconfRqstFDD    OPTIONAL,
    iE-Extensions                                 ProtocolExtensionContainer { { CPCHListItem-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

CPCHListItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CPCH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container { { CPCH-ParametersListIEs-CTCH-ReconfRqstFDD } }

CPCH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject    TYPE CPCH-ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}

CPCH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF CPCH-ParametersItem-CTCH-ReconfRqstFDD

CPCH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    uL-SIR                        UL-SIR          OPTIONAL,
    initialDL-transmissionPower    DL-Power      OPTIONAL,
    maximumDLPower                 DL-Power      OPTIONAL,
    minimumDLPower                 DL-Power      OPTIONAL,
    iE-Extensions                 ProtocolExtensionContainer { { CPCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs } } OPTIONAL,
    ...
}

CPCH-ParametersItem-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AP-AICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container { { AP-AICH-ParametersListIEs-CTCH-ReconfRqstFDD } }

AP-AICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject    TYPE AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE mandatory }
}

```

```

}

AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF AP-AICH-ParametersItem-CTCH-ReconfRqstFDD

AP-AICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    aP-AICH-Power                    AICH-Power          OPTIONAL,
    cSICH-Power                      AICH-Power          OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { AP-AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

AP-AICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CDCA-ICH-ParametersList-CTCH-ReconfRqstFDD ::= ProtocolIE-Single-Container {{ CDCA-ICH-ParametersListIEs-CTCH-ReconfRqstFDD }}

CDCA-ICH-ParametersListIEs-CTCH-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD    CRITICALITY reject    TYPE CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD    PRESENCE mandatory
    }
}

CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfCPCHs)) OF AP-AICH-ParametersItem-CTCH-ReconfRqstFDD

CDCA-ICH-ParametersItem-CTCH-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID          CommonPhysicalChannelID,
    cDCA-ICH-Power                  AICH-Power          OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { CDCA-ICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

CDCA-ICH-ParametersItemIE-CTCH-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****

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

CommonTransportChannelReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-C-ID                    CRITICALITY reject    TYPE C-ID                    PRESENCE
    mandatory }|
    { ID id-ConfigurationGenerationID    CRITICALITY reject    TYPE ConfigurationGenerationID    PRESENCE
    mandatory }|
}

```

```

{ ID id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject TYPE Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD
  PRESENCE optional }|
{ ID id-PICH-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject TYPE PICH-Parameters-CTCH-ReconfRqstTDD          PRESENCE optional }|
{ ID id-FACH-ParametersList-CTCH-ReconfRqstTDD      CRITICALITY reject TYPE FACH-ParametersList-CTCH-ReconfRqstTDD      PRESENCE optional }|
{ ID id-PCH-Parameters-CTCH-ReconfRqstTDD          CRITICALITY reject TYPE PCH-Parameters-CTCH-ReconfRqstTDD          PRESENCE optional },
...
}

CommonTransportChannelReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}

Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
  cCTrCH-ID                CTrCH-ID,
  secondaryCCPCHList       Secondary-CCPCHList-CTCH-ReconfRqstTDD          OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { { Secondary-CCPCH-CTCH-ReconfRqstTDD-ExtIEs } } OPTIONAL,
...
}

Secondary-CCPCH-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

Secondary-CCPCHList-CTCH-ReconfRqstTDD ::= ProtocolIE-Single-Container { { Secondary-CCPCHListIEs-CTCH-ReconfRqstTDD } }

Secondary-CCPCHListIEs-CTCH-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD          CRITICALITY reject TYPE Secondary-CCPCHListIE-CTCH-ReconfRqstTDD          PRESENCE mandatory }
}

Secondary-CCPCHListIE-CTCH-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfSCCPCHs)) OF Secondary-CCPCHItem-CTCH-ReconfRqstTDD

Secondary-CCPCHItem-CTCH-ReconfRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID  CommonPhysicalChannelID,
  sCCPCH-Power             DL-Power          OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { { Secondary-CCPCHItem-CTCH-ReconfRqstTDD-ExtIEs } } OPTIONAL,
...
}

Secondary-CCPCHItem-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

PICH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
  commonPhysicalChannelID  CommonPhysicalChannelID,
  pPICH-Power              PICH-Power          OPTIONAL,
  iE-Extensions            ProtocolExtensionContainer { { PICH-Parameters-CTCH-ReconfRqstTDD-ExtIEs } } OPTIONAL,
...
}

PICH-Parameters-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

```



```

FACH-ParametersList-CTCH-ReconfRqstTDD ::= SEQUENCE (SIZE (0..maxNrOfFACHs)) OF FACH-ParametersItem-CTCH-ReconfRqstTDD

FACH-ParametersItem-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    toAWS                          ToAWS              OPTIONAL,
    toAWE                          ToAWE              OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { FACH-ParametersItem-CTCH-ReconfRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

FACH-ParametersItem-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCH-Parameters-CTCH-ReconfRqstTDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    toAWS                          ToAWS              OPTIONAL,
    toAWE                          ToAWE              OPTIONAL,
    iE-Extensions                  ProtocolExtensionContainer { { PCH-Parameters-CTCH-ReconfRqstTDD-ExtIEs } } OPTIONAL,
    ...
}

PCH-Parameters-CTCH-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION RESPONSE
--
-- *****

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

CommonTransportChannelReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional},
    ...
}

CommonTransportChannelReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL RECONFIGURATION FAILURE
--
-- *****

```

```

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

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

CommonTransportChannelReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL DELETION REQUEST
--
-- *****

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

CommonTransportChannelDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID          CRITICALITY reject          TYPE    C-ID          PRESENCE mandatory }|
    { ID    id-CommonPhysicalChannelID  CRITICALITY reject          TYPE    CommonPhysicalChannelID  PRESENCE mandatory }|
    { ID    id-ConfigurationGenerationID  CRITICALITY reject          TYPE    ConfigurationGenerationID  PRESENCE mandatory },
    ...
}

CommonTransportChannelDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMMON TRANSPORT CHANNEL DELETION RESPONSE
--
-- *****

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

CommonTransportChannelDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CriticalityDiagnostics  CRITICALITY ignore          TYPE    CriticalityDiagnostics  PRESENCE optional },

```

```

}
...
}
CommonTransportChannelDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****
--
-- BLOCK RESOURCE REQUEST
--
-- *****

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

BlockResourceRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID   id-C-ID          CRITICALITY reject      TYPE   C-ID          PRESENCE mandatory }|
  { ID   id-BlockingPriorityIndicator CRITICALITY reject      TYPE   BlockingPriorityIndicator PRESENCE mandatory }|
  { ID   id-ShutdownTimer CRITICALITY reject      TYPE   ShutdownTimer    PRESENCE conditional },
  -- The IE is present when the Blocking Priority IndicatorIE indicates 'Normal Priority'--
  ...
}

BlockResourceRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****
--
-- BLOCK RESOURCE RESPONSE
--
-- *****

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

BlockResourceResponse-IEs NBAP-PROTOCOL-IES ::= {
  { ID   id-CriticalityDiagnostics  CRITICALITY ignore      TYPE   CriticalityDiagnostics  PRESENCE optional},
  ...
}

BlockResourceResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
-- *****

```

```

--
-- BLOCK RESOURCE FAILURE
--
-- *****
BlockResourceFailure ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container    {{BlockResourceFailure-IEs}},
    protocolExtensions   ProtocolExtensionContainer {{BlockResourceFailure-Extensions}}    OPTIONAL,
    ...
}

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

BlockResourceFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- UNBLOCK RESOURCE INDICATION
--
-- *****

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

UnblockResourceIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-C-ID          CRITICALITY   ignore      TYPE      C-ID          PRESENCE   mandatory},
    ...
}

UnblockResourceIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- AUDIT REQUIRED INDICATION
--
-- *****

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

```

```

AuditRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
  ...
}

AuditRequiredIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- AUDIT REQUEST
--
-- *****

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

AuditRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-Start-Of-Audit-Sequence-Indicator      CRITICALITY    reject  TYPE Start-Of-Audit-Sequence-Indicator  PRESENCE  mandatory },
  ...
}

AuditRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- AUDIT RESPONSE
--
-- *****

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

AuditResponse-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-End-Of-Audit-Sequence-Indicator      CRITICALITY    ignore  TYPE    End-Of-Audit-Sequence-Indicator  PRESENCE  mandatory }|
  { ID      id-Cell-InformationList-AuditRsp      CRITICALITY    ignore  TYPE    Cell-InformationList-AuditRsp      PRESENCE
  optional  }|
  { ID      id-CCP-InformationList-AuditRsp      CRITICALITY    ignore  TYPE    CCP-InformationList-AuditRsp      PRESENCE  optional
  }|
  -- CCP (Communication Control Port) --
  { ID      id-Local-Cell-InformationList-AuditRsp  CRITICALITY    ignore  TYPE    Local-Cell-InformationList-AuditRsp  PRESENCE
  optional  }|
  { ID      id-Local-Cell-Group-InformationList-AuditRsp  CRITICALITY    ignore  TYPE    Local-Cell-Group-InformationList-AuditRsp  PRESENCE
  optional  }|
}

```

```

    { ID      id-CriticalityDiagnostics          CRITICALITY  ignore      TYPE      CriticalityDiagnostics          PRESENCE optional
    },
    ...
}

AuditResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Cell-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ Cell-InformationItemIE-AuditRsp}}

Cell-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID      id-Cell-InformationItem-AuditRsp      CRITICALITY  ignore      TYPE      Cell-InformationItem-AuditRsp      PRESENCE      optional }
}

Cell-InformationItem-AuditRsp ::= SEQUENCE {
    c-ID                      C-ID,
    configurationGenerationID ConfigurationGenerationID,
    resourceOperationalState  ResourceOperationalState,
    availabilityStatus        AvailabilityStatus,
    local-Cell-ID             Local-Cell-ID,
    primary-SCH-Information    P-SCH-Information-AuditRsp          OPTIONAL,
    secondary-SCH-Information  S-SCH-Information-AuditRsp         OPTIONAL,
    primary-CPICH-Information  P-CPICH-Information-AuditRsp       OPTIONAL,
    secondary-CPICH-InformationList S-CPICH-InformationList-AuditRsp   OPTIONAL,
    primary-CCPCH-Information  P-CCPCH-Information-AuditRsp       OPTIONAL,
    bCH-Information           BCH-Information-AuditRsp           OPTIONAL,
    secondary-CCPCH-InformationList S-CCPCH-InformationList-AuditRsp   OPTIONAL,
    pCH-Information           PCH-Information-AuditRsp          OPTIONAL,
    pICH-Information          PICH-Information-AuditRsp         OPTIONAL,
    fACH-InformationList      FACH-InformationList-AuditRsp     OPTIONAL,
    pRACH-InformationList     PRACH-InformationList-AuditRsp     OPTIONAL,
    rACH-InformationList      RACH-InformationList-AuditRsp     OPTIONAL,
    aICH-InformationList      AICH-InformationList-AuditRsp     OPTIONAL,
    pCPCH-InformationList     PCPCH-InformationList-AuditRsp    OPTIONAL,
    cPCH-InformationList      CPCH-InformationList-AuditRsp     OPTIONAL,
    aP-AICH-InformationList   AP-AICH-InformationList-AuditRsp  OPTIONAL,
    cDCA-ICH-InformationList  CDCA-ICH-InformationList-AuditRsp  OPTIONAL,
    sCH-Information          SCH-Information-AuditRsp          OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { Cell-InformationItem-AuditRsp-ExtIEs} }  OPTIONAL,
    ...
}

Cell-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

P-SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ P-SCH-InformationIE-AuditRsp }}

P-SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID id-P-SCH-Information      CRITICALITY ignore      TYPE      Common-PhysicalChannel-Status-Information      PRESENCE mandatory }
}

```

```

S-SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ S-SCH-InformationIE-AuditRsp }}

S-SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-S-SCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

P-CPICH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ P-CPICH-InformationIE-AuditRsp }}

P-CPICH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-P-CPICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

S-CPICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container {{ S-CPICH-InformationItemIE-AuditRsp }}

S-CPICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-S-CPICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

P-CCPCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ P-CCPCH-InformationIE-AuditRsp }}

P-CCPCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-P-CCPCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

BCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ BCH-InformationIE-AuditRsp }}

BCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-BCH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information  PRESENCE mandatory }
}

S-CCPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxSCCPCHCell)) OF ProtocolIE-Single-Container {{ S-CCPCH-InformationItemIE-AuditRsp }}

S-CCPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-S-CCPCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

PCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ PCH-InformationIE-AuditRsp }}

PCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PCH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information  PRESENCE mandatory }
}

PICH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ PICH-InformationIE-AuditRsp }}

PICH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

FACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxFACHCell)) OF ProtocolIE-Single-Container {{ FACH-InformationItemIE-AuditRsp }}

FACH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-FACH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information  PRESENCE mandatory }
}

```

```

PRACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ PRACH-InformationItemIE-AuditRsp }}

PRACH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PRACH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

RACH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxRACHCell)) OF ProtocolIE-Single-Container {{ RACH-InformationItemIE-AuditRsp }}

RACH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-RACH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information  PRESENCE mandatory }
}

AICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxRACHCell)) OF ProtocolIE-Single-Container {{ AICH-InformationItemIE-AuditRsp }}

AICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-AICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

PCPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-Container {{ PCPCH-InformationItemIE-AuditRsp }}

PCPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-PCPCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE optional }
}

CPCH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CPCH-InformationItemIE-AuditRsp }}

CPCH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-CPCH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information  PRESENCE optional }
}

AP-AICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ AP-AICH-InformationItemIE-AuditRsp }}

AP-AICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-AP-AICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

CDCA-ICH-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CDCA-ICH-InformationItemIE-AuditRsp }}

CDCA-ICH-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-CDCA-ICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

SCH-Information-AuditRsp ::= ProtocolIE-Single-Container {{ SCH-InformationIE-AuditRsp }}

SCH-InformationIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-SCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

CCP-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxCCPinNodeB)) OF ProtocolIE-Single-Container {{ CCP-InformationItemIE-AuditRsp }}

CCP-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
  { ID id-CCP-InformationItem-AuditRsp  CRITICALITY  ignore  TYPE  CCP-InformationItem-AuditRsp  PRESENCE mandatory }
}

```



```

CCP-InformationItem-AuditRsp ::= SEQUENCE {
    communicationControlPortID      CommunicationControlPortID,
    resourceOperationalState        ResourceOperationalState,
    availabilityStatus              AvailabilityStatus,
    iE-Extensions                   ProtocolExtensionContainer  {{ CCP-InformationItem-AuditRsp-ExtIEs }}  OPTIONAL,
    ...
}

CCP-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Local-Cell-InformationList-AuditRsp ::=SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-InformationItemIE-AuditRsp }}

Local-Cell-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID      id-Local-Cell-InformationItem-AuditRsp          CRITICALITY      ignore          TYPE      Local-Cell-InformationItem-AuditRsp      PRESENCE
      mandatory}
}

Local-Cell-InformationItem-AuditRsp ::= SEQUENCE {
    local-Cell-ID                Local-Cell-ID,
    dl-or-global-capacityCredit   DL-or-Global-CapacityCredit,
    ul-capacityCredit            UL-CapacityCredit          OPTIONAL,
    commonChannelsCapacityConsumptionLaw,
    dedicatedChannelsCapacityConsumptionLaw,
    maximumDL-PowerCapability     MaximumDL-PowerCapability   OPTIONAL,
    minSpreadingFactor           MinSpreadingFactor          OPTIONAL,
    minimumDL-PowerCapability     MinimumDL-PowerCapability   OPTIONAL,
    local-Cell-Group-ID          Local-Cell-ID              OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer  {{ Local-Cell-InformationItem-AuditRsp-ExtIEs}}  OPTIONAL,
    ...
}

Local-Cell-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Local-Cell-Group-InformationList-AuditRsp ::= SEQUENCE (SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-InformationItemIE-AuditRsp }}

Local-Cell-Group-InformationItemIE-AuditRsp NBAP-PROTOCOL-IES ::= {
    { ID      id-Local-Cell-Group-InformationItem-AuditRsp          CRITICALITY      ignore          TYPE      Local-Cell-Group-InformationItem-AuditRsp
      PRESENCE      mandatory}
}

Local-Cell-Group-InformationItem-AuditRsp ::= SEQUENCE {
    local-Cell-Group-ID          Local-Cell-ID,
    dl-or-global-capacityCredit   DL-or-Global-CapacityCredit,
    ul-capacityCredit            UL-CapacityCredit          OPTIONAL,
    commonChannelsCapacityConsumptionLaw,
    dedicatedChannelsCapacityConsumptionLaw,

```

```

    iE-Extensions          ProtocolExtensionContainer  {{ Local-Cell-Group-InformationItem-AuditRsp-ExtIEs}}    OPTIONAL,
  ...
}

Local-Cell-Group-InformationItem-AuditRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- AUDIT FAILURE
--
-- *****

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

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

AuditFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

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

CommonMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID    id-MeasurementID          CRITICALITY  reject          TYPE    MeasurementID          PRESENCE mandatory
  }|
  { ID    id-CommonMeasurementObjectType-CM-Rqst          CRITICALITY  reject          TYPE    CommonMeasurementObjectType-CM-Rqst          PRESENCE
  mandatory }|
  -- This IE represents both the Common Measurement Object Type IE and the choice based on the Common Measurement Object Type
  -- as described in the tabular message format in subclause 9.1.
  { ID    id-CommonMeasurementType          CRITICALITY  reject          TYPE    CommonMeasurementType          PRESENCE mandatory
  }|
  { ID    id-MeasurementFilterCoefficient          CRITICALITY  reject          TYPE    MeasurementFilterCoefficient          PRESENCE
  optional }|
}

```

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

```
CommonMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
CommonMeasurementObjectType-CM-Rqst ::= CHOICE {
  cell                Cell-CM-Rqst,
  rACH                RACH-CM-Rqst,
  cPCH                CPCH-CM-Rqst,
  ...
}
```

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

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

```
RACH-CM-Rqst ::= SEQUENCE {
  c-ID                C-ID,
  commonTransportChannelID CommonTransportChannelID,
  iE-Extensions      ProtocolExtensionContainer { { RACHItem-CM-Rqst-ExtIEs } } OPTIONAL,
  ...
}
```

```
RACHItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
CPCH-CM-Rqst ::= SEQUENCE {
  c-ID                C-ID,
  commonTransportChannelID CommonTransportChannelID,
  spreadingfactor     MinUL-ChannelisationCodeLength OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { { CPCHItem-CM-Rqst-ExtIEs } } OPTIONAL,
  ...
}
```

```
CPCHItem-CM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```

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

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

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

CommonMeasurementInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonMeasurementObjectType-CM-Rsp ::= CHOICE {
    cell                Cell-CM-Rsp,
    rACH                RACH-CM-Rsp,
    cPCH                CPCH-CM-Rsp,
    ...
}

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

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

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

RACHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

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

CPCHItem-CM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

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

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

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

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

```

```

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

CommonMeasurementObjectType-CM-Rprt ::= CHOICE {
    cell                Cell-CM-Rprt,
    rACH                RACH-CM-Rprt,
    cPCH                CPCH-CM-Rprt,
    ...
}

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

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

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

RACHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

CPCHItem-CM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

```

```

}

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

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

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

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

CommonMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-MeasurementID          CRITICALITY ignore          TYPE      MeasurementID      PRESENCE mandatory }|
  { ID      id-Cause                  CRITICALITY ignore          TYPE      Cause              PRESENCE mandatory }|
  ...
}

CommonMeasurementFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- CELL SETUP REQUEST FDD
--
-- *****

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

CellSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-Local-Cell-ID          CRITICALITY  reject          TYPE      Local-Cell-ID
  PRESENCE  mandatory }|
  { ID      id-C-ID                  CRITICALITY  reject          TYPE      C-ID              PRESENCE
  mandatory }|
  { ID      id-ConfigurationGenerationID  CRITICALITY  reject          TYPE      ConfigurationGenerationID
  PRESENCE  mandatory }|

```

|  |  |
|--|--|
| <pre> { ID id-T-Cell   PRESENCE mandatory }  { ID id-UARFCNforNu   PRESENCE mandatory }  { ID id-UARFCNforNd   PRESENCE mandatory }  { ID id-MaximumTransmissionPower   PRESENCE mandatory }  { ID id-Closed-Loop-Timing-Adjustment-Mode   PRESENCE optional }  { ID id-PrimaryScramblingCode   PRESENCE mandatory }  { ID id-Synchronisation-Configuration-Cell-SetupRqst   PRESENCE mandatory }  { ID id-DL-TPC-Pattern01Count   PRESENCE mandatory }  { ID id-PrimarySCH-Information-Cell-SetupRqstFDD   PRESENCE mandatory }  { ID id-SecondarySCH-Information-Cell-SetupRqstFDD   PRESENCE mandatory }  { ID id-PrimaryCPICH-Information-Cell-SetupRqstFDD   PRESENCE mandatory }  { ID id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD   PRESENCE optional }  { ID id-PrimaryCCPCH-Information-Cell-SetupRqstFDD   PRESENCE mandatory }  { ID id-Limited-power-increase-information-Cell-SetupRqstFDD   PRESENCE mandatory }, ... } </pre> | <pre> CRITICALITY reject TYPE T-Cell CRITICALITY reject TYPE UARFCN CRITICALITY reject TYPE UARFCN CRITICALITY reject TYPE MaximumTransmissionPower CRITICALITY reject TYPE Closedlooptimingadjustmentmode CRITICALITY reject TYPE PrimaryScramblingCode CRITICALITY reject TYPE Synchronisation-Configuration-Cell-SetupRqst CRITICALITY reject TYPE DL-TPC-Pattern01Count CRITICALITY reject TYPE PrimarySCH-Information-Cell-SetupRqstFDD CRITICALITY reject TYPE SecondarySCH-Information-Cell-SetupRqstFDD CRITICALITY reject TYPE PrimaryCPICH-Information-Cell-SetupRqstFDD CRITICALITY reject TYPE SecondaryCPICH-InformationList-Cell- CRITICALITY reject TYPE PrimaryCCPCH-Information-Cell-SetupRqstFDD CRITICALITY reject TYPE Limited-power-increase-information-Cell- </pre> |
|--|--|

CellSetupRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {

```

...
}

```

Synchronisation-Configuration-Cell-SetupRqst ::= SEQUENCE {

```

n-INSYNC-IND N-INSYNC-IND,
n-OUTSYNC-IND N-OUTSYNC-IND,
t-RLFFAILURE T-RLFFAILURE,
iE-Extensions ProtocolExtensionContainer { { Synchronisation-Configuration-Cell-SetupRqst-ExtIEs} } OPTIONAL,
...
}

```

Synchronisation-Configuration-Cell-SetupRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

...
}

```

PrimarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {

```

commonPhysicalChannelID CommonPhysicalChannelID,
primarySCH-Power DL-Power,
tSTD-Indicator TSTD-Indicator,
iE-Extensions ProtocolExtensionContainer { { PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs} } OPTIONAL,
...
}

```



```

}

PrimarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondarySCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    secondarySCH-Power           DL-Power,
    tSTD-Indicator               TSTD-Indicator,
    iE-Extensions                ProtocolExtensionContainer { { SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

SecondarySCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    primaryCPICH-Power           PrimaryCPICH-Power,
    transmitDiversityIndicator   TransmitDiversityIndicator,
    iE-Extensions                ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

PrimaryCPICH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCPICH-InformationList-Cell-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container{{ SecondaryCPICH-InformationItemIE-Cell-SetupRqstFDD }}

SecondaryCPICH-InformationItemIE-Cell-SetupRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD      CRITICALITY      reject      TYPE      SecondaryCPICH-InformationItem-Cell-SetupRqstFDD      PRESENCE      mandatory}
}

SecondaryCPICH-InformationItem-Cell-SetupRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    dl-ScramblingCode            DL-ScramblingCode,
    fDD-DL-ChannelisationCodeNumber FDD-DL-ChannelisationCodeNumber,
    secondaryCPICH-Power         DL-Power,
    transmitDiversityIndicator   TransmitDiversityIndicator,
    iE-Extensions                ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs} } OPTIONAL,
    ...
}

SecondaryCPICH-InformationItem-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCCPCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {

```

```

commonPhysicalChannelID          CommonPhysicalChannelID,
bCH-information                   BCH-Information-Cell-SetupRqstFDD,
sTTD-Indicator                    STTD-Indicator,
iE-Extensions                      ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs} } OPTIONAL,
...
}

PrimaryCCPCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

BCH-Information-Cell-SetupRqstFDD ::= SEQUENCE {
commonTransportChannelID          CommonTransportChannelID,
bCH-Power                          DL-Power,
iE-Extensions                      ProtocolExtensionContainer { { BCH-Information-Cell-SetupRqstFDD-ExtIEs} } OPTIONAL,
...
}

BCH-Information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

Limited-power-increase-information-Cell-SetupRqstFDD ::= SEQUENCE {
powerRaiseLimit                    PowerRaiseLimit,
dLPowerAveragingWindowSize          DLPowerAveragingWindowSize,
iE-Extensions                      ProtocolExtensionContainer { { Limited-power-increase-information-Cell-SetupRqstFDD-ExtIEs} }
OPTIONAL,
...
}

Limited-power-increase-information-Cell-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- CELL SETUP REQUEST TDD
--
-- *****

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

CellSetupRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
{ ID      id-Local-Cell-ID          CRITICALITY    reject      TYPE Local-Cell-ID          PRESENCE
mandatory  }|
  { ID      id-C-ID                CRITICALITY    reject      TYPE C-ID                  PRESENCE
mandatory  }|
{ ID      id-ConfigurationGenerationID  CRITICALITY    reject      TYPE ConfigurationGenerationID  PRESENCE
mandatory  }|

```

|  |             |        |   |          |
|--|-------------|--------|---|----------|
| { ID id-UARFCNforNt<br>mandatory }   | CRITICALITY | reject | TYPE UARFCN                                       | PRESENCE |
| { ID id-CellParameterID<br>mandatory }                                       | CRITICALITY | reject | TYPE CellParameterID                              | PRESENCE |
| { ID id-MaximumTransmissionPower<br>mandatory }                              | CRITICALITY | reject | TYPE MaximumTransmissionPower                     | PRESENCE |
| { ID id-TransmissionDiversityApplied<br>mandatory }                          | CRITICALITY | reject | TYPE TransmissionDiversityApplied                 | PRESENCE |
| { ID id-SyncCase<br>mandatory }  | CRITICALITY | reject | TYPE SyncCase                                     | PRESENCE |
| { ID id-Synchronisation-Configuration-Cell-SetupRqst<br>PRESENCE mandatory } | CRITICALITY | reject | TYPE Synchronisation-Configuration-Cell-SetupRqst |          |
| { ID id-DPCHConstant<br>mandatory }  | CRITICALITY | reject | TYPE ConstantValue                                | PRESENCE |
| { ID id-PUSCHConstant<br>mandatory }   | CRITICALITY | reject | TYPE ConstantValue                                | PRESENCE |
| { ID id-PRACHConstant<br>mandatory }   | CRITICALITY | reject | TYPE ConstantValue                                | PRESENCE |
| { ID id-TimingAdvanceApplied<br>mandatory }                                  | CRITICALITY | reject | TYPE TimingAdvanceApplied                         | PRESENCE |
| { ID id-SCH-Information-Cell-SetupRqstTDD<br>PRESENCE mandatory }            | CRITICALITY | reject | TYPE SCH-Information-Cell-SetupRqstTDD            |          |
| { ID id-PCCPCH-Information-Cell-SetupRqstTDD<br>PRESENCE mandatory }         | CRITICALITY | reject | TYPE PCCPCH-Information-Cell-SetupRqstTDD         |          |
| { ID id-TimeSlotConfigurationList-Cell-SetupRqstTDD<br>PRESENCE mandatory }  | CRITICALITY | reject | TYPE TimeSlotConfigurationList-Cell-SetupRqstTDD  |          |
| ...<br>}   |             |        |   |          |

CellSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {  
...  
}

SCH-Information-Cell-SetupRqstTDD ::= SEQUENCE {  
commonPhysicalChannelID CommonPhysicalChannelID,  
syncCaseIndicator SyncCaseIndicator-Cell-SetupRqstTDD-PSCH,  
sCH-Power DL-Power,  
tSTD-Indicator TSTD-Indicator,  
iE-Extensions ProtocolExtensionContainer { { SCH-Information-Cell-SetupRqstTDD-ExtIEs } } OPTIONAL,  
...  
}

SCH-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {  
...  
}

SyncCaseIndicator-Cell-SetupRqstTDD-PSCH ::= ProtocolIE-Single-Container {{ SyncCaseIndicatorIE-Cell-SetupRqstTDD-PSCH }}

SyncCaseIndicatorIE-Cell-SetupRqstTDD-PSCH NBAP-PROTOCOL-IES ::= {  
{ ID id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH CRITICALITY reject TYPE SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH PRESENCE  
mandatory }  
}

```

SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH ::= CHOICE {
    case1                Case1-Cell-SetupRqstTDD,
    case2                Case2-Cell-SetupRqstTDD,
    ...
}

Case1-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlot             TimeSlot,
    iE-Extensions       ProtocolExtensionContainer { { Case1Item-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

Case1Item-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Case2-Cell-SetupRqstTDD ::= SEQUENCE {
    sCH-TimeSlot        SCH-TimeSlot,
    iE-Extensions       ProtocolExtensionContainer { { Case2Item-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

Case2Item-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCCPCH-Information-Cell-SetupRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID    CommonPhysicalChannelID,
    tdd-PhysicalChannelOffset  TDD-PhysicalChannelOffset,
    repetitionPeriod           RepetitionPeriod,
    repetitionLength           RepetitionLength,
    pCCPCH-Power               PCCPCH-Power,
    blockSTTD-Indicator        BlockSTTD-Indicator,
    iE-Extensions              ProtocolExtensionContainer { { PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PCCPCH-Information-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-Cell-SetupRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-SetupRqstTDD

TimeSlotConfigurationItem-Cell-SetupRqstTDD ::= SEQUENCE {
    timeSlot             TimeSlot,
    timeSlotStatus       TimeSlotStatus,
    timeSlotDirection    TimeSlotDirection,
    iE-Extensions       ProtocolExtensionContainer { { TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

```

```

TimeSlotConfigurationItem-Cell-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL SETUP RESPONSE
--
-- *****

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

CellSetupResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CriticalityDiagnostics    CRITICALITY    ignore          TYPE    CriticalityDiagnostics    PRESENCE optional},
    ...
}

CellSetupResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL SETUP FAILURE
--
-- *****

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

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

CellSetupFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL RECONFIGURATION REQUEST FDD
--
-- *****

```

```

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

CellReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-C-ID          CRITICALITY reject          TYPE C-ID          PRESENCE
      mandatory }|
    { ID id-ConfigurationGenerationID  CRITICALITY reject          TYPE ConfigurationGenerationID
      PRESENCE mandatory }|
    { ID id-MaximumTransmissionPower    CRITICALITY reject          TYPE MaximumTransmissionPower
      PRESENCE optional }|
    { ID id-Synchronisation-Configuration-Cell-ReconfRqst  CRITICALITY reject          TYPE Synchronisation-Configuration-Cell-ReconfRqst
      PRESENCE optional }|
    { ID id-PrimarySCH-Information-Cell-ReconfRqstFDD      CRITICALITY reject          TYPE PrimarySCH-Information-Cell-ReconfRqstFDD
      PRESENCE optional }|
    { ID id-SecondarySCH-Information-Cell-ReconfRqstFDD    CRITICALITY reject          TYPE SecondarySCH-Information-Cell-ReconfRqstFDD
      PRESENCE optional }|
    { ID id-PrimaryCPICH-Information-Cell-ReconfRqstFDD    CRITICALITY reject          TYPE PrimaryCPICH-Information-Cell-ReconfRqstFDD
      PRESENCE optional }|
    { ID id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD  CRITICALITY reject          TYPE SecondaryCPICH-InformationList-Cell-
      ReconfRqstFDD PRESENCE optional }|
    { ID id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD    CRITICALITY reject          TYPE PrimaryCCPCH-Information-Cell-ReconfRqstFDD
      PRESENCE optional },
    ...
}

CellReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Synchronisation-Configuration-Cell-ReconfRqst ::= SEQUENCE {
    n-INSYNC-IND          N-INSYNC-IND,
    n-OUTSYNC-IND         N-OUTSYNC-IND,
    t-RLFFAILURE          T-RLFFAILURE,
    iE-Extensions        ProtocolExtensionContainer { { Synchronisation-Configuration-Cell-ReconfRqst-ExtIEs } }    OPTIONAL,
    ...
}

Synchronisation-Configuration-Cell-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID  CommonPhysicalChannelID,
    primarySCH-Power          DL-Power,
    iE-Extensions            ProtocolExtensionContainer { { PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

PrimarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

SecondarySCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    secondarySCH-Power           DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

SecondarySCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCPICH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    primaryCPICH-Power           PrimaryCPICH-Power,
    iE-Extensions                ProtocolExtensionContainer { { PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

PrimaryCPICH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SecondaryCPICH-InformationList-Cell-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container{{ SecondaryCPICH-
InformationItemIE-Cell-ReconfRqstFDD }}

SecondaryCPICH-InformationItemIE-Cell-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD      CRITICALITY    reject      TYPE      SecondaryCPICH-InformationItem-Cell-
ReconfRqstFDD      PRESENCE      mandatory}
}

SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    secondaryCPICH-Power         DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD-ExtIEs} }
    OPTIONAL,
    ...
}

SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PrimaryCCPCH-Information-Cell-ReconfRqstFDD ::= SEQUENCE {
    bCH-information              BCH-information-Cell-ReconfRqstFDD,
    iE-Extensions                ProtocolExtensionContainer { { PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs} }    OPTIONAL,
    ...
}

PrimaryCCPCH-Information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

BCH-information-Cell-ReconfRqstFDD ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    bCH-Power                     DL-Power,
    iE-Extensions                 ProtocolExtensionContainer { { BCH-information-Cell-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

BCH-information-Cell-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL RECONFIGURATION REQUEST TDD
--
-- *****

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

CellReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-C-ID                CRITICALITY    reject    TYPE    C-ID                PRESENCE
    mandatory }|
    { ID    id-ConfigurationGenerationID    CRITICALITY    reject    TYPE    ConfigurationGenerationID    PRESENCE
    mandatory }|
    { ID    id-Synchronisation-Configuration-Cell-ReconfRqst    CRITICALITY    reject    TYPE    Synchronisation-Configuration-Cell-ReconfRqst
    PRESENCE optional }|
    { ID    id-TimingAdvanceApplied    CRITICALITY    reject    TYPE    TimingAdvanceApplied    PRESENCE
    optional }|
    { ID    id-SCH-Information-Cell-ReconfRqstTDD    CRITICALITY    reject    TYPE    SCH-Information-Cell-ReconfRqstTDD
    PRESENCE optional }|
    { ID    id-PCCPCH-Information-Cell-ReconfRqstTDD    CRITICALITY    reject    TYPE    PCCPCH-Information-Cell-ReconfRqstTDD
    PRESENCE optional }|
    { ID    id-MaximumTransmissionPower    CRITICALITY    reject    TYPE    MaximumTransmissionPower    PRESENCE
    optional }|
    { ID    id-DPCHConstant    CRITICALITY    reject    TYPE    ConstantValue    PRESENCE
    optional }|
    { ID    id-PUSCHConstant    CRITICALITY    reject    TYPE    ConstantValue    PRESENCE
    optional }|
    { ID    id-PRACHConstant    CRITICALITY    reject    TYPE    ConstantValue    PRESENCE
    optional }|
    { ID    id-TimeSlotConfigurationList-Cell-ReconfRqstTDD    CRITICALITY    reject    TYPE    TimeSlotConfigurationList-Cell-ReconfRqstTDD
    PRESENCE mandatory },
    ...
}

CellReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```



```

SCH-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    sCH-Power                    DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { PSCH-Information-Cell-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PSCH-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PCCPCH-Information-Cell-ReconfRqstTDD ::= SEQUENCE {
    commonPhysicalChannelID      CommonPhysicalChannelID,
    pCCPCH-Power                DL-Power,
    iE-Extensions                ProtocolExtensionContainer { { PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

PCCPCH-Information-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TimeSlotConfigurationList-Cell-ReconfRqstTDD ::= SEQUENCE (SIZE (1..15)) OF TimeSlotConfigurationItem-Cell-ReconfRqstTDD

TimeSlotConfigurationItem-Cell-ReconfRqstTDD ::= SEQUENCE {
    timeSlot                    TimeSlot,
    timeSlotStatus              TimeSlotStatus,
    timeSlotDirection           TimeSlotDirection,
    iE-Extensions                ProtocolExtensionContainer { { TimeSlotConfigurationItem-Cell-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

TimeSlotConfigurationItem-Cell-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- CELL RECONFIGURATION RESPONSE
--
-- *****

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

CellReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics      CRITICALITY      ignore      TYPE      CriticalityDiagnostics      PRESENCE optional},
    ...
}

```

```

CellReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- CELL RECONFIGURATION FAILURE
--
-- *****

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

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

CellReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- CELL DELETION REQUEST
--
-- *****

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

CellDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID   id-C-ID          CRITICALITY   reject      TYPE   C-ID          PRESENCE   mandatory},
  ...
}

CellDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- CELL DELETION RESPONSE
--
-- *****

```

```

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

CellDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics          CRITICALITY      ignore          TYPE      CriticalityDiagnostics      PRESENCE optional},
    ...
}

CellDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RESOURCE STATUS INDICATION
--
-- *****

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

ResourceStatusIndication-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-IndicationType-ResourceStatusInd          CRITICALITY      ignore          TYPE      IndicationType-ResourceStatusInd          PRESENCE
      mandatory }|
    { ID      id-Cause          CRITICALITY      ignore          TYPE      Cause          PRESENCE      optional
    },
    ...
}

ResourceStatusIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

IndicationType-ResourceStatusInd ::= CHOICE {
    no-Failure          No-Failure-ResourceStatusInd,
    serviceImpacting    ServiceImpacting-ResourceStatusInd,
    ...
}

No-Failure-ResourceStatusInd ::= SEQUENCE {
    local-Cell-InformationList      Local-Cell-InformationList-ResourceStatusInd,
    local-Cell-Group-InformationList      Local-Cell-Group-InformationList-ResourceStatusInd    OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { No-FailureItem-ResourceStatusInd-ExtIEs } }    OPTIONAL,
    ...
}

```

```
No-FailureItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
Local-Cell-InformationList-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-InformationItemIE-ResourceStatusInd }}
```

```
Local-Cell-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-Local-Cell-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE Local-Cell-InformationItem-ResourceStatusInd PRESENCE mandatory }
}
```

```
Local-Cell-InformationItem-ResourceStatusInd ::= SEQUENCE {
  local-CellID Local-Cell-ID,
  addorDeleteIndicator AddorDeleteIndicator,
  dl-or-global-capacityCredit DL-or-Global-CapacityCredit OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  ul-capacityCredit UL-CapacityCredit OPTIONAL,
  commonChannelsCapacityConsumptionLaw CommonChannelsCapacityConsumptionLaw OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  dedicatedChannelsCapacityConsumptionLaw DedicatedChannelsCapacityConsumptionLaw OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  maximumDL-PowerCapability MaximumDL-PowerCapability OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  minSpreadingFactor MinSpreadingFactor OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  minimumDL-PowerCapability MinimumDL-PowerCapability OPTIONAL,
  -- This IE is present only if "AddorDeleteIndicator" equals add
  local-Cell-Group-ID Local-Cell-ID OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { Local-Cell-InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
  ...
}
```

```
Local-Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
Local-Cell-Group-InformationList-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-InformationItemIE-ResourceStatusInd }}
```

```
Local-Cell-Group-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-Local-Cell-Group-InformationItem-ResourceStatusInd CRITICALITY ignore TYPE Local-Cell-Group-InformationItem-ResourceStatusInd PRESENCE mandatory }
}
```

```
Local-Cell-Group-InformationItem-ResourceStatusInd ::= SEQUENCE {
  local-Cell-Group-ID Local-Cell-ID,
  dl-or-global-capacityCredit DL-or-Global-CapacityCredit,
  ul-capacityCredit UL-CapacityCredit OPTIONAL,
  commonChannelsCapacityConsumptionLaw CommonChannelsCapacityConsumptionLaw,
  dedicatedChannelsCapacityConsumptionLaw DedicatedChannelsCapacityConsumptionLaw,
  iE-Extensions ProtocolExtensionContainer { { Local-Cell-Group-InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
  ...
}
```

```

}

Local-Cell-Group-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

ServiceImpacting-ResourceStatusInd ::= SEQUENCE {
  local-Cell-InformationList          Local-Cell-InformationList2-ResourceStatusInd  OPTIONAL,
  local-Cell-Group-InformationList    Local-Cell-Group-InformationList2-ResourceStatusInd  OPTIONAL,
  cCP-InformationList                 CCP-InformationList-ResourceStatusInd          OPTIONAL,
  cell-InformationList                Cell-InformationList-ResourceStatusInd      OPTIONAL,
  iE-Extensions                       ProtocolExtensionContainer { { ServiceImpactingItem-ResourceStatusInd-ExtIEs} }  OPTIONAL,
  ...
}

ServiceImpactingItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Local-Cell-InformationList2-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-InformationItemIE2-ResourceStatusInd }}

Local-Cell-InformationItemIE2-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-Local-Cell-InformationItem2-ResourceStatusInd  CRITICALITY ignore  TYPE Local-Cell-InformationItem2-ResourceStatusInd  PRESENCE mandatory }
}

Local-Cell-InformationItem2-ResourceStatusInd ::= SEQUENCE {
  local-Cell-ID                      Local-Cell-ID,
  dl-or-global-capacityCredit         DL-or-Global-CapacityCredit  OPTIONAL,
  ul-capacityCredit                   UL-CapacityCredit           OPTIONAL,
  commonChannelsCapacityConsumptionLaw  CommonChannelsCapacityConsumptionLaw  OPTIONAL,
  dedicatedChannelsCapacityConsumptionLaw  DedicatedChannelsCapacityConsumptionLaw  OPTIONAL,
  maximum-DL-PowerCapability           MaximumDL-PowerCapability      OPTIONAL,
  minSpreadingFactor                  MinSpreadingFactor            OPTIONAL,
  minimumDL-PowerCapability            MinimumDL-PowerCapability      OPTIONAL,
  iE-Extensions                       ProtocolExtensionContainer { { Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs} }  OPTIONAL,
  ...
}

Local-Cell-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Local-Cell-Group-InformationList2-ResourceStatusInd ::= SEQUENCE(SIZE (1..maxLocalCellinNodeB)) OF ProtocolIE-Single-Container {{ Local-Cell-Group-InformationItemIE2-ResourceStatusInd }}

Local-Cell-Group-InformationItemIE2-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-Local-Cell-Group-InformationItem2-ResourceStatusInd  CRITICALITY ignore  TYPE Local-Cell-Group-InformationItem2-ResourceStatusInd  PRESENCE mandatory }
}

Local-Cell-Group-InformationItem2-ResourceStatusInd ::= SEQUENCE {

```

```

local-Cell-Group-ID          Local-Cell-ID,
dl-or-global-capacityCredit  DL-or-Global-CapacityCredit  OPTIONAL,
ul-capacityCredit            UL-CapacityCredit            OPTIONAL,
commonChannelsCapacityConsumptionLaw  CommonChannelsCapacityConsumptionLaw  OPTIONAL,
dedicatedChannelsCapacityConsumptionLaw  DedicatedChannelsCapacityConsumptionLaw  OPTIONAL,
iE-Extensions                ProtocolExtensionContainer { { Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs } }  OPTIONAL,
...
}

Local-Cell-Group-InformationItem2-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

CCP-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCCPinNodeB)) OF ProtocolIE-Single-Container {{ CCP-InformationItemIE-ResourceStatusInd }}

CCP-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
{ ID id-CCP-InformationItem-ResourceStatusInd  CRITICALITY ignore  TYPE CCP-InformationItem-ResourceStatusInd  PRESENCE mandatory }
}

CCP-InformationItem-ResourceStatusInd ::= SEQUENCE {
communicationControlPortID      CommunicationControlPortID,
resourceOperationalState        ResourceOperationalState,
availabilityStatus              AvailabilityStatus,
iE-Extensions                  ProtocolExtensionContainer { { CCP-InformationItem-ResourceStatusInd-ExtIEs } }  OPTIONAL,
...
}

CCP-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

Cell-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCellinNodeB)) OF ProtocolIE-Single-Container {{ Cell-InformationItemIE-ResourceStatusInd }}

Cell-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
{ ID id-Cell-InformationItem-ResourceStatusInd  CRITICALITY ignore  TYPE Cell-InformationItem-ResourceStatusInd  PRESENCE mandatory }
}

Cell-InformationItem-ResourceStatusInd ::= SEQUENCE {
c-ID                            C-ID,
resourceOperationalState        ResourceOperationalState  OPTIONAL,
availabilityStatus              AvailabilityStatus  OPTIONAL,
primary-SCH-Information         P-SCH-Information-ResourceStatusInd  OPTIONAL,
secondary-SCH-Information       S-SCH-Information-ResourceStatusInd  OPTIONAL,
primary-CPICH-Information       P-CPICH-Information-ResourceStatusInd  OPTIONAL,
secondary-CPICH-Information     S-CPICH-InformationList-ResourceStatusInd  OPTIONAL,
primary-CCPCH-Information       P-CCPCH-Information-ResourceStatusInd  OPTIONAL,
bCH-Information                 BCH-Information-ResourceStatusInd  OPTIONAL,
secondary-CCPCH-InformationList S-CCPCH-InformationList-ResourceStatusInd  OPTIONAL,
pCH-Information                 PCH-Information-ResourceStatusInd  OPTIONAL,
pICH-Information                PICH-Information-ResourceStatusInd  OPTIONAL,
fACH-InformationList            FACH-InformationList-ResourceStatusInd  OPTIONAL,

```

```

pRACH-InformationList          PRACH-InformationList-ResourceStatusInd          OPTIONAL,
rACH-InformationList           RACH-InformationList-ResourceStatusInd          OPTIONAL,
aICH-InformationList           AICH-InformationList-ResourceStatusInd          OPTIONAL,
pCPCH-InformationList          PCPCH-InformationList-ResourceStatusInd          OPTIONAL,
cPCH-InformationList           CPCH-InformationList-ResourceStatusInd          OPTIONAL,
aP-AICH-InformationList        AP-AICH-InformationList-ResourceStatusInd        OPTIONAL,
cDCA-ICH-InformationList       CDCA-ICH-InformationList-ResourceStatusInd       OPTIONAL,
sCH-Information                SCH-Information-ResourceStatusInd                OPTIONAL,
iE-Extensions                  ProtocolExtensionContainer { { Cell-InformationItem-ResourceStatusInd-ExtIEs } } OPTIONAL,
...
}
Cell-InformationItem-ResourceStatusInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
P-SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-SCH-InformationIE-ResourceStatusInd }}
P-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-P-SCH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}
S-SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ S-SCH-InformationIE-ResourceStatusInd }}
S-SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-S-SCH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}
P-CPICH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-CPICH-InformationIE-ResourceStatusInd }}
P-CPICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-P-CPICH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}
S-CPICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxSCPICHCell)) OF ProtocolIE-Single-Container {{ S-CPICH-InformationItemIE-ResourceStatusInd }}
S-CPICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-S-CPICH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}
P-CCPCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ P-CCPCH-InformationIE-ResourceStatusInd }}
P-CCPCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-P-CCPCH-Information    CRITICALITY ignore    TYPE Common-PhysicalChannel-Status-Information    PRESENCE mandatory }
}
BCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ BCH-InformationIE-ResourceStatusInd }}
BCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
    { ID id-BCH-Information    CRITICALITY ignore    TYPE Common-TransportChannel-Status-Information    PRESENCE mandatory }
}

```

S-CCPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxSCCPCHCell)) OF ProtocolIE-Single-Container {{ S-CCPCH-InformationItemIE-ResourceStatusInd }}

S-CCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {  
 { ID id-S-CCPCH-Information CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information PRESENCE mandatory }  
 }

PCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ PCH-InformationIE-ResourceStatusInd }}

PCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {  
 { ID id-PCH-Information CRITICALITY ignore TYPE Common-TransportChannel-Status-Information PRESENCE mandatory }  
 }

PICH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ PICH-InformationIE-ResourceStatusInd }}

PICH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {  
 { ID id-PICH-Information CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information PRESENCE mandatory }  
 }

FACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxFACHCell)) OF ProtocolIE-Single-Container {{ FACH-InformationItemIE-ResourceStatusInd }}

FACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {  
 { ID id-FACH-Information CRITICALITY ignore TYPE Common-TransportChannel-Status-Information PRESENCE mandatory }  
 }

PRACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ PRACH-InformationItemIE-ResourceStatusInd }}

PRACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {  
 { ID id-PRACH-Information CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information PRESENCE mandatory }  
 }

RACH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ RACH-InformationItemIE-ResourceStatusInd }}

RACH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {  
 { ID id-RACH-Information CRITICALITY ignore TYPE Common-TransportChannel-Status-Information PRESENCE mandatory }  
 }

AICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPRACHCell)) OF ProtocolIE-Single-Container {{ AICH-InformationItemIE-ResourceStatusInd }}

AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {  
 { ID id-AICH-Information CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information PRESENCE mandatory }  
 }

PCPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxPCPCHCell)) OF ProtocolIE-Single-Container {{ PCPCH-InformationItemIE-ResourceStatusInd }}

PCPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {  
 { ID id-PCPCH-Information CRITICALITY ignore TYPE Common-PhysicalChannel-Status-Information PRESENCE optional }  
 }



```

CPCH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CPCH-InformationItemIE-ResourceStatusInd }}

CPCH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-CPCH-Information  CRITICALITY ignore  TYPE Common-TransportChannel-Status-Information  PRESENCE optional }
}

AP-AICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ AP-AICH-InformationItemIE-ResourceStatusInd }}

AP-AICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-AP-AICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE optional }
}

CDCA-ICH-InformationList-ResourceStatusInd ::= SEQUENCE (SIZE (1..maxCPCHCell)) OF ProtocolIE-Single-Container {{ CDCA-ICH-InformationItemIE-ResourceStatusInd }}

CDCA-ICH-InformationItemIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-CDCA-ICH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE optional }
}

SCH-Information-ResourceStatusInd ::= ProtocolIE-Single-Container {{ SCH-InformationIE-ResourceStatusInd }}

SCH-InformationIE-ResourceStatusInd NBAP-PROTOCOL-IES ::= {
  { ID id-SCH-Information  CRITICALITY ignore  TYPE Common-PhysicalChannel-Status-Information  PRESENCE mandatory }
}

-- *****
--
-- SYSTEM INFORMATION UPDATE REQUEST
--
-- *****

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

SystemInformationUpdateRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-C-ID          CRITICALITY reject  TYPE C-ID          PRESENCE mandatory
  }|
  { ID id-BCCH-ModificationTime  CRITICALITY reject  TYPE BCCH-ModificationTime  PRESENCE optional
  }|
  { ID id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst  CRITICALITY reject  TYPE MIB-SB-SIB-InformationList-SystemInfoUpdateRqst
  PRESENCE mandatory },
  ...
}

SystemInformationUpdateRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

MIB-SB-SIB-InformationList-SystemInfoUpdateRqst ::= SEQUENCE (SIZE (1..maxIB)) OF MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst

MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst ::= SEQUENCE {
    iB-Type                IB-Type,
    iB-OC-ID               IB-OC-ID,
    deletionIndicator      DeletionIndicator-SystemInfoUpdate,
    iE-Extensions          ProtocolExtensionContainer { { MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs } }    OPTIONAL,
    ...
}

MIB-SB-SIB-InformationItem-SystemInfoUpdateRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DeletionIndicator-SystemInfoUpdate ::= CHOICE {
    no-Deletion            No-Deletion-SystemInfoUpdate,
    yes-Deletion           NULL
}

No-Deletion-SystemInfoUpdate ::= SEQUENCE {
    sIB-Originator         SIB-Originator                OPTIONAL,
    -- This IE shall be present if the IB-Type is equal to "SIB"
    iB-SG-REP              IB-SG-REP                    OPTIONAL,
    segmentInformationList SegmentInformationList-SystemInfoUpdate,
    iE-Extensions          ProtocolExtensionContainer { { No-DeletionItem-SystemInfoUpdate-ExtIEs } }    OPTIONAL,
    ...
}

No-DeletionItem-SystemInfoUpdate-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

SegmentInformationList-SystemInfoUpdate ::= ProtocolIE-Single-Container {{ SegmentInformationListIEs-SystemInfoUpdate }}

SegmentInformationListIEs-SystemInfoUpdate NBAP-PROTOCOL-IES ::= {
    { ID id-SegmentInformationListIE-SystemInfoUpdate    CRITICALITY reject    TYPE SegmentInformationListIE-SystemInfoUpdate    PRESENCE mandatory }
}

SegmentInformationListIE-SystemInfoUpdate ::= SEQUENCE (SIZE (1..maxIBSEG)) OF SegmentInformationItem-SystemInfoUpdate

SegmentInformationItem-SystemInfoUpdate ::= SEQUENCE {
    iB-SG-POS              IB-SG-POS                    OPTIONAL,
    segment-Type           Segment-Type                OPTIONAL,
    -- This IE shall be present if the SIB Originator IE is set to "CRNC" or the IB-Type is "MIB", "SB1" or "SB2"
    iB-SG-DATA             IB-SG-DATA                    OPTIONAL,
    -- This IE shall be present if the SIB Originator IE is set to "CRNC" or the IB-Type is "MIB", "SB1" or "SB2"
    iE-Extensions          ProtocolExtensionContainer { { SegmentInformationItem-SystemInfoUpdate-ExtIEs } }    OPTIONAL,
    ...
}

SegmentInformationItem-SystemInfoUpdate-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
-- *****
--
-- SYSTEM INFORMATION UPDATE RESPONSE
--
-- *****

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

SystemInformationUpdateResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CriticalityDiagnostics    CRITICALITY    ignore          TYPE    CriticalityDiagnostics    PRESENCE optional},
    ...
}

SystemInformationUpdateResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- SYSTEM INFORMATION UPDATE FAILURE
--
-- *****

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

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

SystemInformationUpdateFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

RadioLinkSetupRequestFDD ::= SEQUENCE {

```

```

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

RadioLinkSetupRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY reject          TYPE CRNC-CommunicationContextID          PRESENCE
    mandatory }|
    { ID id-UL-DPCH-Information-RL-SetupRqstFDD   CRITICALITY reject          TYPE UL-DPCH-Information-RL-SetupRqstFDD   PRESENCE
    mandatory }|
    { ID id-DL-DPCH-Information-RL-SetupRqstFDD   CRITICALITY reject          TYPE DL-DPCH-Information-RL-SetupRqstFDD   PRESENCE
    mandatory }|
    { ID id-DCH-FDD-Information          CRITICALITY reject          TYPE DCH-FDD-Information          PRESENCE mandatory }|
    { ID id-DSCH-FDD-Information          CRITICALITY reject          TYPE DSCH-FDD-Information          PRESENCE optional }|
    { ID id-TFCI2-Bearer-Information-RL-SetupRqstFDD CRITICALITY ignore          TYPE TFCI2-Bearer-Information-RL-SetupRqstFDD PRESENCE
    optional }|
    { ID id-RL-InformationList-RL-SetupRqstFDD   CRITICALITY notify          TYPE RL-InformationList-RL-SetupRqstFDD   PRESENCE
    mandatory }|
    { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject          TYPE Transmission-Gap-Pattern-Sequence-Information
    PRESENCE optional }|
    { ID id-Active-Pattern-Sequence-Information CRITICALITY reject          TYPE Active-Pattern-Sequence-Information PRESENCE
    optional },
    ...
}

RadioLinkSetupRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

UL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-SetupRqstFDD ::= SEQUENCE {
    tFCS                      TFCS,
    dl-DPCH-SlotFormat        DL-DPCH-SlotFormat,
    tFCI-SignallingMode        TFCI-SignallingMode,

```

```

tFCI-Presence          TFCI-Presence    OPTIONAL,
-- this IE is only present if the DL DPCH slot format is equal to any of the value 12 to 16 --
multiplexingPosition  MultiplexingPosition,
pDSCH-RL-ID          RL-ID          OPTIONAL,
-- This IE is present only if the DSCH Information group is present --
pDSCH-CodeMapping    PDSCH-CodeMapping    OPTIONAL,
-- This IE is present only if the DSCH Information group is present --
powerOffsetInformation PowerOffsetInformation-RL-SetupRqstFDD,
fdd-TPC-DownlinkStepSize FDD-TPC-DownlinkStepSize,
limitedPowerIncrease  LimitedPowerIncrease,
innerLoopDLPCStatus  InnerLoopDLPCStatus,
iE-Extensions        ProtocolExtensionContainer { { DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
...
}

DL-DPCH-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

PowerOffsetInformation-RL-SetupRqstFDD ::= SEQUENCE {
p01-ForTFCI-Bits      PowerOffset,
p02-ForTPC-Bits      PowerOffset,
p03-ForPilotBits     PowerOffset,
iE-Extensions        ProtocolExtensionContainer { { PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
...
}

PowerOffsetInformation-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

TFCI2-Bearer-Information-RL-SetupRqstFDD ::= SEQUENCE {
toAWS                 ToAWS,
toAWE                 ToAWE,
iE-Extensions        ProtocolExtensionContainer { { TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs } } OPTIONAL,
...
}

TFCI2-Bearer-Information-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

RL-InformationList-RL-SetupRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF
ProtocolIE-Single-Container{{ RL-InformationItemIE-RL-SetupRqstFDD }}

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

RL-InformationItem-RL-SetupRqstFDD ::= SEQUENCE {
rL-ID              RL-ID,
c-ID              C-ID,

```

```

firstRLS-indicator      FirstRLS-Indicator,
frameOffset             FrameOffset,
chipOffset             ChipOffset,
propagationDelay       PropagationDelay          OPTIONAL,
diversityControlField  DiversityControlField     OPTIONAL,
-- This IE is present only if the RL is not the first one in the RL Information
dl-CodeInformation     FDD-DL-CodeInformation,
initialDL-transmissionPower DL-Power,
maximumDL-power       DL-Power,
minimumDL-power       DL-Power,
sSDT-Cell-Identity    SSDT-Cell-Identity          OPTIONAL,
transmitDiversityIndicator TransmitDiversityIndicator  OPTIONAL,
-- This IE is present unless Diversity Mode IE in UL DPCH Information group is "none"
iE-Extensions         ProtocolExtensionContainer { { RL-InformationItem-RL-SetupRqstFDD-ExtIEs} }  OPTIONAL,
...
}

RL-InformationItem-RL-SetupRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

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

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

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

RadioLinkSetupRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}

UL-CCTrCH-InformationList-RL-SetupRqstTDD ::= SEQUENCE (SIZE(1..maxNrOfCCTrCHs)) OF

```

```

ProtocolIE-Single-Container{{ UL-CCTrCH-InformationItemIE-RL-SetupRqstTDD }}

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

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

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

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

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

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

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

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

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

DL-CCTrCH-InformationItem-RL-SetupRqstTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,
  tFCS TFCS,
  tFCI-Coding TFCI-Coding,
  punctureLimit PunctureLimit,

```

```

tdd-TPC-DownlinkStepSize      TDD-TPC-DownlinkStepSize,
cCtRCH-TPCList                cCtRCH-TPCList-RL-SetupRqstTDD      OPTIONAL,
dL-DPCH-Information           DL-DPCH-Information-RL-SetupRqstTDD  OPTIONAL,
iE-Extensions                 ProtocolExtensionContainer { { DL-CtRCH-InformationItem-RL-SetupRqstTDD-ExtIEs } }  OPTIONAL,
...
}

DL-CtRCH-InformationItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

CtRCH-TPCList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCtRCHs)) OF CtRCH-TPCItem-RL-SetupRqstTDD

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

CtRCH-TPCItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

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

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

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

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

RL-Information-RL-SetupRqstTDD ::= SEQUENCE {
rL-ID                        RL-ID,
c-ID                          C-ID,
frameOffset                   FrameOffset,
initialDL-transmissionPower   DL-Power,
maximumDL-power               DL-Power,
minimumDL-power               DL-Power,
timeslotISCPInfoList          TimeslotISCPInfoList-RL-SetupRqstTDD  OPTIONAL,
iE-Extensions                 ProtocolExtensionContainer { { RL-Information-RL-SetupRqstTDD-ExtIEs } }  OPTIONAL,
...
}

```



```

TimeslotISCPInfoList-RL-SetupRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF TimeslotISCPInfoItem-RL-SetupRqstTDD

TimeslotISCPInfoItem-RL-SetupRqstTDD ::= SEQUENCE {
    timeSlot          TimeSlot,
    dL-TimeslotISCP   DL-TimeslotISCP,
    iE-Extensions     ProtocolExtensionContainer { {TimeslotISCPInfoItem-RL-SetupRqstTDD-ExtIEs} } OPTIONAL,
    ...
}

TimeslotISCPInfoItem-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Information-RL-SetupRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

RadioLinkSetupResponseFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE CRNC-CommunicationContextID
    PRESENCE  mandatory }|
    { ID      id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE NodeB-CommunicationContextID          PRESENCE
    mandatory }|
    { ID      id-CommunicationControlPortID           CRITICALITY ignore          TYPE CommunicationControlPortID          PRESENCE
    mandatory }|
    { ID      id-RL-InformationResponseList-RL-SetupRspFDD CRITICALITY ignore          TYPE RL-InformationResponseList-RL-SetupRspFDD
    PRESENCE  mandatory }|
    { ID      id-TFCI2-BearerInformationResponse      CRITICALITY ignore          TYPE TFCI2-BearerInformationResponse PRESENCE optional }|
    { ID      id-CriticalityDiagnostics               CRITICALITY ignore          TYPE CriticalityDiagnostics              PRESENCE
    optional },
    ...
}

RadioLinkSetupResponseFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationResponseList-RL-SetupRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container{{ RL-InformationResponseItemIE-RL-SetupRspFDD }}

RL-InformationResponseItemIE-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-RL-InformationResponseItem-RL-SetupRspFDD
      PRESENCE mandatory}
  }

RL-InformationResponseItem-RL-SetupRspFDD ::= SEQUENCE {
  rL-ID RL-ID,
  rL-Set-ID RL-Set-ID,
  received-total-wide-band-power Received-total-wide-band-power-Value,
  diversityIndication DiversityIndication-RL-SetupRspFDD,
  -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
  -- the tabular message format in subclause 9.1.
  dSCH-InformationResponseList DSCH-InformationResponseList-RL-SetupRspFDD OPTIONAL,
  sSDT-SupportIndicator SSdT-SupportIndicator,
  iE-Extensions ProtocolExtensionContainer { { RL-InformationResponseItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
  ...
}

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

DiversityIndication-RL-SetupRspFDD ::= CHOICE {
  combining Combining-RL-SetupRspFDD,
  nonCombiningOrFirstRL NonCombiningOrFirstRL-RL-SetupRspFDD
}

Combining-RL-SetupRspFDD ::= SEQUENCE {
  rL-ID RL-ID,
  iE-Extensions ProtocolExtensionContainer { { Combining-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
  ...
}

Combining-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

NonCombiningOrFirstRL-RL-SetupRspFDD ::= SEQUENCE {
  dCH-InformationResponse DCH-InformationResponse,
  iE-Extensions ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs } } OPTIONAL,
  ...
}

NonCombiningOrFirstRLItem-RL-SetupRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DSCH-InformationResponseList-RL-SetupRspFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-SetupRspFDD }}

DSCH-InformationResponseListIEs-RL-SetupRspFDD NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationResponse CRITICALITY ignore TYPE DSCH-InformationResponse PRESENCE mandatory }
}

-- *****

```

```

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

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

RadioLinkSetupResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE CRNC-CommunicationContextID
    PRESENCE mandatory } |
    { ID id-NodeB-CommunicationContextID        CRITICALITY ignore          TYPE NodeB-CommunicationContextID
    PRESENCE mandatory } |
    { ID id-CommunicationControlPortID         CRITICALITY ignore          TYPE CommunicationControlPortID
    PRESENCE mandatory } |
    { ID id-RL-InformationResponse-RL-SetupRspTDD CRITICALITY ignore          TYPE RL-InformationResponse-RL-SetupRspTDD
    PRESENCE mandatory } |
    { ID id-CriticalityDiagnostics             CRITICALITY ignore          TYPE CriticalityDiagnostics
    PRESENCE optional } ,
    ...
}

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

RL-InformationResponse-RL-SetupRspTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    uL-TimeSlot-ISCP-Info UL-TimeSlot-ISCP-Info,
    ul-PhysCH-SF-Variation UL-PhysCH-SF-Variation,
    dCH-InformationResponseList DCH-InformationResponseList-RL-SetupRspTDD    OPTIONAL,
    dSCH-InformationResponseList DSCH-InformationResponseList-RL-SetupRspTDD    OPTIONAL,
    uSCH-InformationResponseList USCH-InformationResponseList-RL-SetupRspTDD    OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { RL-InformationResponseList-RL-SetupRspTDD-ExtIEs } }    OPTIONAL,
    ...
}

RL-InformationResponseList-RL-SetupRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container{{ DCH-InformationResponseListIEs-RL-SetupRspTDD }}

DCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DCH-InformationResponse CRITICALITY ignore          TYPE DCH-InformationResponse PRESENCE mandatory}
}

DSCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-SetupRspTDD }}

DSCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {

```

```

    { ID id-DSCH-InformationResponse CRITICALITY ignore TYPE DSCH-InformationResponse PRESENCE mandatory }
  }

USCH-InformationResponseList-RL-SetupRspTDD ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-SetupRspTDD }}

USCH-InformationResponseListIEs-RL-SetupRspTDD NBAP-PROTOCOL-IES ::= {
  { ID id-USCH-InformationResponse CRITICALITY ignore TYPE USCH-InformationResponse PRESENCE mandatory }
}

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

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

RadioLinkSetupFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID PRESENCE mandatory }|
  { ID id-NodeB-CommunicationContextID CRITICALITY ignore TYPE NodeB-CommunicationContextID PRESENCE conditional }|
  -- This IE is present if at least one of the radio links has been successfully set up
  { ID id-CommunicationControlPortID CRITICALITY ignore TYPE CommunicationControlPortID PRESENCE optional }|
  { ID id-CauseLevel-RL-SetupFailureFDD CRITICALITY ignore TYPE CauseLevel-RL-SetupFailureFDD PRESENCE mandatory }|
  { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional },
  ...
}

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

CauseLevel-RL-SetupFailureFDD ::= CHOICE {
  generalCause          GeneralCauseList-RL-SetupFailureFDD,
  rLSpecificCause       RLSpecificCauseList-RL-SetupFailureFDD,
  ...
}

GeneralCauseList-RL-SetupFailureFDD ::= SEQUENCE {
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureFDD-ExtIEs} } OPTIONAL,
  ...
}

GeneralCauseItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
}
RLSpecificCauseList-RL-SetupFailureFDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespList-RL-SetupFailureFDD      Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD,
    successful-RL-InformationRespList-RL-SetupFailureFDD        Successful-RL-InformationRespList-RL-SetupFailureFDD OPTIONAL,
    iE-Extensions                                               ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs } } OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ Unsuccessful-RL-
InformationRespItemIE-RL-SetupFailureFDD }}

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD      CRITICALITY      ignore      TYPE      Unsuccessful-RL-InformationRespItem-RL-
SetupFailureFDD      PRESENCE      mandatory}
}

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

Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Successful-RL-InformationRespList-RL-SetupFailureFDD ::= SEQUENCE (SIZE (1.. maxNrOfRLs)) OF ProtocolIE-Single-Container {{ Successful-RL-
InformationRespItemIE-RL-SetupFailureFDD }}

Successful-RL-InformationRespItemIE-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID      id-Successful-RL-InformationRespItem-RL-SetupFailureFDD      CRITICALITY      ignore      TYPE      Successful-RL-InformationRespItem-RL-
SetupFailureFDD      PRESENCE      mandatory}
}

Successful-RL-InformationRespItem-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                RL-ID,
    rL-Set-ID            RL-Set-ID,
    received-total-wide-band-power          Received-total-wide-band-power-Value,
    diversityIndication DiversityIndication-RL-SetupFailureFDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    dSCH-InformationResponseList            DSCH-InformationRespList-RL-SetupFailureFDD      OPTIONAL,
    tFCI2-BearerInformationResponse         TFCI2-BearerInformationResponse      OPTIONAL,
    sSDT-SupportIndicator                   SSdT-SupportIndicator,

```

```

    iE-Extensions          ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs } }
    OPTIONAL,
    ...
}

Successful-RL-InformationRespItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-SetupFailureFDD ::= CHOICE {
    combining                Combining-RL-SetupFailureFDD,
    nonCombiningOrFirstRL   NonCombiningOrFirstRL-RL-SetupFailureFDD
}

Combining-RL-SetupFailureFDD ::= SEQUENCE {
    rL-ID                    RL-ID,
    iE-Extensions           ProtocolExtensionContainer { { CombiningItem-RL-SetupFailureFDD-ExtIEs } }    OPTIONAL,
    ...
}

CombiningItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

NonCombiningOrFirstRL-RL-SetupFailureFDD ::= SEQUENCE {
    dCH-InformationResponse  DCH-InformationResponse,
    iE-Extensions           ProtocolExtensionContainer { { NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs } }
    OPTIONAL,
    ...
}

NonCombiningOrFirstRLItem-RL-SetupFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-InformationRespList-RL-SetupFailureFDD ::= ProtocolIE-Single-Container {{ DSCH-InformationRespListIEs-RL-SetupFailureFDD }}

DSCH-InformationRespListIEs-RL-SetupFailureFDD NBAP-PROTOCOL-IES ::= {
    { ID id-DSCH-InformationResponse    CRITICALITY ignore    TYPE DSCH-InformationResponse    PRESENCE mandatory }
}

-- *****
--
-- RADIO LINK SETUP FAILURE TDD
--
-- *****

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

```

```

RadioLinkSetupFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID
    PRESENCE mandatory } |
  { ID id-CauseLevel-RL-SetupFailureTDD
    PRESENCE mandatory } |
  { ID id-CriticalityDiagnostics
    PRESENCE optional },
  ...
}

RadioLinkSetupFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CauseLevel-RL-SetupFailureTDD ::= CHOICE {
  generalCause      GeneralCauseList-RL-SetupFailureTDD,
  rLSpecificCause   RLSpecificCauseList-RL-SetupFailureTDD,
  ...
}

GeneralCauseList-RL-SetupFailureTDD ::= SEQUENCE {
  cause              Cause,
  iE-Extensions      ProtocolExtensionContainer { { GeneralCauseItem-RL-SetupFailureTDD-ExtIEs } } OPTIONAL,
  ...
}

GeneralCauseItem-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RLSpecificCauseList-RL-SetupFailureTDD ::= SEQUENCE {
  unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD,
  iE-Extensions      ProtocolExtensionContainer { { RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs } }
  OPTIONAL,
  ...
}

RLSpecificCauseItem-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Unsuccessful-RL-InformationRespItem-RL-SetupFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD}
}

Unsuccessful-RL-InformationRespItemIE-RL-SetupFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD      CRITICALITY ignore      TYPE Unsuccessful-RL-InformationResp-RL-
SetupFailureTDD      PRESENCE mandatory }
}

Unsuccessful-RL-InformationResp-RL-SetupFailureTDD ::= SEQUENCE {
  rL-ID              RL-ID,
  cause              Cause,
}

```

```

    iE-Extensions          ProtocolExtensionContainer { { Unsuccessful-RL-InformationResp-RL-SetupFailureTDD-ExtIEs } }
    OPTIONAL,
    ...
}

Unsuccessful-RL-InformationResp-RL-SetupFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

RadioLinkAdditionRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY reject          TYPE NodeB-CommunicationContextID          PRESENCE
      mandatory } |
    { ID id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD          CRITICALITY reject          TYPE Compressed-Mode-Deactivation-Flag-RL-
      AdditionRqstFDD PRESENCE optional } |
    { ID id-RL-InformationList-RL-AdditionRqstFDD          CRITICALITY notify          TYPE RL-InformationList-RL-AdditionRqstFDD
      PRESENCE mandatory },
    ...
}

RadioLinkAdditionRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

RL-InformationItem-RL-AdditionRqstFDD ::= SEQUENCE {
    rL-ID              RL-ID,
    c-ID              C-ID,
    frameOffset       FrameOffset,
    chipOffset        ChipOffset,
    diversityControlField DiversityControlField,
    dl-CodeInformation FDD-DL-CodeInformation,
    initialDL-TransmissionPower DL-Power          OPTIONAL,
    maximumDL-Power   DL-Power          OPTIONAL,
    minimumDL-Power   DL-Power          OPTIONAL,
}

```



```

sSDT-CellIdentity          SSDT-Cell-Identity          OPTIONAL,
transmitDiversityIndicator TransmitDiversityIndicator OPTIONAL,
iE-Extensions              ProtocolExtensionContainer { { RL-InformationItem-RL-AdditionRqstFDD-ExtIEs } } OPTIONAL,
...
}

RL-InformationItem-RL-AdditionRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

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

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

RadioLinkAdditionRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-NodeB-CommunicationContextID          CRITICALITY   reject          TYPE   NodeB-CommunicationContextID
  PRESENCE  mandatory }|
  { ID      id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD CRITICALITY   reject          TYPE   UL-CCTrCH-InformationList-RL-AdditionRqstTDD
  PRESENCE  optional }|
  { ID      id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD CRITICALITY   reject          TYPE   DL-CCTrCH-InformationList-RL-AdditionRqstTDD
  PRESENCE  optional }|
  { ID      id-RL-Information-RL-AdditionRqstTDD          CRITICALITY   reject          TYPE   RL-Information-RL-AdditionRqstTDD
  PRESENCE  mandatory },
  ...
}

RadioLinkAdditionRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}

UL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationItem-RL-AdditionRqstTDD

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
  cCTrCH-ID          CCTrCH-ID,
  uL-DPCH-Information UL-DPCH-InformationList-RL-AdditionRqstTDD OPTIONAL,
  iE-Extensions      ProtocolExtensionContainer { { UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs } } OPTIONAL,
  ...
}

UL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

UL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

```

```

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

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

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

DL-CCTrCH-InformationList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationItem-RL-AdditionRqstTDD

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD ::= SEQUENCE {
  cCTrCH-ID              CCTrCH-ID,
  dL-DPCH-Information    DL-DPCH-InformationList-RL-AdditionRqstTDD    OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs } }    OPTIONAL,
  ...
}

DL-CCTrCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-DPCH-InformationList-RL-AdditionRqstTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationItemIE-RL-AdditionRqstTDD }}

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

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

DL-DPCH-InformationItem-RL-AdditionRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Information-RL-AdditionRqstTDD ::= SEQUENCE {
  rL-ID                RL-ID,

```

```

c-ID          C-ID,
frameOffset   FrameOffset,
diversityControlField DiversityControlField,
initial-DL-Transmission-Power DL-Power          OPTIONAL,
maximumDL-Power DL-Power          OPTIONAL,
minimumDL-Power DL-Power          OPTIONAL,
timeslotISCPInfoList TimeslotISCPInfoList-RL-AdditionRqstTDD OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { RL-information-RL-AdditionRqstTDD-ExtIEs } } OPTIONAL,
...
}

RL-information-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

TimeslotISCPInfoList-RL-AdditionRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF TimeslotISCPInfoItem-RL-AdditionRqstTDD

TimeslotISCPInfoItem-RL-AdditionRqstTDD ::= SEQUENCE {
timeslot          TimeSlot,
dL-TimeslotISCP  DL-TimeslotISCP,
iE-Extensions    ProtocolExtensionContainer { {TimeslotISCPInfoItem-RL-AdditionRqstTDD-ExtIEs} } OPTIONAL,
...
}

TimeslotISCPInfoItem-RL-AdditionRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}

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

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

RadioLinkAdditionResponseFDD-IEs NBAP-PROTOCOL-IEs ::= {
{ ID id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE CRNC-CommunicationContextID
PRESENCE mandatory }|
{ ID id-RL-InformationResponseList-RL-AdditionRspFDD CRITICALITY ignore          TYPE RL-InformationResponseList-RL-
AdditionRspFDD PRESENCE mandatory }|
{ ID id-CriticalityDiagnostics          CRITICALITY ignore          TYPE CriticalityDiagnostics
PRESENCE optional },
...
}

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

```

```
RL-InformationResponseList-RL-AdditionRspFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationResponseItemIE-RL-AdditionRspFDD }}
```

```
RL-InformationResponseItemIE-RL-AdditionRspFDD NBAP-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,
  received-total-wide-band-power          Received-total-wide-band-power-Value,
  diversityIndication DiversityIndication-RL-AdditionRspFDD,
  -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
  -- the tabular message format in subclause 9.1.
  sSDT-SupportIndicator SSDT-SupportIndicator,
  iE-Extensions         ProtocolExtensionContainer { { RL-InformationResponseItem-RL-AdditionRspFDD-ExtIEs} }
  OPTIONAL,
  ...
}
```

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

```
DiversityIndication-RL-AdditionRspFDD ::= CHOICE {
  combining          Combining-RL-AdditionRspFDD,
  non-combining      Non-Combining-RL-AdditionRspFDD
}
```

```
Combining-RL-AdditionRspFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  iE-Extensions         ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspFDD-ExtIEs} }
  OPTIONAL,
  ...
}
```

```
CombiningItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
Non-Combining-RL-AdditionRspFDD ::= SEQUENCE {
  dCH-InformationResponse DCH-InformationResponse,
  iE-Extensions         ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspFDD-ExtIEs} }
  OPTIONAL,
  ...
}
```

```
Non-CombiningItem-RL-AdditionRspFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

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

```

-- RADIO LINK ADDITION RESPONSE TDD
--
-- *****
RadioLinkAdditionResponseTDD ::= SEQUENCE {
    protocolIEs          ProtocolIE-Container  {{RadioLinkAdditionResponseTDD-IEs}},
    protocolExtensions  ProtocolExtensionContainer  {{RadioLinkAdditionResponseTDD-Extensions}}  OPTIONAL,
    ...
}

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

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

RL-InformationResponse-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    uL-TimeSlot-ISCP-Info  UL-TimeSlot-ISCP-Info,
    ul-PhysCH-SF-Variation  UL-PhysCH-SF-Variation,
    dCH-Information        DCH-Information-RL-AdditionRspTDD          OPTIONAL,
    dSCH-InformationResponseList  DSCH-InformationResponseList-RL-AdditionRspTDD  OPTIONAL,
    uSCH-InformationResponseList  USCH-InformationResponseList-RL-AdditionRspTDD  OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { RL-InformationResponse-RL-AdditionRspTDD-ExtIEs} }  OPTIONAL,
    ...
}

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

DCH-Information-RL-AdditionRspTDD ::= SEQUENCE {
    diversityIndication  DiversityIndication-RL-AdditionRspTDD,
    -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
    -- the tabular message format in subclause 9.1.
    iE-Extensions        ProtocolExtensionContainer { { DCH-Information-RL-AdditionRspTDD-ExtIEs} }  OPTIONAL,
    ...
}

DCH-Information-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DiversityIndication-RL-AdditionRspTDD ::= CHOICE {
    combining              Combining-RL-AdditionRspTDD,

```

```

    non-Combining                               Non-Combining-RL-AdditionRspTDD
  }

Combining-RL-AdditionRspTDD ::= SEQUENCE {
    rL-ID                                         RL-ID,
    iE-Extensions                               ProtocolExtensionContainer { { CombiningItem-RL-AdditionRspTDD-ExtIEs} }    OPTIONAL,
    ...
}

CombiningItem-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Non-Combining-RL-AdditionRspTDD ::= SEQUENCE {
    dCH-InformationResponse                     DCH-InformationResponse,
    iE-Extensions                               ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionRspTDD-ExtIEs} }    OPTIONAL,
    ...
}

Non-CombiningItem-RL-AdditionRspTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DSCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-AdditionRspTDD }}

DSCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationResponse    CRITICALITY ignore    TYPE DSCH-InformationResponse    PRESENCE mandatory }
}

USCH-InformationResponseList-RL-AdditionRspTDD ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-AdditionRspTDD }}

USCH-InformationResponseListIEs-RL-AdditionRspTDD NBAP-PROTOCOL-IES ::= {
  { ID id-USCH-InformationResponse    CRITICALITY ignore    TYPE USCH-InformationResponse    PRESENCE mandatory }
}

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

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

RadioLinkAdditionFailureFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID    CRITICALITY ignore    TYPE CRNC-CommunicationContextID    PRESENCE mandatory }|
  { ID id-CauseLevel-RL-AdditionFailureFDD    CRITICALITY ignore    TYPE CauseLevel-RL-AdditionFailureFDD    PRESENCE mandatory }|
  { ID id-CriticalityDiagnostics          CRITICALITY ignore    TYPE CriticalityDiagnostics          PRESENCE optional }|
  ...
}

```

```

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

CauseLevel-RL-AdditionFailureFDD ::= CHOICE {
  generalCause      GeneralCauseList-RL-AdditionFailureFDD,
  rLSpecificCause   RLSpecificCauseList-RL-AdditionFailureFDD,
  ...
}

GeneralCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
  cause              Cause,
  iE-Extensions     ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs } } OPTIONAL,
  ...
}

GeneralCauseItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RLSpecificCauseList-RL-AdditionFailureFDD ::= SEQUENCE {
  unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD      Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD,
  successful-RL-InformationRespList-RL-AdditionFailureFDD        Successful-RL-InformationRespList-RL-AdditionFailureFDD OPTIONAL,
  iE-Extensions           ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs } } OPTIONAL,
  ...
}

RLSpecificCauseItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { { Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureFDD } }

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD      CRITICALITY   ignore      TYPE   Unsuccessful-RL-InformationRespItem-
  RL-AdditionFailureFDD      PRESENCE      mandatory}
}

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

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

Successful-RL-InformationRespList-RL-AdditionFailureFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { { Successful-RL-
InformationRespItemIE-RL-AdditionFailureFDD } }

Successful-RL-InformationRespItemIE-RL-AdditionFailureFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD      CRITICALITY      ignore      TYPE      Successful-RL-InformationRespItem-RL-
AdditionFailureFDD      PRESENCE      mandatory }
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  rL-Set-ID            RL-Set-ID,
  received-total-wide-band-power      Received-total-wide-band-power-Value,
  diversityIndication      DiversityIndication-RL-AdditionFailureFDD,
  -- This IE represents both the Diversity Indication IE and the choice based on the diversity indication as described in
  -- the tabular message format in subclause 9.1.
  sSDT-SupportIndicator      SSDT-SupportIndicator,
  iE-Extensions              ProtocolExtensionContainer { { Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs } }
  OPTIONAL,
  ...
}

Successful-RL-InformationRespItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DiversityIndication-RL-AdditionFailureFDD ::= CHOICE {
  combining              Combining-RL-AdditionFailureFDD,
  non-Combining          Non-Combining-RL-AdditionFailureFDD
}

Combining-RL-AdditionFailureFDD ::= SEQUENCE {
  rL-ID                RL-ID,
  iE-Extensions        ProtocolExtensionContainer { { CombiningItem-RL-AdditionFailureFDD-ExtIEs } }      OPTIONAL,
  ...
}

CombiningItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Non-Combining-RL-AdditionFailureFDD ::= SEQUENCE {
  dCH-InformationResponse      DCH-InformationResponse,
  iE-Extensions                ProtocolExtensionContainer { { Non-CombiningItem-RL-AdditionFailureFDD-ExtIEs } }      OPTIONAL,
  ...
}

Non-CombiningItem-RL-AdditionFailureFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK ADDITION FAILURE TDD

```



```

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

RadioLinkAdditionFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID          CRITICALITY    ignore    TYPE    CRNC-CommunicationContextID
    PRESENCE  mandatory }|
    { ID      id-CauseLevel-RL-AdditionFailureTDD     CRITICALITY    ignore    TYPE    CauseLevel-RL-AdditionFailureTDD
    PRESENCE  mandatory }|
    { ID      id-CriticalityDiagnostics              CRITICALITY    ignore    TYPE    CriticalityDiagnostics
    PRESENCE  optional },
    ...
}

RadioLinkAdditionFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CauseLevel-RL-AdditionFailureTDD ::= CHOICE {
    generalCause          GeneralCauseList-RL-AdditionFailureTDD,
    rLSpecificCause      RLSpecificCauseList-RL-AdditionFailureTDD,
    ...
}

GeneralCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
    cause                 Cause,
    iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs } }    OPTIONAL,
    ...
}

GeneralCauseItem-RL-AdditionFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-AdditionFailureTDD ::= SEQUENCE {
    unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD,
    iE-Extensions        ProtocolExtensionContainer { { RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs } }
    OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-AdditionFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unsuccessful-RL-InformationRespItem-RL-AdditionFailureTDD ::= ProtocolIE-Single-Container { {Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD} }

```

```

Unsuccessful-RL-InformationRespItemIE-RL-AdditionFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD   CRITICALITY ignore   TYPE Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD
    PRESENCE mandatory }
}

Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { { Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD-ExtIEs } }
  OPTIONAL,
  ...
}

Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION PREPARE FDD
--
-- *****

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

RadioLinkReconfigurationPrepareFDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID          CRITICALITY reject          TYPE NodeB-CommunicationContextID          PRESENCE
    mandatory } |
  { ID id-UL-DPCH-Information-RL-ReconfPrepFDD   CRITICALITY reject          TYPE UL-DPCH-Information-RL-ReconfPrepFDD   PRESENCE
    optional } |
  { ID id-DL-DPCH-Information-RL-ReconfPrepFDD   CRITICALITY reject          TYPE DL-DPCH-Information-RL-ReconfPrepFDD   PRESENCE
    optional } |
  { ID id-FDD-DCHs-to-Modify                      CRITICALITY reject          TYPE FDD-DCHs-to-Modify                      PRESENCE optional } |
  { ID id-DCHs-to-Add-FDD                         CRITICALITY reject          TYPE DCH-FDD-Information                      PRESENCE optional } |
  { ID id-DCH-DeleteList-RL-ReconfPrepFDD         CRITICALITY reject          TYPE DCH-DeleteList-RL-ReconfPrepFDD         PRESENCE
    optional } |
  { ID id-DSCH-ModifyList-RL-ReconfPrepFDD        CRITICALITY reject          TYPE DSCH-ModifyList-RL-ReconfPrepFDD        PRESENCE
    optional } |
  { ID id-DSCHs-to-Add-FDD                        CRITICALITY reject          TYPE DSCH-FDD-Information                    PRESENCE optional } |
  { ID id-DSCH-DeleteList-RL-ReconfPrepFDD        CRITICALITY reject          TYPE DSCH-DeleteList-RL-ReconfPrepFDD        PRESENCE
    optional } |
  { ID id-TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD CRITICALITY reject          TYPE TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD PRESENCE optional } |
  { ID id-RL-InformationList-RL-ReconfPrepFDD     CRITICALITY reject          TYPE RL-InformationList-RL-ReconfPrepFDD     PRESENCE
    optional } |
  { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject          TYPE Transmission-Gap-Pattern-Sequence-Information PRESENCE optional },
  ...
}

```

```

RadioLinkReconfigurationPrepareFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

UL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfPrepFDD ::= SEQUENCE {
    tFCS                             TFCS                            OPTIONAL,
    dl-DPCH-SlotFormat              DL-DPCH-SlotFormat            OPTIONAL,
    tFCI-SignallingMode              TFCI-SignallingMode            OPTIONAL,
    tFCI-Presence                    TFCI-Presence                  OPTIONAL,
    -- This IE is only present if the DL DPCH Slot Format is equal to any of the value from 12 to 16
    multiplexingPosition             MultiplexingPosition            OPTIONAL,
    pDSCH-CodeMapping                PDSCH-CodeMapping              OPTIONAL,
    pDSCH-RL-ID                      RL-ID                          OPTIONAL,
    limitedPowerIncrease              LimitedPowerIncrease            OPTIONAL,
    iE-Extensions                    ProtocolExtensionContainer { { DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs } } OPTIONAL,
    ...
}

DL-DPCH-Information-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepFDD

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

DCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```

}

DSCH-ModifyList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Single-Container {{DSCH-ModifyItemIE-RL-ReconfPrepFDD }}

DSCH-ModifyItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-DSCH-ModifyItem-RL-ReconfPrepFDD      CRITICALITY reject      TYPE      DSCH-ModifyItem-RL-ReconfPrepFDD      PRESENCE mandatory}
}

DSCH-ModifyItem-RL-ReconfPrepFDD ::= SEQUENCE {
  dSCH-ID          DSCH-ID,
  dl-TransportFormatSet      TransportFormatSet      OPTIONAL,
  allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
  frameHandlingPriority      FrameHandlingPriority  OPTIONAL,
  toAWS              ToAWS              OPTIONAL,
  toAWE              ToAWE              OPTIONAL,
  transportBearerRequestIndicator TransportBearerRequestIndicator,
  iE-Extensions       ProtocolExtensionContainer { { DSCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs} }      OPTIONAL,
  ...
}

DSCH-ModifyItem-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DSCH-DeleteList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF ProtocolIE-Single-Container {{DSCH-DeleteItemIE-RL-ReconfPrepFDD }}

DSCH-DeleteItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-DSCH-DeleteItem-RL-ReconfPrepFDD      CRITICALITY reject      TYPE      DSCH-DeleteItem-RL-ReconfPrepFDD      PRESENCE mandatory}
}

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

DSCH-DeleteItem-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TFCI2-BearerSpecificInformation-RL-ReconfPrepFDD ::= CHOICE {
  addOrModify      AddOrModify-TFCI2-RL-ReconfPrepFDD,
  delete           NULL
}

AddOrModify-TFCI2-RL-ReconfPrepFDD ::= SEQUENCE {
  toAWS            ToAWS,
  toAWE            ToAWE,
  iE-Extensions       ProtocolExtensionContainer { { AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs} }      OPTIONAL,
  ...
}

AddOrModify-TFCI2-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
RL-InformationList-RL-ReconfPrepFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-ReconfPrepFDD }}

RL-InformationItemIE-RL-ReconfPrepFDD NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-InformationItem-RL-ReconfPrepFDD      CRITICALITY    reject          TYPE  RL-InformationItem-RL-ReconfPrepFDD    PRESENCE
    mandatory}
}

RL-InformationItem-RL-ReconfPrepFDD ::= SEQUENCE {
  rL-ID                               RL-ID,
  dl-CodeInformation                   FDD-DL-CodeInformation    OPTIONAL,
  maxDL-Power                          DL-Power                  OPTIONAL,
  minDL-Power                          DL-Power                  OPTIONAL,
  sSDT-Indication                      SSDT-Indication          OPTIONAL,
  sSDT-Cell-Identity                  SSDT-Cell-Identity       OPTIONAL,
  -- The IE may be present if the SSDT Indication is set to SSDT Active in the UE
  transmitDiversityIndicator          TransmitDiversityIndicator OPTIONAL,
  -- This IE is present if Diversity Mode IE in UL DPCH Information group is present, unless it is equal to "none"
  iE-Extensions                       ProtocolExtensionContainer {{ RL-InformationItem-RL-ReconfPrepFDD-ExtIEs }}  OPTIONAL,
  ...
}

RL-InformationItem-RL-ReconfPrepFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

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

RadioLinkReconfigurationPrepareTDD-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-NodeB-CommunicationContextID      CRITICALITY    reject          TYPE  NodeB-CommunicationContextID
    PRESENCE  mandatory } |
  { ID      id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD      CRITICALITY    reject          TYPE  UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
    PRESENCE  optional } |
  { ID      id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD      CRITICALITY    reject          TYPE  UL-CCTrCH-InformationModifyList-RL-
ReconfPrepTDD      PRESENCE  optional } |
  { ID      id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD      CRITICALITY    reject          TYPE  UL-CCTrCH-InformationDeleteList-RL-
ReconfPrepTDD      PRESENCE  optional } |
  { ID      id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD      CRITICALITY    reject          TYPE  DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD
    PRESENCE  optional } |
  { ID      id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD      CRITICALITY    reject          TYPE  DL-CCTrCH-InformationModifyList-RL-
ReconfPrepTDD      PRESENCE  optional } |
}

```

**3GPP TS 25.433 version 3.4.1 Release 1999**

**325**

**ETSI TS 125 433 V3.4.1 (2000-12)**

```

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

RadioLinkReconfigurationPrepareTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}

UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

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

UL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

UL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
{ ID id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE UL-DPCH-InformationAddItem-RL-ReconfPrepTDD PRESENCE
mandatory }
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
repetitionPeriod RepetitionPeriod,
repetitionLength RepetitionLength,

```

```

    tdd-DPCHOffset          TDD-DPCHOffset,
    uL-Timeslot-Information UL-Timeslot-Information,
    iE-Extensions          ProtocolExtensionContainer { { UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

UL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCTrCH-ID          CCTrCH-ID,
    tFCS              TFCS                                OPTIONAL,
    tFCI-Coding       TFCI-Coding                        OPTIONAL,
    punctureLimit     PunctureLimit                      OPTIONAL,
    ul-DPCH-InformationAddList UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD OPTIONAL,
    ul-DPCH-InformationModifyList UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD OPTIONAL,
    ul-DPCH-InformationDeleteList UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD OPTIONAL,
    iE-Extensions     ProtocolExtensionContainer { { UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs} }
    OPTIONAL,
    ...
}

UL-CCTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD
    PRESENCE mandatory }
}

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

UL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD }}

UL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {

```

```

{ ID id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE UL-DPCH-InformationModify-ModifyItem-RL-
ReconfPrepTDD PRESENCE mandatory }
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod          OPTIONAL,
    repetitionLength          RepetitionLength          OPTIONAL,
    tdd-DPCHOffset            TDD-DPCHOffset            OPTIONAL,
    uL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD          UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD          OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

UL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    timeSlot                  TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType          OPTIONAL,
    tFCI-Presence              TFCI-Presence          OPTIONAL,
    uL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD          UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD          OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

UL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dPCH-ID                    DPCH-ID,
    tdd-ChannelisationCode      TDD-ChannelisationCode          OPTIONAL,
    iE-Extensions              ProtocolExtensionContainer { { UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

UL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container { { UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD } }

UL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {

```



```

    { ID id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE UL-DPCH-InformationModify-DeleteListIE-RL-
    ReconfPrepTDD PRESENCE mandatory }
  }

```

```

UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF UL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD

```

```

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
  dPCH-ID DPCH-ID,
  iE-Extensions ProtocolExtensionContainer { { UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }
  OPTIONAL,
  ...
}

```

```

UL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

```

```

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

```

```

UL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationAddItem-RL-ReconfPrepTDD

```

```

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

```

```

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

```

```

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

```

```

CCTrCH-TPCAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
  cCTrCH-ID CCTrCH-ID,

```

```

    iE-Extensions          ProtocolExtensionContainer { { CcTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs } }      OPTIONAL,
    ...
}

CcTrCH-TPCAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationAddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container { { DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD } }

DL-DPCH-InformationAddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE DL-DPCH-InformationAddItem-RL-ReconfPrepTDD      PRESENCE
mandatory }
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod,
    repetitionLength          RepetitionLength,
    tdd-DPCHOffset            TDD-DPCHOffset,
    dl-Timeslot-Information    DL-Timeslot-Information,
    iE-Extensions              ProtocolExtensionContainer { { DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs } }      OPTIONAL,
    ...
}

DL-DPCH-InformationAddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CcTrCH-InformationModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCcTrCHs)) OF DL-CcTrCH-InformationModifyItem-RL-ReconfPrepTDD

DL-CcTrCH-InformationModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCtRcH-ID                  CcTrCH-ID,
    tFCS                        TFCS                                OPTIONAL,
    tFCI-Coding                 TFCI-Coding                            OPTIONAL,
    punctureLimit               PunctureLimit                        OPTIONAL,
    cCtRcH-TPCList              CcTrCH-TPCModifyList-RL-ReconfPrepTDD        OPTIONAL,
    dl-DPCH-InformationAddList    DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD    OPTIONAL,
    dl-DPCH-InformationModifyList DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD  OPTIONAL,
    dl-DPCH-InformationDeleteList DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD  OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { DL-CcTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs } }
OPTIONAL,
    ...
}

DL-CcTrCH-InformationModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CcTrCH-TPCModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCcTrCHs)) OF CcTrCH-TPCModifyItem-RL-ReconfPrepTDD

CcTrCH-TPCModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    cCtRcH-ID                  CcTrCH-ID,
    iE-Extensions                ProtocolExtensionContainer { { CcTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs } }      OPTIONAL,

```

```

}
...
}
CCTrCH-TPCModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
DL-DPCH-InformationModify-AddList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD }}
DL-DPCH-InformationModify-AddListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
{ ID id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD
PRESENCE mandatory }
}
DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD ::= SEQUENCE {
repetitionPeriod          RepetitionPeriod,
repetitionLength          RepetitionLength,
tdd-DPCHOffset           TDD-DPCHOffset,
dL-Timeslot-Information  DL-Timeslot-Information,
iE-Extensions            ProtocolExtensionContainer { { DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs } }
OPTIONAL,
...
}
DL-DPCH-InformationModify-AddItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
DL-DPCH-InformationModify-ModifyList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container {{ DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD }}
DL-DPCH-InformationModify-ModifyListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
{ ID id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD  CRITICALITY reject          TYPE DL-DPCH-InformationModify-ModifyItem-RL-
ReconfPrepTDD          PRESENCE mandatory }
}
DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
repetitionPeriod          RepetitionPeriod          OPTIONAL,
repetitionLength          RepetitionLength          OPTIONAL,
tdd-DPCHOffset           TDD-DPCHOffset           OPTIONAL,
dL-Timeslot-InformationAddModify-ModifyList-RL-ReconfPrepTDD  DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD          OPTIONAL,
iE-Extensions            ProtocolExtensionContainer { { DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs } }
OPTIONAL,
...
}
DL-DPCH-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
DL-Timeslot-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-Timeslot-InformationModify-ModifyItem-RL-
ReconfPrepTDD
DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {

```

```

    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType      OPTIONAL,
    tFCI-Presence           TFCI-Presence                    OPTIONAL,
    dl-Code-InformationModify-ModifyList-RL-ReconfPrepTDD DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DL-Timeslot-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
DL-Code-InformationModify-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (0..maxNrOfDPCHs)) OF DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dpch-ID                DPCH-ID,
    tdd-ChannelisationCode TDD-ChannelisationCode          OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DL-Code-InformationModify-ModifyItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-InformationModify-DeleteList-RL-ReconfPrepTDD ::= ProtocolIE-Single-Container { { DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD } }

DL-DPCH-InformationModify-DeleteListIEs-RL-ReconfPrepTDD NBAP-PROTOCOL-IES ::= {
    { ID id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD CRITICALITY reject TYPE DL-DPCH-InformationModify-DeleteListIE-RL-
ReconfPrepTDD PRESENCE mandatory }
}

DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDPCHs)) OF DL-DPCH-InformationModify-DeleteItem-RL-
ReconfPrepTDD

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dpch-ID                DPCH-ID,
    iE-Extensions          ProtocolExtensionContainer { { DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs } }
    OPTIONAL,
    ...
}

DL-DPCH-InformationModify-DeleteItem-RL-ReconfPrepTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD

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

```

```

}
...
}
DL-CCTrCH-InformationDeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfPrepTDD
DCH-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    iE-Extensions        ProtocolExtensionContainer { { DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}
DCH-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
DSCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-ModifyItem-RL-ReconfPrepTDD
DSCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    cCTrCH-ID              CCTrCH-ID                OPTIONAL,
    transportFormatSet     TransportFormatSet        OPTIONAL,
    allocationRetentionPriority  AllocationRetentionPriority  OPTIONAL,
    frameHandlingPriority   FrameHandlingPriority   OPTIONAL,
    toAWS                   ToAWS                    OPTIONAL,
    toAWE                   ToAWE                    OPTIONAL,
    transportBearerRequestIndicator  TransportBearerRequestIndicator,
    iE-Extensions        ProtocolExtensionContainer { { DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}
DSCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
DSCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-Information-DeleteItem-RL-ReconfPrepTDD
DSCH-Information-DeleteItem-RL-ReconfPrepTDD ::= SEQUENCE {
    dSCH-ID                DSCH-ID,
    iE-Extensions        ProtocolExtensionContainer { { DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs} }    OPTIONAL,
    ...
}
DSCH-Information-DeleteItem-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
...
}
USCH-Information-ModifyList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-ModifyItem-RL-ReconfPrepTDD
USCH-Information-ModifyItem-RL-ReconfPrepTDD ::= SEQUENCE {

```

```

    uSCH-ID                USCH-ID,
    transportFormatSet     TransportFormatSet    OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    cCTrCH-ID              CCTrCH-ID            OPTIONAL,
    transportBearerRequestIndicator TransportBearerRequestIndicator,
    iE-Extensions          ProtocolExtensionContainer { { USCH-Information-ModifyItem-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

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

USCH-Information-DeleteList-RL-ReconfPrepTDD ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-Information-DeleteItem-RL-ReconfPrepTDD

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

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

RL-Information-RL-ReconfPrepTDD ::= SEQUENCE {
    rL-ID                  RL-ID,
    maxDL-Power            DL-Power            OPTIONAL,
    minDL-Power            DL-Power            OPTIONAL,
    iE-Extensions          ProtocolExtensionContainer { { RL-Information-RL-ReconfPrepTDD-ExtIEs} } OPTIONAL,
    ...
}

RL-Information-RL-ReconfPrepTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION READY
--
-- *****

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

RadioLinkReconfigurationReady-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-CRNC-CommunicationContextID          CRITICALITY ignore TYPE CRNC-CommunicationContextID
    PRESENCE mandatory } |

```

```

{ ID id-RL-InformationResponseList-RL-ReconfReady          CRITICALITY ignore TYPE RL-InformationResponseList-RL-ReconfReady
  PRESENCE optional } |
{ ID id-CriticalityDiagnostics                             CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE
  optional },
...
}

RadioLinkReconfigurationReady-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}

RL-InformationResponseList-RL-ReconfReady ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationResponseItemIE-RL-
ReconfReady}}

RL-InformationResponseItemIE-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationResponseItem-RL-ReconfReady          CRITICALITY ignore TYPE RL-InformationResponseItem-RL-ReconfReady
    PRESENCE mandatory}
}

RL-InformationResponseItem-RL-ReconfReady ::= SEQUENCE {
  rL-ID RL-ID,
  dCH-InformationResponseList-RL-ReconfReady DCH-InformationResponseList-RL-ReconfReady OPTIONAL,
  dSCH-InformationResponseList-RL-ReconfReady DSCH-InformationResponseList-RL-ReconfReady OPTIONAL,
  uSCH-InformationResponseList-RL-ReconfReady USCH-InformationResponseList-RL-ReconfReady OPTIONAL,
  tFCI2-BearerInformationResponse TFCI2-BearerInformationResponse OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { RL-InformationResponseItem-RL-ReconfReady-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationResponseItem-RL-ReconfReady-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-InformationResponseList-RL-ReconfReady ::= ProtocolIE-Single-Container {{ DCH-InformationResponseListIEs-RL-ReconfReady }}

DCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE mandatory }
}

DSCH-InformationResponseList-RL-ReconfReady ::= ProtocolIE-Single-Container {{ DSCH-InformationResponseListIEs-RL-ReconfReady }}

DSCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-DSCH-InformationResponse CRITICALITY ignore TYPE DSCH-InformationResponse PRESENCE mandatory }
}

USCH-InformationResponseList-RL-ReconfReady ::= ProtocolIE-Single-Container {{ USCH-InformationResponseListIEs-RL-ReconfReady }}

USCH-InformationResponseListIEs-RL-ReconfReady NBAP-PROTOCOL-IES ::= {
  { ID id-USCH-InformationResponse CRITICALITY ignore TYPE USCH-InformationResponse PRESENCE mandatory }
}

-- *****
--

```

```

-- RADIO LINK RECONFIGURATION FAILURE
--
-- *****

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

RadioLinkReconfigurationFailure-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID          CRITICALITY  ignore      TYPE  CRNC-CommunicationContextID
    PRESENCE  mandatory } |
    { ID      id-CauseLevel-RL-ReconfFailure  CRITICALITY  ignore      TYPE  CauseLevel-RL-ReconfFailure  PRESENCE mandatory } |
    { ID      id-CriticalityDiagnostics        CRITICALITY  ignore      TYPE  CriticalityDiagnostics
    PRESENCE  optional },
    ...
}

RadioLinkReconfigurationFailure-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CauseLevel-RL-ReconfFailure ::= CHOICE {
    generalCause          GeneralCauseList-RL-ReconfFailure,
    rLSpecificCause      RLSpecificCauseList-RL-ReconfFailure,
    ...
}

GeneralCauseList-RL-ReconfFailure ::= SEQUENCE {
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-RL-ReconfFailure-ExtIEs } }  OPTIONAL,
    ...
}

GeneralCauseItem-RL-ReconfFailure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RLSpecificCauseList-RL-ReconfFailure ::= SEQUENCE {
    rL-ReconfigurationFailureList-RL-ReconfFailure  RL-ReconfigurationFailureList-RL-ReconfFailure  OPTIONAL,
    iE-Extensions        ProtocolExtensionContainer { { RLSpecificCauseItem-RL-ReconfFailure-ExtIEs } }  OPTIONAL,
    ...
}

RLSpecificCauseItem-RL-ReconfFailure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-ReconfigurationFailureList-RL-ReconfFailure ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-
ReconfigurationFailureItemIE-RL-ReconfFailure}}

RL-ReconfigurationFailureItemIE-RL-ReconfFailure NBAP-PROTOCOL-IES ::= {

```



```

{ ID      id-RL-ReconfigurationFailureItem-RL-ReconfFailure
ReconfFailure          PRESENCE      mandatory}
}

RL-ReconfigurationFailureItem-RL-ReconfFailure ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { RL-ReconfigurationFailureItem-RL-ReconfFailure-ExtIEs} }
    OPTIONAL,
    ...
}

RL-ReconfigurationFailureItem-RL-ReconfFailure-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION COMMIT
--
-- *****

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

RadioLinkReconfigurationCommit-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-NodeB-CommunicationContextID      CRITICALITY  ignore      TYPE      NodeB-CommunicationContextID      PRESENCE mandatory } |
    { ID      id-CFN                               CRITICALITY  ignore      TYPE      CFN                               PRESENCE mandatory } |
    { ID      id-Active-Pattern-Sequence-Information CRITICALITY  ignore      TYPE      Active-Pattern-Sequence-Information PRESENCE optional },
    ...
}

RadioLinkReconfigurationCommit-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION CANCEL
--
-- *****

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

RadioLinkReconfigurationCancel-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-NodeB-CommunicationContextID      CRITICALITY  ignore      TYPE      NodeB-CommunicationContextID      PRESENCE mandatory },

```

```

}
...
}
RadioLinkReconfigurationCancel-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
-- *****
--
-- RADIO LINK RECONFIGURATION REQUEST FDD
--
-- *****

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

RadioLinkReconfigurationRequestFDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID id-NodeB-CommunicationContextID          CRITICALITY reject TYPE NodeB-CommunicationContextID PRESENCE
    mandatory } |
    { ID id-UL-DPCH-Information-RL-ReconfRqstFDD   CRITICALITY reject TYPE UL-DPCH-Information-RL-ReconfRqstFDD PRESENCE
    optional } |
    { ID id-DL-DPCH-Information-RL-ReconfRqstFDD   CRITICALITY reject TYPE DL-DPCH-Information-RL-ReconfRqstFDD PRESENCE
    optional } |
    { ID id-FDD-DCHs-to-Modify                     CRITICALITY reject TYPE FDD-DCHs-to-Modify PRESENCE optional } |
    { ID id-DCHs-to-Add-FDD                         CRITICALITY reject TYPE DCH-FDD-Information PRESENCE optional } |
    { ID id-DCH-DeleteList-RL-ReconfRqstFDD        CRITICALITY reject TYPE DCH-DeleteList-RL-ReconfRqstFDD PRESENCE
    optional } |
    { ID id-RL-InformationList-RL-ReconfRqstFDD    CRITICALITY reject TYPE RL-InformationList-RL-ReconfRqstFDD PRESENCE
    optional } |
    { ID id-Transmission-Gap-Pattern-Sequence-Information CRITICALITY reject TYPE Transmission-Gap-Pattern-Sequence-Information
    PRESENCE optional },
    ...
}

RadioLinkReconfigurationRequestFDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {
    ul-TFCS          TFCS          OPTIONAL,
    iE-Extensions   ProtocolExtensionContainer { { UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs } }    OPTIONAL,
    ...
}

UL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-DPCH-Information-RL-ReconfRqstFDD ::= SEQUENCE {

```

```

dl-TFCS                TFCS                OPTIONAL,
tFCI-SignallingMode    TFCI-SignallingMode    OPTIONAL,
limitedPowerIncrease    LimitedPowerIncrease  OPTIONAL,
iE-Extensions          ProtocolExtensionContainer { { DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs } } OPTIONAL,
...
}

DL-DPCH-Information-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

DCH-DeleteList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstFDD

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

DCH-DeleteItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

RL-InformationList-RL-ReconfRqstFDD ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-ReconfRqstFDD}}

RL-InformationItemIE-RL-ReconfRqstFDD NBAP-PROTOCOL-IES ::= {
{ ID      id-RL-InformationItem-RL-ReconfRqstFDD      CRITICALITY    reject          TYPE RL-InformationItem-RL-ReconfRqstFDD
PRESENCE  mandatory}
}

RL-InformationItem-RL-ReconfRqstFDD ::= SEQUENCE {
rL-ID                RL-ID,
maxDL-Power          DL-Power                OPTIONAL,
minDL-Power          DL-Power                OPTIONAL,
dl-CodeInformation   FDD-DL-CodeInformation  OPTIONAL,
-- This IE is group present only if Downlink compressed mode method is set to "SF/2'" in the Transmission Gap Pattern Sequence Information IE.
iE-Extensions          ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstFDD-ExtIEs } } OPTIONAL,
...
}

RL-InformationItem-RL-ReconfRqstFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

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

RadioLinkReconfigurationRequestTDD ::= SEQUENCE {
protocolIEs          ProtocolIE-Container    {{RadioLinkReconfigurationRequestTDD-IEs}},

```

```

    protocolExtensions      ProtocolExtensionContainer  {{RadioLinkReconfigurationRequestTDD-Extensions}}      OPTIONAL,
    ...
}

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

RadioLinkReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

UL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID      id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD          CRITICALITY      notify          TYPE      UL-CCTrCH-InformationModifyItem-RL-
ReconfRqstTDD          PRESENCE      mandatory}
}

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

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

UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ UL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

```

```

UL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD
    CRITICALITY notify TYPE UL-CCTrCH-InformationDeleteItem-RL-
    ReconfRqstTDD PRESENCE mandatory}
}

```

```

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

```

```

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

```

```

DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationModifyItemIE-RL-ReconfRqstTDD}}

```

```

DL-CCTrCH-InformationModifyItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD
    CRITICALITY notify TYPE DL-CCTrCH-InformationModifyItem-RL-
    ReconfRqstTDD PRESENCE mandatory}
}

```

```

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

```

```

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

```

```

DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfCCTrCHs)) OF ProtocolIE-Single-Container {{ DL-CCTrCH-
InformationDeleteItemIE-RL-ReconfRqstTDD}}

```

```

DL-CCTrCH-InformationDeleteItemIE-RL-ReconfRqstTDD NBAP-PROTOCOL-IES ::= {
  { ID id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD
    CRITICALITY notify TYPE DL-CCTrCH-InformationDeleteItem-RL-
    ReconfRqstTDD PRESENCE mandatory}
}

```

```

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

```

```

DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```

```

}
...
DCH-DeleteList-RL-ReconfRqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-DeleteItem-RL-ReconfRqstTDD

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

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

RL-Information-RL-ReconfRqstTDD ::= SEQUENCE {
    rL-ID                RL-ID,
    maxDL-Power          DL-Power    OPTIONAL,
    minDL-Power          DL-Power    OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { RL-InformationItem-RL-ReconfRqstTDD-ExtIEs} }    OPTIONAL,
    ...
}

RL-InformationItem-RL-ReconfRqstTDD-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK RECONFIGURATION RESPONSE
--
-- *****

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

RadioLinkReconfigurationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CRNC-CommunicationContextID          CRITICALITY ignore      TYPE      CRNC-CommunicationContextID          PRESENCE
      mandatory } |
    { ID      id-RL-InformationResponseList-RL-ReconfRsp  CRITICALITY ignore      TYPE      RL-InformationResponseList-RL-ReconfRsp          PRESENCE
      optional } |
    { ID      id-CriticalityDiagnostics                CRITICALITY ignore      TYPE      CriticalityDiagnostics          PRESENCE
      optional },
    ...
}

RadioLinkReconfigurationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
RL-InformationResponseList-RL-ReconfRsp ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-InformationResponseItemIE-RL-ReconfRsp}}
```

```
RL-InformationResponseItemIE-RL-ReconfRsp NBAP-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,
  dCH-InformationResponseList-RL-ReconfRsp DCH-InformationResponseList-RL-ReconfRsp OPTIONAL,
  iE-Extensions ProtocolExtensionContainer { { RL-InformationResponseItem-RL-ReconfRsp-ExtIEs} } OPTIONAL,
  ...
}
```

```
RL-InformationResponseItem-RL-ReconfRsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
DCH-InformationResponseList-RL-ReconfRsp ::= ProtocolIE-Single-Container {{ DCH-InformationResponseListIEs-RL-ReconfRsp }}
```

```
DCH-InformationResponseListIEs-RL-ReconfRsp NBAP-PROTOCOL-IES ::= {
  { ID id-DCH-InformationResponse CRITICALITY ignore TYPE DCH-InformationResponse PRESENCE mandatory }
}
```

```
-- *****
--
-- RADIO LINK DELETION REQUEST
--
-- *****
```

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

```
RadioLinkDeletionRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID CRITICALITY reject TYPE NodeB-CommunicationContextID PRESENCE
  mandatory } |
  { ID id-CRNC-CommunicationContextID CRITICALITY reject TYPE CRNC-CommunicationContextID PRESENCE
  mandatory } |
  { ID id-RL-informationList-RL-DeletionRqst CRITICALITY notify TYPE RL-informationList-RL-DeletionRqst PRESENCE
  mandatory } ,
  ...
}
```

```
RadioLinkDeletionRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```

RL-informationList-RL-DeletionRqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-informationItemIE-RL-DeletionRqst}}

RL-informationItemIE-RL-DeletionRqst NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-informationItem-RL-DeletionRqst          CRITICALITY    notify          TYPE      RL-informationItem-RL-DeletionRqst
  PRESENCE  mandatory}
}

RL-informationItem-RL-DeletionRqst ::= SEQUENCE {
  rL-ID          RL-ID,
  iE-Extensions ProtocolExtensionContainer { { RL-informationItem-RL-DeletionRqst-ExtIEs} }    OPTIONAL,
  ...
}

RL-informationItem-RL-DeletionRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK DELETION RESPONSE
--
-- *****

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

RadioLinkDeletionResponse-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CRNC-CommunicationContextID          CRITICALITY    ignore          TYPE      CRNC-CommunicationContextID          PRESENCE mandatory
  }|
  { ID      id-CriticalityDiagnostics              CRITICALITY    ignore          TYPE      CriticalityDiagnostics          PRESENCE optional },
  ...
}

RadioLinkDeletionResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DL POWER CONTROL REQUEST FDD
--
-- *****

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

```



```

DL-PowerControlRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE      NodeB-CommunicationContextID          PRESENCE mandatory  } |
  { ID id-PowerAdjustmentType                   CRITICALITY ignore          TYPE      PowerAdjustmentType          PRESENCE mandatory } |
  { ID id-DLReferencePower                      CRITICALITY ignore          TYPE      DL-Power                      PRESENCE conditional } |
  -- This IE is present only 'Adjustment Type' equals to 'Common'
  { ID id-InnerLoopDLPCStatus                   CRITICALITY ignore          TYPE      InnerLoopDLPCStatus          PRESENCE optional  } |
  { ID id-DLReferencePowerList-DL-PC-Rqst       CRITICALITY ignore          TYPE      DL-ReferencePowerInformationList-DL-PC-Rqst PRESENCE conditional } |
  -- This IE is present only 'Adjustment Type' equals to 'Individual'
  { ID id-MaxAdjustmentStep                     CRITICALITY ignore          TYPE      MaxAdjustmentStep           PRESENCE conditional } |
  -- This IE is present only 'Adjustment Type " equals to 'Common' or 'Individual'
  { ID id-AdjustmentPeriod                     CRITICALITY ignore          TYPE      AdjustmentPeriod            PRESENCE conditional } |
  -- This IE is present only 'Adjustment Type " equals to 'Common' or 'Individual'
  { ID id-AdjustmentRatio                      CRITICALITY ignore          TYPE      ScaledAdjustmentRatio       PRESENCE conditional },
  -- This IE is present only 'Adjustment Type " equals to 'Common' or 'Individual'
  ...
}

DL-PowerControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-ReferencePowerInformationList-DL-PC-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{DL-ReferencePowerInformationItemIE-DL-PC-Rqst }}

DL-ReferencePowerInformationItemIE-DL-PC-Rqst NBAP-PROTOCOL-IES ::= {
  { ID id-DL-ReferencePowerInformationItem-DL-PC-Rqst          CRITICALITY ignore          TYPE      DL-ReferencePowerInformationItem-DL-PC-Rqst
    PRESENCE mandatory
  }
}

DL-ReferencePowerInformationItem-DL-PC-Rqst ::= SEQUENCE {
  rL-ID                      RL-ID,
  dl-ReferencePower          DL-Power,
  iE-Extensions              ProtocolExtensionContainer { { DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs } } OPTIONAL,
  ...
}

DL-ReferencePowerInformationItem-DL-PC-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DL POWER TIMESLOT CONTROL REQUEST TDD
--
-- *****

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

```

```

DL-PowerTimeslotControlRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID          CRITICALITY ignore          TYPE      NodeB-CommunicationContextID          PRESENCE mandatory
  } |
  { ID id-TimeslotISCPInfoList-DL-PC-RqstTDD     CRITICALITY ignore          TYPE      TimeslotISCPInfoList-DL-PC-RqstTDD     PRESENCE mandatory },
  ...
}

TimeslotISCPInfoList-DL-PC-RqstTDD ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF TimeslotISCPInfoItem-DL-PC-RqstTDD

TimeslotISCPInfoItem-DL-PC-RqstTDD ::= SEQUENCE {
  rL-ID                RL-ID,
  timeslot             TimeSlot,
  dL-TimeslotISCP     DL-TimeslotISCP,
  iE-Extensions       ProtocolExtensionContainer { {TimeslotISCPInfoItem-DL-PC-RqstTDD-ExtIEs} }    OPTIONAL,
  ...
}

TimeslotISCPInfoItem-DL-PC-RqstTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-PowerTimeslotControlRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION REQUEST
--
-- *****

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

DedicatedMeasurementInitiationRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID          CRITICALITY reject          TYPE      NodeB-CommunicationContextID          PRESENCE
  mandatory } |
  { ID id-MeasurementID                          CRITICALITY reject          TYPE      MeasurementID                          PRESENCE mandatory
  } |
  { ID id-DedicatedMeasurementObjectType-DM-Rqst CRITICALITY reject          TYPE      DedicatedMeasurementObjectType-DM-Rqst PRESENCE
  mandatory } |
  -- This IE represents both the Dedicated Measurement Object Type IE and the choice based on the Dedicated Measurement Object Type
  -- as described in the tabular message format in subclause 9.1.
  { ID id-DedicatedMeasurementType              CRITICALITY reject          TYPE      DedicatedMeasurementType              PRESENCE
  mandatory } |
  { ID id-MeasurementFilterCoefficient          CRITICALITY reject          TYPE      MeasurementFilterCoefficient          PRESENCE
  optional } |

```

|  |             |        |      |                       |          |
|--|-------------|--------|------|-----------------------|----------|
| { ID id-ReportCharacteristics<br>mandatory } | CRITICALITY | reject | TYPE | ReportCharacteristics | PRESENCE |
| { ID id-CFNReportingIndicator<br>mandatory } | CRITICALITY | reject | TYPE | FNReportingIndicator  | PRESENCE |
| { ID id-CFN<br>optional } ,                  | CRITICALITY | reject | TYPE | CFN                   | PRESENCE |

...  
}

DedicatedMeasurementInitiationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {  
...  
}

DedicatedMeasurementObjectType-DM-Rqst ::= CHOICE {  
rL RL-DM-Rqst,  
rLS RL-Set-DM-Rqst,  
all-RL AllRL-DM-Rqst,  
all-RLS AllRL-Set-DM-Rqst,  
...  
}

RL-DM-Rqst ::= SEQUENCE {  
rL-InformationList RL-InformationList-DM-Rqst,  
iE-Extensions ProtocolExtensionContainer { { RLItem-DM-Rqst-ExtIEs } } OPTIONAL,  
...  
}

RLItem-DM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {  
...  
}

RL-InformationList-DM-Rqst ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rqst }}

RL-InformationItemIE-DM-Rqst NBAP-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 NBAP-PROTOCOL-EXTENSION ::= {  
...  
}

RL-Set-DM-Rqst ::= SEQUENCE {  
rL-Set-InformationList-DM-Rqst RL-Set-InformationList-DM-Rqst,  
iE-Extensions ProtocolExtensionContainer { { RL-SetItem-DM-Rqst-ExtIEs } } OPTIONAL,  
...  
}

```

RL-SetItem-DM-Rqst-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rqst ::= SEQUENCE (SIZE(1..maxNrOfRLSets)) OF RL-Set-InformationItem-DM-Rqst

RL-Set-InformationItem-DM-Rqst ::= SEQUENCE {
    rL-Set-ID          RL-Set-ID,
    iE-Extensions     ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rqst-ExtIEs } } OPTIONAL,
    ...
}

RL-Set-InformationItem-DM-Rqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

AllRL-DM-Rqst ::= NULL

AllRL-Set-DM-Rqst ::= NULL

-- *****
--
-- DEDICATED MEASUREMENT INITIATION RESPONSE
--
-- *****

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

DedicatedMeasurementInitiationResponse-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-CRNC-CommunicationContextID    CRITICALITY    ignore    TYPE    CRNC-CommunicationContextID    PRESENCE
      mandatory } |
    { ID    id-MeasurementID                  CRITICALITY    ignore    TYPE    MeasurementID                    PRESENCE mandatory
      } |
    { ID    id-DedicatedMeasurementObjectType-DM-Rsp    CRITICALITY    ignore    TYPE    DedicatedMeasurementObjectType-DM-Rsp    PRESENCE
      optional } |
    { ID    id-CriticalityDiagnostics          CRITICALITY    ignore    TYPE    CriticalityDiagnostics                PRESENCE
      optional },
    ...
}

DedicatedMeasurementInitiationResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DedicatedMeasurementObjectType-DM-Rsp ::= CHOICE {
    rL          RL-DM-Rsp,
    rLS         RL-Set-DM-Rsp,
}

```

```

    all-RL                RL-DM-Rsp,
    all-RLS              RL-Set-DM-Rsp,
    ...
}

RL-DM-Rsp ::= SEQUENCE {
    rL-InformationList-DM-Rsp    RL-InformationList-DM-Rsp,
    iE-Extensions                ProtocolExtensionContainer { { RLItem-DM-Rsp-ExtIEs } } OPTIONAL,
    ...
}

RLItem-DM-Rsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rsp }}

RL-InformationItemIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-RL-InformationItem-DM-Rsp    CRITICALITY ignore    TYPE RL-InformationItem-DM-Rsp    PRESENCE mandatory }
}

RL-InformationItem-DM-Rsp ::= SEQUENCE {
    rL-ID                    RL-ID,
    dPCH-ID                  DPCH-ID                OPTIONAL,
    dedicatedMeasurementValue DedicatedMeasurementValue,
    cFN                      CFN                    OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { { RL-InformationItem-DM-Rsp-ExtIEs } }    OPTIONAL,
    ...
}

RL-InformationItem-DM-Rsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-DM-Rsp ::= SEQUENCE {
    rL-Set-InformationList-DM-Rsp    RL-Set-InformationList-DM-Rsp,
    iE-Extensions                    ProtocolExtensionContainer { { RL-SetItem-DM-Rsp-ExtIEs } }    OPTIONAL,
    ...
}

RL-SetItem-DM-Rsp-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-DM-Rsp ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-DM-Rsp }}

RL-Set-InformationItemIE-DM-Rsp NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-DM-Rsp    CRITICALITY ignore    TYPE    RL-Set-InformationItem-DM-Rsp PRESENCE mandatory}
}

RL-Set-InformationItem-DM-Rsp ::= SEQUENCE {
    rL-Set-ID                    RL-Set-ID,
    dedicatedMeasurementValue    DedicatedMeasurementValue,

```

```

cFN                CFN                OPTIONAL,
iE-Extensions      ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rsp-ExtIEs } } OPTIONAL,
...
}

RL-Set-InformationItem-DM-Rsp-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- DEDICATED MEASUREMENT INITIATION FAILURE
--
-- *****

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

DedicatedMeasurementInitiationFailure-IEs NBAP-PROTOCOL-IES ::= {
  { ID   id-CRNC-CommunicationContextID   CRITICALITY   ignore   TYPE   CRNC-CommunicationContextID   PRESENCE mandatory } |
  { 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 NBAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- DEDICATED MEASUREMENT REPORT
--
-- *****

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

DedicatedMeasurementReport-IEs NBAP-PROTOCOL-IES ::= {
  { ID   id-CRNC-CommunicationContextID   CRITICALITY   ignore   TYPE   CRNC-CommunicationContextID   PRESENCE
  mandatory } |
  { ID   id-MeasurementID                 CRITICALITY   ignore   TYPE   MeasurementID                 PRESENCE
  mandatory } |
  { ID   id-DedicatedMeasurementObjectType-DM-Rprt   CRITICALITY   ignore   TYPE   DedicatedMeasurementObjectType-DM-Rprt   PRESENCE
  mandatory } ,
  ...
}

```

```

}

DedicatedMeasurementReport-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DedicatedMeasurementObjectType-DM-Rprt ::= CHOICE {
  rL                RL-DM-Rprt,
  rLS               RL-Set-DM-Rprt,
  all-RL            RL-DM-Rprt,
  all-RLS           RL-Set-DM-Rprt,
  ...
}

RL-DM-Rprt ::= SEQUENCE {
  rL-InformationList-DM-Rprt    RL-InformationList-DM-Rprt,
  iE-Extensions                 ProtocolExtensionContainer { { RLItem-DM-Rprt-ExtIEs } }    OPTIONAL,
  ...
}

RLItem-DM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-DM-Rprt }}

RL-InformationItemIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-DM-Rprt    CRITICALITY ignore TYPE RL-InformationItem-DM-Rprt    PRESENCE mandatory }
}

RL-InformationItem-DM-Rprt ::= SEQUENCE {
  rL-ID                RL-ID,
  dPCH-ID              DPCH-ID    OPTIONAL,
  dedicatedMeasurementValueInformation    DedicatedMeasurementValueInformation,
  iE-Extensions        ProtocolExtensionContainer { { RL-InformationItem-DM-Rprt-ExtIEs } }    OPTIONAL,
  ...
}

RL-InformationItem-DM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-DM-Rprt ::= SEQUENCE {
  rL-Set-InformationList-DM-Rprt    RL-Set-InformationList-DM-Rprt,
  iE-Extensions                     ProtocolExtensionContainer { { RL-SetItem-DM-Rprt-ExtIEs } }    OPTIONAL,
  ...
}

RL-SetItem-DM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-Set-InformationList-DM-Rprt ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-DM-Rprt }}

```

```

RL-Set-InformationItemIE-DM-Rprt NBAP-PROTOCOL-IES ::= {
  { ID id-RL-Set-InformationItem-DM-Rprt CRITICALITY ignore TYPE RL-Set-InformationItem-DM-Rprt PRESENCE mandatory }
}

RL-Set-InformationItem-DM-Rprt ::= SEQUENCE {
  rL-Set-ID RL-Set-ID,
  dedicatedMeasurementValueInformation DedicatedMeasurementValueInformation,
  iE-Extensions ProtocolExtensionContainer { { RL-Set-InformationItem-DM-Rprt-ExtIEs } } OPTIONAL,
  ...
}

RL-Set-InformationItem-DM-Rprt-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT TERMINATION REQUEST
--
-- *****

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

DedicatedMeasurementTerminationRequest-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-NodeB-CommunicationContextID CRITICALITY ignore TYPE NodeB-CommunicationContextID PRESENCE mandatory } |
  { ID id-MeasurementID CRITICALITY ignore TYPE MeasurementID PRESENCE mandatory },
  ...
}

DedicatedMeasurementTerminationRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- DEDICATED MEASUREMENT FAILURE INDICATION
--
-- *****

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

DedicatedMeasurementFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID PRESENCE mandatory } |
  { ID id-MeasurementID CRITICALITY ignore TYPE MeasurementID PRESENCE mandatory } |

```



```

    { ID      id-Cause
      ...
    }
}

DedicatedMeasurementFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK FAILURE INDICATION
--
-- *****

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

RadioLinkFailureIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID      id-CRNC-CommunicationContextID
    CRITICALITY   ignore
    TYPE          CRNC-CommunicationContextID
    PRESENCE      PRESENCE
    mandatory } |
  { ID      id-Reporting-Object-RL-FailureInd
    CRITICALITY   ignore
    TYPE          Reporting-Object-RL-FailureInd
    PRESENCE      PRESENCE mandatory
  } ,
  ...
}

RadioLinkFailureIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Reporting-Object-RL-FailureInd ::= CHOICE {
  rL              RL-RL-FailureInd,
  rL-Set          RL-Set-RL-FailureInd,
  ...
}

RL-RL-FailureInd ::= SEQUENCE {
  rL-InformationList-RL-FailureInd  RL-InformationList-RL-FailureInd,
  iE-Extensions                     ProtocolExtensionContainer { { RLItem-RL-FailureInd-ExtIEs } } OPTIONAL,
  ...
}

RLItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{ RL-InformationItemIE-RL-FailureInd}}

RL-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
  { ID      id-RL-InformationItem-RL-FailureInd
    CRITICALITY   ignore
    TYPE          RL-InformationItem-RL-FailureInd
    PRESENCE      PRESENCE
    mandatory}
}

```

```

}

RL-InformationItem-RL-FailureInd ::= SEQUENCE {
    rL-ID                RL-ID,
    cause                Cause,
    iE-Extensions        ProtocolExtensionContainer { { RL-InformationItem-RL-FailureInd-ExtIEs } }    OPTIONAL,
    ...
}

RL-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-RL-FailureInd ::= SEQUENCE {
    rL-Set-InformationList-RL-FailureInd    RL-Set-InformationList-RL-FailureInd,
    iE-Extensions                          ProtocolExtensionContainer { { RL-SetItem-RL-FailureInd-ExtIEs } }    OPTIONAL,
    ...
}

RL-SetItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-RL-FailureInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-RL-FailureInd
}}

RL-Set-InformationItemIE-RL-FailureInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-RL-FailureInd    CRITICALITY ignore          TYPE RL-Set-InformationItem-RL-FailureInd    PRESENCE mandatory    }
}

RL-Set-InformationItem-RL-FailureInd ::= SEQUENCE {
    rL-Set-ID                RL-Set-ID,
    cause                    Cause,
    iE-Extensions            ProtocolExtensionContainer { { RL-Set-InformationItem-RL-FailureInd-ExtIEs } }    OPTIONAL,
    ...
}

RL-Set-InformationItem-RL-FailureInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RADIO LINK PREEMPTION REQUIRED INDICATION
--
-- *****

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

```

```

RadioLinkPreemptionRequiredIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE CRNC-CommunicationContextID          PRESENCE
    mandatory } |
  { ID id-RL-InformationList-RL-PreemptRequiredInd  CRITICALITY ignore  TYPE RL-InformationList-RL-PreemptRequiredInd  PRESENCE optional },
  ...
}

RadioLinkPreemptionRequiredIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

RL-InformationList-RL-PreemptRequiredInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container { {RL-InformationItemIE-RL-PreemptRequiredInd}}

RL-InformationItemIE-RL-PreemptRequiredInd NBAP-PROTOCOL-IES ::= {
  { ID id-RL-InformationItem-RL-PreemptRequiredInd          CRITICALITY ignore  TYPE RL-InformationItem-RL-PreemptRequiredInd          PRESENCE mandatory
  },
  ...
}

RL-InformationItem-RL-PreemptRequiredInd ::= SEQUENCE {
  rL-ID              RL-ID,
  iE-Extensions      ProtocolExtensionContainer { {RL-InformationItem-RL-PreemptRequiredInd-ExtIEs} } OPTIONAL,
  ...
}

RL-InformationItem-RL-PreemptRequiredInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

-- *****
--
-- RADIO LINK RESTORE INDICATION
--
-- *****

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

RadioLinkRestoreIndication-IEs NBAP-PROTOCOL-IES ::= {
  { ID id-CRNC-CommunicationContextID          CRITICALITY ignore          TYPE CRNC-CommunicationContextID          PRESENCE
    mandatory } |
  { ID id-Reporting-Object-RL-RestoreInd      CRITICALITY ignore          TYPE Reporting-Object-RL-RestoreInd      PRESENCE mandatory
  },
  ...
}

RadioLinkRestoreIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

Reporting-Object-RL-RestoreInd ::= CHOICE {
    rL                RL-RL-RestoreInd,
    rL-Set            RL-Set-RL-RestoreInd,
    ...
}

RL-RL-RestoreInd ::= SEQUENCE {
    rL-InformationList-RL-RestoreInd    RL-InformationList-RL-RestoreInd,
    iE-Extensions                       ProtocolExtensionContainer { { RLItem-RL-RestoreInd-ExtIEs } }    OPTIONAL,
    ...
}

RLItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLs)) OF ProtocolIE-Single-Container {{RL-InformationItemIE-RL-RestoreInd}}

RL-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID    id-RL-InformationItem-RL-RestoreInd    CRITICALITY    ignore        TYPE    RL-InformationItem-RL-RestoreInd    PRESENCE
    mandatory}
}

RL-InformationItem-RL-RestoreInd ::= SEQUENCE {
    rL-ID                RL-ID,
    iE-Extensions        ProtocolExtensionContainer { { RL-InformationItem-RL-RestoreInd-ExtIEs } }    OPTIONAL,
    ...
}

RL-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-RL-RestoreInd ::= SEQUENCE {
    rL-Set-InformationList-RL-RestoreInd    RL-Set-InformationList-RL-RestoreInd,
    iE-Extensions                           ProtocolExtensionContainer { { RL-SetItem-RL-RestoreInd-ExtIEs } }    OPTIONAL,
    ...
}

RL-SetItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

RL-Set-InformationList-RL-RestoreInd ::= SEQUENCE (SIZE (1..maxNrOfRLSets)) OF ProtocolIE-Single-Container {{ RL-Set-InformationItemIE-RL-RestoreInd }}

RL-Set-InformationItemIE-RL-RestoreInd NBAP-PROTOCOL-IES ::= {
    { ID id-RL-Set-InformationItem-RL-RestoreInd    CRITICALITY ignore        TYPE RL-Set-InformationItem-RL-RestoreInd PRESENCE mandatory }
}

RL-Set-InformationItem-RL-RestoreInd ::= SEQUENCE {
    rL-Set-ID                RL-Set-ID,

```

```

    iE-Extensions          ProtocolExtensionContainer { { RL-Set-InformationItem-RL-RestoreInd-ExtIEs } } OPTIONAL,
    ...
}

RL-Set-InformationItem-RL-RestoreInd-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- COMPRESSED MODE COMMAND FDD
--
-- *****

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

CompressedModeCommand-IEs NBAP-PROTOCOL-IES ::= {
    { ID    id-NodeB-CommunicationContextID    CRITICALITY    ignore    TYPE    NodeB-CommunicationContextID    PRESENCE
    mandatory } |
    { ID    id-Active-Pattern-Sequence-Information    CRITICALITY    ignore    TYPE    Active-Pattern-Sequence-Information    PRESENCE mandatory
    },
    ...
}

CompressedModeCommand-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- ERROR INDICATION
--
-- *****

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

ErrorIndication-IEs NBAP-PROTOCOL-IES ::= {

```

```

{ ID id-CRNC-CommunicationContextID CRITICALITY ignore TYPE CRNC-CommunicationContextID PRESENCE optional } |
{ ID id-NodeB-CommunicationContextID CRITICALITY ignore TYPE NodeB-CommunicationContextID PRESENCE optional } |
{ ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE conditional } |
-- At least either or Cause IE or Criticality Diagnostic IE shall be present--
{ ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE conditional },
-- At least either or Cause IE or Criticality Diagnostic IE shall be present--
...
}

ErrorIndication-Extensions NBAP-PROTOCOL-EXTENSION ::= {
...
}

-- *****
--
-- PRIVATE MESSAGE
--
-- *****

PrivateMessage ::= SEQUENCE {
privateIES PrivateIE-Container {{PrivateMessage-IEs}},
...
}

PrivateMessage-IEs NBAP-PRIVATE-IES ::= {
...
}

-- *****
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION REQUEST TDD
--
-- *****

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

PhysicalSharedChannelReconfigurationRequestTDD-IEs NBAP-PROTOCOL-IES ::= {
{ ID id-C-ID CRITICALITY reject TYPE C-ID PRESENCE
mandatory } |
{ ID id-SFN CRITICALITY reject TYPE SFN PRESENCE
optional } |
{ ID id-PDSCHSets-AddList-PSCH-ReconfRqst CRITICALITY reject TYPE PDSCHSets-AddList-PSCH-ReconfRqst PRESENCE
optional } |
{ ID id-PDSCHSets-ModifyList-PSCH-ReconfRqst CRITICALITY reject TYPE PDSCHSets-ModifyList-PSCH-ReconfRqst PRESENCE
optional } |
{ ID id-PDSCHSets-DeleteList-PSCH-ReconfRqst CRITICALITY reject TYPE PDSCHSets-DeleteList-PSCH-ReconfRqst PRESENCE
optional } |
{ ID id-PUSCHSets-AddList-PSCH-ReconfRqst CRITICALITY reject TYPE PUSCHSets-AddList-PSCH-ReconfRqst PRESENCE
optional } |

```

```

    { ID id-PUSCHSets-ModifyList-PSCH-ReconfRqst CRITICALITY reject TYPE PUSCHSets-ModifyList-PSCH-ReconfRqst PRESENCE
      optional } |
    { ID id-PUSCHSets-DeleteList-PSCH-ReconfRqst CRITICALITY reject TYPE PUSCHSets-DeleteList-PSCH-ReconfRqst PRESENCE
      optional },
    ...
  }

PhysicalSharedChannelReconfigurationRequestTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PDSCHSets-AddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-AddItem-PSCH-ReconfRqst

PDSCHSets-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
  pDSCHSet-ID PDSCHSet-ID,
  pDSCH-InformationList PDSCH-Information-AddList-PSCH-ReconfRqst,
  iE-Extensions ProtocolExtensionContainer { {PDSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
  ...
}

PDSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

PDSCH-Information-AddList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PDSCH-Information-AddListIEs-PSCH-ReconfRqst }}

PDSCH-Information-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
  {ID id-PDSCH-Information-AddListIE-PSCH-ReconfRqst CRITICALITY reject TYPE PDSCH-Information-AddItem-PSCH-ReconfRqst PRESENCE
  mandatory}
}

PDSCH-Information-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
  dL-Timeslot-InformationAddList-PSCH-ReconfRqst DL-Timeslot-InformationAddList-PSCH-ReconfRqst,
  iE-Extensions ProtocolExtensionContainer { {PDSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
  ...
}

PDSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-Timeslot-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSs)) OF DL-Timeslot-InformationAddItem-PSCH-ReconfRqst

DL-Timeslot-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
  timeSlot TimeSlot,
  midambleShiftAndBurstType MidambleShiftAndBurstType,
  tFCI-Presence TFCI-Presence,
  dL-Code-InformationAddList-PSCH-ReconfRqst DL-Code-InformationAddList-PSCH-ReconfRqst,
  iE-Extensions ProtocolExtensionContainer { { DL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
  ...
}

```

```

}

DL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF DL-Code-InformationAddItem-PSCH-ReconfRqst

DL-Code-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                PDSCH-ID,
    tdd-ChannelisationCode  TDD-ChannelisationCode,
    iE-Extensions           ProtocolExtensionContainer { { DL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs } } OPTIONAL,
    ...
}

DL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCHSets-ModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-ModifyItem-PSCH-ReconfRqst

PDSCHSets-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCHSet-ID            PDSCHSet-ID,
    pDSCH-InformationList  PDSCH-Information-ModifyList-PSCH-ReconfRqst,
    iE-Extensions         ProtocolExtensionContainer { {PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

PDSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container { { PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst } }

PDSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
    {ID id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst CRITICALITY reject TYPE PDSCH-Information-ModifyItem-PSCH-ReconfRqst
    PRESENCE mandatory}
}

PDSCH-Information-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    repetitionPeriod          RepetitionPeriod          OPTIONAL,
    repetitionLength          RepetitionLength          OPTIONAL,
    tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
    dl-Timeslot-InformationModifyList-PSCH-ReconfRqst DL-Timeslot-InformationModifyList-PSCH-ReconfRqst OPTIONAL,
    iE-Extensions            ProtocolExtensionContainer { {PDSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

PDSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Timeslot-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1.. maxNrOfDLTSs)) OF DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst

```



```

DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    timeSlot                TimeSlot,
    midambleShiftAndBurstType MidambleShiftAndBurstType OPTIONAL,
    tFCI-Presence           TFCI-Presence OPTIONAL,
    dL-Code-InformationModifyList-PSCH-ReconfRqst DL-Code-InformationModifyList-PSCH-ReconfRqst OPTIONAL,
    iE-Extensions           ProtocolExtensionContainer { { DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs } } OPTIONAL,
    ...
}

DL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

DL-Code-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF DL-Code-InformationModifyItem-PSCH-ReconfRqst

DL-Code-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCH-ID                PDSCH-ID,
    tdd-ChannelisationCode  TDD-ChannelisationCode,
    iE-Extensions           ProtocolExtensionContainer { { DL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs } } OPTIONAL,
    ...
}

DL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCHSets-DeleteList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHSets)) OF PDSCHSets-DeleteItem-PSCH-ReconfRqst

PDSCHSets-DeleteItem-PSCH-ReconfRqst ::= SEQUENCE {
    pDSCHSet-ID            PDSCHSet-ID,
    iE-Extensions         ProtocolExtensionContainer { { PDSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs } } OPTIONAL,
    ...
}

PDSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCHSets-AddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-AddItem-PSCH-ReconfRqst

PUSCHSets-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCHSet-ID            PUSCHSet-ID,
    pUSCH-InformationList  PUSCH-Information-AddList-PSCH-ReconfRqst,
    iE-Extensions         ProtocolExtensionContainer { { PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs } } OPTIONAL,
    ...
}

PUSCHSets-AddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PUSCH-Information-AddList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container { { PUSCH-Information-AddListIEs-PSCH-ReconfRqst } }

```

```
PUSCH-Information-AddListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
  {ID id-PUSCH-Information-AddListIE-PSCH-ReconfRqst CRITICALITY reject TYPE PUSCH-Information-AddItem-PSCH-ReconfRqst PRESENCE
  mandatory}
}
```

```
PUSCH-Information-AddItem-PSCH-ReconfRqst ::= SEQUENCE {
  repetitionPeriod RepetitionPeriod,
  repetitionLength RepetitionLength,
  tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset,
  uL-Timeslot-InformationAddList-PSCH-ReconfRqst UL-Timeslot-InformationAddList-PSCH-ReconfRqst,
  iE-Extensions ProtocolExtensionContainer { {PUSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
  ...
}
```

```
PUSCH-Information-AddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
UL-Timeslot-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationAddItem-PSCH-ReconfRqst
```

```
UL-Timeslot-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
  timeSlot TimeSlot,
  midambleShiftAndBurstType MidambleShiftAndBurstType,
  tFCI-Presence TFCI-Presence,
  uL-Code-InformationAddList-PSCH-ReconfRqst UL-Code-InformationAddList-PSCH-ReconfRqst,
  iE-Extensions ProtocolExtensionContainer { { UL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
  ...
}
```

```
UL-Timeslot-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
UL-Code-InformationAddList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPDSCHs)) OF UL-Code-InformationAddItem-PSCH-ReconfRqst
```

```
UL-Code-InformationAddItem-PSCH-ReconfRqst ::= SEQUENCE {
  pUSCH-ID PUSCH-ID,
  tdd-ChannelisationCode TDD-ChannelisationCode,
  iE-Extensions ProtocolExtensionContainer { { UL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
  ...
}
```

```
UL-Code-InformationAddItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
```

```
PUSCHSets-ModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-ModifyItem-PSCH-ReconfRqst
```

```
PUSCHSets-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
  pUSCHSet-ID PUSCHSet-ID,
  pUSCH-InformationList PDSCH-Information-ModifyList-PSCH-ReconfRqst,
  iE-Extensions ProtocolExtensionContainer { {PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
}
```

```

}
...
}
PUSCHSets-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
PUSCH-Information-ModifyList-PSCH-ReconfRqst ::= ProtocolIE-Single-Container {{ PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst }}
PUSCH-Information-ModifyListIEs-PSCH-ReconfRqst NBAP-PROTOCOL-IES ::= {
{ID id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst CRITICALITY reject TYPE PUSCH-Information-ModifyItem-PSCH-ReconfRqst
PRESENCE mandatory}
}
PUSCH-Information-ModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
repetitionPeriod RepetitionPeriod OPTIONAL,
repetitionLength RepetitionLength OPTIONAL,
tdd-PhysicalChannelOffset TDD-PhysicalChannelOffset OPTIONAL,
uL-Timeslot-InformationModifyList-PSCH-ReconfRqst UL-Timeslot-InformationModifyList-PSCH-ReconfRqst OPTIONAL,
iE-Extensions ProtocolExtensionContainer { {PUSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
...
}
PUSCH-Information-ModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
UL-Timeslot-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfULTSs)) OF UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst
UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
timeSlot TimeSlot,
midambleShiftAndBurstType MidambleShiftAndBurstType OPTIONAL,
tFCI-Presence TFCI-Presence OPTIONAL,
uL-Code-InformationModifyList-PSCH-ReconfRqst UL-Code-InformationModifyList-PSCH-ReconfRqst OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
...
}
UL-Timeslot-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
UL-Code-InformationModifyList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHs)) OF UL-Code-InformationModifyItem-PSCH-ReconfRqst
UL-Code-InformationModifyItem-PSCH-ReconfRqst ::= SEQUENCE {
pUSCH-ID PUSCH-ID,
tdd-ChannelisationCode TDD-ChannelisationCode,
iE-Extensions ProtocolExtensionContainer { { UL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
...
}
UL-Code-InformationModifyItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

```

```

}

PUSCHSets-DeleteList-PSCH-ReconfRqst ::= SEQUENCE (SIZE (1..maxNrOfPUSCHSets)) OF PUSCHSets-DeleteItem-PSCH-ReconfRqst

PUSCHSets-DeleteItem-PSCH-ReconfRqst ::= SEQUENCE {
    pUSCHSet-ID          PUSCHSet-ID,
    iE-Extensions        ProtocolExtensionContainer { {PUSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs} } OPTIONAL,
    ...
}

PUSCHSets-DeleteItem-PSCH-ReconfRqst-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION RESPONSE TDD
--
-- *****

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

PhysicalSharedChannelReconfigurationResponseTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CriticalityDiagnostics      CRITICALITY ignore TYPE      CriticalityDiagnostics PRESENCE optional },
    ...
}

PhysicalSharedChannelReconfigurationResponseTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- PHYSICAL SHARED CHANNEL RECONFIGURATION FAILURE TDD
--
-- *****

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

PhysicalSharedChannelReconfigurationFailureTDD-IEs NBAP-PROTOCOL-IES ::= {
    { ID      id-CauseLevel-PSCH-ReconfFailureTDD      CRITICALITY ignore TYPE CauseLevel-PSCH-ReconfFailureTDD PRESENCE mandatory },
    { ID      id-CriticalityDiagnostics      CRITICALITY ignore TYPE      CriticalityDiagnostics PRESENCE optional },
    ...
}

```

```

PhysicalSharedChannelReconfigurationFailureTDD-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

CauseLevel-PSCH-ReconfFailureTDD ::= CHOICE {
  generalCause          GeneralCauseList-PSCH-ReconfFailureTDD,
  setSpecificCause      SetSpecificCauseList-PSCH-ReconfFailureTDD,
  ...
}

GeneralCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
  cause                 Cause,
  iE-Extensions        ProtocolExtensionContainer { { GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs } } OPTIONAL,
  ...
}

GeneralCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

SetSpecificCauseList-PSCH-ReconfFailureTDD ::= SEQUENCE {
  unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD OPTIONAL,
  unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD OPTIONAL,
  iE-Extensions        ProtocolExtensionContainer { { SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs } } OPTIONAL,
  ...
}

SetSpecificCauseItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Unsuccessful-PDSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPDSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PDSCHSetItemIE-PSCH-ReconfFailureTDD }}

Unsuccessful-PDSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD CRITICALITY ignore TYPE Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
mandatory}
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
  pDSCHSet-ID          PDSCHSet-ID,
  cause                Cause,
  iE-Extensions        ProtocolExtensionContainer { {Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} } OPTIONAL,
  ...
}

Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

Unsuccessful-PUSCHSetList-PSCH-ReconfFailureTDD ::= SEQUENCE (SIZE (0.. maxNrOfPUSCHSets)) OF ProtocolIE-Single-Container {{ Unsuccessful-
PUSCHSetItemIE-PSCH-ReconfFailureTDD }}

```

```

Unsuccessful-PUSCHSetItemIE-PSCH-ReconfFailureTDD NBAP-PROTOCOL-IES ::= {
  { ID id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD CRITICALITY ignore TYPE Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDDPRESENCE
  mandatory}
}

```

```

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD ::= SEQUENCE {
  pUSCHSet-ID PUSCHSet-ID,
  cause Cause,
  iE-Extensions ProtocolExtensionContainer { {Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs} } OPTIONAL,
  ...
}

```

```

Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

-- *****
--
-- RESET REQUEST
--
-- *****

```

```

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

```

```

ResetRequest-IEs NBAP-PROTOCOL-IES ::= {
  {ID id-ResetIndicator CRITICALITY ignore TYPE ResetIndicator PRESENCE mandatory},
  ...
}

```

```

ResetRequest-Extensions NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

```

```

ResetIndicator ::= CHOICE {
  communicationContext CommunicationContextList-Reset,
  communicationControlPort CommunicationControlPortList-Reset,
  nodeB NULL,
  ...
}

```

```

CommunicationContextList-Reset ::= SEQUENCE {
    communicationContextInfoList-Reset      CommunicationContextInfoList-Reset,
    iE-Extensions                            ProtocolExtensionContainer  { {CommunicationContextItem-Reset-ExtIEs} }   OPTIONAL,
    ...
}

CommunicationContextItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationContextInfoList-Reset ::= SEQUENCE (SIZE (1.. maxCommunicationContext))  OF ProtocolIE-Single-Container  {{
CommunicationContextInfoItemIE-Reset }}

CommunicationContextInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
    {ID id-CommunicationContextInfoItem-Reset      CRITICALITY reject      TYPE CommunicationContextInfoItem-Reset      PRESENCE mandatory}
}

CommunicationContextInfoItem-Reset ::= SEQUENCE {
    communicationContextType-Reset          CommunicationContextType-Reset,
    iE-Extensions                            ProtocolExtensionContainer  { { CommunicationContextInfoItem-Reset-ExtIEs} }   OPTIONAL,
    ...
}

CommunicationContextInfoItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationContextType-Reset ::= CHOICE {
    cRNC-CommunicationContextID             CRNC-CommunicationContextID,
    nodeB-CommunicationContextID            NodeB-CommunicationContextID,
    ...
}

CommunicationControlPortList-Reset ::= SEQUENCE {
    communicationControlPortInfoList-Reset  CommunicationControlPortInfoList-Reset,
    iE-Extensions                            ProtocolExtensionContainer  { {CommunicationControlPortItem-Reset-ExtIEs} }   OPTIONAL,
    ...
}

```

```

CommunicationControlPortItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationControlPortInfoList-Reset ::= SEQUENCE (SIZE (1.. maxCCPinNodeB)) OF ProtocolIE-Single-Container {{CommunicationControlPortInfoItemIE-Reset }}

CommunicationControlPortInfoItemIE-Reset NBAP-PROTOCOL-IES ::= {
    {ID id-CommunicationControlPortInfoItem-Reset          CRITICALITY reject          TYPE CommunicationControlPortInfoItem-Reset          PRESENCE mandatory}
}

CommunicationControlPortInfoItem-Reset ::= SEQUENCE {
    communicationControlPortID          CommunicationControlPortID,
    iE-Extensions                        ProtocolExtensionContainer { {CommunicationControlPortInfoItem-Reset-ExtIEs} } OPTIONAL,
    ...
}

CommunicationControlPortInfoItem-Reset-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

-- *****
--
-- RESET RESPONSE
--
-- *****

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

ResetResponse-IEs NBAP-PROTOCOL-IES ::= {
    {ID id-CriticalityDiagnostics          CRITICALITY          ignore          TYPE          CriticalityDiagnostics          PRESENCE optional},
    ...
}

ResetResponse-Extensions NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

END

```



## 9.3.4 Information Elements Definitions

```

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

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

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

IMPORTS
    maxNrOfTFCs,
    maxNrOfErrors,
    maxCTFC,
    maxNrOfTTFs,
    maxTTI-count,
    maxRateMatching,
    maxCodeNrComp-1,
    maxNrOfCodeGroups,
    maxNrOfTFCIGroups,
    maxNrOfTFCI1Combs,
    maxNrOfTFCI2Combs,
    maxNrOfTFCI2Combs-1,
    maxNrOfSF,
    maxTGPS,
    maxNrOfUSCHs,
    maxNrOfULTSs,
    maxNrOfDPCHs,
    maxNrOfCodes,
    maxNrOfDSCHs,
    maxNrOfDLTSs,
    maxNrOfDCHs

FROM NBAP-Constants

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

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

```

```

-- =====
-- A
-- =====

Acknowledged-PCPCH-access-preambles ::= INTEGER (0..15,...)

Acknowledged-PRACH-preambles-Value ::= INTEGER(0..240,...)
-- The number of L1 acknowledged random access tries per every 20 ms period.

AddorDeleteIndicator ::= ENUMERATED {
    add,
    delete
}

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

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

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

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

AICH-Power ::= INTEGER (-22..5)
-- Offset in dB.

AICH-TransmissionTiming ::= ENUMERATED {
    v0,
    v1
}

```

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

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

APPreambleSignature ::= INTEGER (0..15)

APSubChannelNumber ::= INTEGER (0..11)

AvailabilityStatus ::= ENUMERATED {
    empty,
    in-test,
    failed,
    power-off,
    off-line,
    off-duty,
    dependency,
    degraded,
    not-installed,
    log-full,
    ...
}

-- =====
-- B
-- =====

BCCH-ModificationTime ::= INTEGER (0..511)
-- Time = BCCH-ModificationTime * 8
-- Range 0 to 4088, step 8
-- All SFN values in which MIB may be mapped are allowed

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

BetaCD ::= INTEGER (0..15)

BlockingPriorityIndicator ::= ENUMERATED {
    high,
    normal,
    low,
    ...
}
-- High priority: Block resource immediately.
-- Normal priority: Block resource when idle or upon timer expiry.
-- Low priority: Block resource when idle.
```

```
BlockSTTD-Indicator ::= ENUMERATED {
    active,
    inactive
}

-- =====
-- C
-- =====

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

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

CauseProtocol ::= ENUMERATED {
    transfer-syntax-error,
    abstract-syntax-error-reject,
    abstract-syntax-error-ignore-and-notify,
    message-not-compatible-with-receiver-state,
    semantic-error,
    unspecified,
    abstract-syntax-error-falsely-constructed-message,
    ...
}

CauseRadioNetwork ::= ENUMERATED {
    unknown-C-ID,
    cell-not-available,
    power-level-not-supported,
    dl-radio-resources-not-available,
    ul-radio-resources-not-available,
    rl-already-ActivatedOrAlocated,
    nodeB-Resources-unavailable,
    measurement-not-supported-for-the-object,
    combining-resources-not-available,
    requested-configuration-not-supported,
    synchronisation-failure,
    priority-transport-channel-established,
    sIB-Origination-in-Node-B-not-Supported,
    requested-tx-diversity-mode-not-supported,
    unspecified,
}
```

```
bCCH-scheduling-error,
measurement-temporarily-not-available,
invalid-CM-settings,
reconfiguration-CFN-not-elapsed,
number-of-DL-codes-not-supported,
s-cipch-not-supported,
combining-not-supported,
ul-sf-not-supported,
dl-SF-not-supported,
common-transport-channel-type-not-supported,
dedicated-transport-channel-type-not-supported,
downlink-shared-channel-type-not-supported,
uplink-shared-channel-type-not-supported,
cm-not-supported,
tx-diversity-no-longer-supported,
unknown-Local-Cell-ID,
...
}

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

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

CDSubChannelNumbers ::= BIT STRING (SIZE (12))

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

CFN ::= INTEGER (0..255)

Channel-Assignment-Indication ::= ENUMERATED {
    cA-Active,
    cA-Inactive
}

ChipOffset ::= INTEGER (0..38399)
-- Unit Chip

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

Closedlooptimingadjustmentmode ::= ENUMERATED {
    adj-1-slot,
    adj-2-slot,
    ...
}

CommonChannelsCapacityConsumptionLaw ::= SEQUENCE (SIZE(1..maxNrOfSF)) OF
SEQUENCE {
    dl-Cost      INTEGER (0..65535),
    ul-Cost      INTEGER (0..65535),
```

```

        iE-Extensions      ProtocolExtensionContainer { { CommonChannelsCapacityConsumptionLaw-ExtIEs } } OPTIONAL,
    }
    ...
}

CommonChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonMeasurementType ::= ENUMERATED {
    received-total-wide-band-power,
    transmitted-carrier-power,
    acknowledged-prach-preambles,
    ul-timeslot-iscp,
    acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles,
    ...
}

CommonMeasurementValue ::= CHOICE {
    transmitted-carrier-power          Transmitted-Carrier-Power-Value,
    received-total-wide-band-power     Received-total-wide-band-power-Value,
    acknowledged-prach-preambles      Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                    UL-TimeslotISCP-Value,
    acknowledged-PCPCH-access-preambles Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles    Detected-PCPCH-access-preambles,
    ...
}

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

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

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

CommonMeasurementnotAvailable ::= NULL

CommonPhysicalChannelID ::= INTEGER (0..255)

Common-PhysicalChannel-Status-Information ::= SEQUENCE {
    commonPhysicalChannelID     CommonPhysicalChannelID,

```

```

    resourceOperationalState      ResourceOperationalState,
    availabilityStatus            AvailabilityStatus,
    iE-Extensions                 ProtocolExtensionContainer { { Common-PhysicalChannel-Status-Information-ExtIEs } } OPTIONAL,
    ...
}

Common-PhysicalChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommonTransportChannelID ::= INTEGER (0..255)

Common-TransportChannel-Status-Information ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    resourceOperationalState      ResourceOperationalState,
    availabilityStatus            AvailabilityStatus,
    iE-Extensions                 ProtocolExtensionContainer { { Common-TransportChannel-Status-Information-ExtIEs } } OPTIONAL,
    ...
}

Common-TransportChannel-Status-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

CommunicationControlPortID ::= INTEGER (0..65535)

Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD ::= ENUMERATED {
    on,
    off
}
-- on=deactivate

ConfigurationGenerationID ::= INTEGER (0..255)
-- Value '0' means "No configuration"

ConstantValue ::= INTEGER (-10..10,...)
-- -10 dB - +10 dB
-- unit dB
-- step 1 dB

CPCH-Allowed-Total-Rate ::= ENUMERATED {
    v15,
    v30,
    v60,
    v120,
    v240,
    v480,
    v960,
    v1920,
    v2880,
    v3840,

```

```

    v4800,
    v5760,
    ...
}

CPCHScramblingCodeNumber ::= INTEGER (0..79)

CPCH-UL-DPCCH-SlotFormat ::= INTEGER (0..2,...)

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

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

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

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

CRNC-CommunicationContextID ::= INTEGER (0..1048575)

-- =====
-- D
-- =====

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

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

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

```



```

}
...
}
DCH-FDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-Specific-FDD-InformationList ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-Specific-FDD-Item
DCH-Specific-FDD-Item ::= SEQUENCE {
dCH-ID DCH-ID,
ul-TransportFormatSet TransportFormatSet,
dl-TransportFormatSet TransportFormatSet,
allocationRetentionPriority AllocationRetentionPriority,
frameHandlingPriority FrameHandlingPriority,
qE-Selector QE-Selector,
iE-Extensions ProtocolExtensionContainer { { DCH-Specific-FDD-Item-ExtIEs} } OPTIONAL,
...
}
DCH-Specific-FDD-Item-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-InformationResponseItem
DCH-InformationResponseItem ::= SEQUENCE {
dCH-ID DCH-ID,
bindingID BindingID OPTIONAL,
transportLayerAddress TransportLayerAddress OPTIONAL,
iE-Extensions ProtocolExtensionContainer { { DCH-InformationResponseItem-ExtIEs} } OPTIONAL,
...
}
DCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}
DCH-TDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-TDD-InformationItem
DCH-TDD-InformationItem ::= SEQUENCE {
payloadCRC-PresenceIndicator PayloadCRC-PresenceIndicator,
ul-FP-Mode UL-FP-Mode,
toAWS ToAWS,
toAWE ToAWE,
dCH-SpecificInformationList DCH-Specific-TDD-InformationList,
iE-Extensions ProtocolExtensionContainer { { DCH-TDD-InformationItem-ExtIEs} } OPTIONAL,
...
}
DCH-TDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
...
}

```

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

```
DCH-Specific-TDD-Item ::= SEQUENCE {
    dCH-ID                DCH-ID,
    ul-CCTrCH-ID          CCTrCH-ID,
    dl-CCTrCH-ID          CCTrCH-ID,
    ul-TransportFormatSet TransportFormatSet,
    dl-TransportFormatSet TransportFormatSet,
    allocationRetentionPriority AllocationRetentionPriority,
    frameHandlingPriority FrameHandlingPriority OPTIONAL,
    qE-Selector           QE-Selector           OPTIONAL,
    -- This IE is present only if DCH is part of set of Coordinated DCHs
    iE-Extensions         ProtocolExtensionContainer { { DCH-Specific-TDD-Item-ExtIEs} } OPTIONAL,
    ...
}
```

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

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

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

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

DCH-ModifySpecificInformation-FDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-FDD

```
DCH-ModifySpecificItem-FDD ::= SEQUENCE {
    dCH-ID                DCH-ID,
    ul-TransportFormatSet TransportFormatSet     OPTIONAL,
    dl-TransportFormatSet TransportFormatSet     OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority FrameHandlingPriority  OPTIONAL,
    iE-Extensions         ProtocolExtensionContainer { { DCH-ModifySpecificItem-FDD-ExtIEs} } OPTIONAL,
    ...
}
```

```
DCH-ModifySpecificItem-FDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

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

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

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

DCH-ModifySpecificInformation-TDD ::= SEQUENCE (SIZE (1..maxNrOfDCHs)) OF DCH-ModifySpecificItem-TDD

```
DCH-ModifySpecificItem-TDD ::= SEQUENCE {
    dCH-ID              DCH-ID,
    ul-CCTrCH-ID       CCTrCH-ID              OPTIONAL,
    dl-CCTrCH-ID       CCTrCH-ID              OPTIONAL,
    ul-TransportFormatSet TransportFormatSet    OPTIONAL,
    dl-TransportFormatSet TransportFormatSet    OPTIONAL,
    allocationRetentionPriority AllocationRetentionPriority OPTIONAL,
    frameHandlingPriority FrameHandlingPriority  OPTIONAL,
    iE-Extensions      ProtocolExtensionContainer { { DCH-ModifySpecificItem-TDD-ExtIEs } } OPTIONAL,
    ...
}
```

```
DCH-ModifySpecificItem-TDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
DedicatedChannelsCapacityConsumptionLaw ::= SEQUENCE ( SIZE(1..maxNrOfSF) ) OF
SEQUENCE {
    dl-Cost-RLS        INTEGER (0..65535),
    dl-Cost-RL         INTEGER (0..65535),
    ul-Cost-RLS        INTEGER (0..65535),
    ul-Cost-RL         INTEGER (0..65535),
    iE-Extensions      ProtocolExtensionContainer { { DedicatedChannelsCapacityConsumptionLaw-ExtIEs } } OPTIONAL,
    ...
}
```

```
DedicatedChannelsCapacityConsumptionLaw-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
DedicatedMeasurementType ::= ENUMERATED {
    sir,
    sir-error,
    transmitted-code-power,
```

```

    rscp,
    rx-timing-deviation,
    round-trip-time,
    ...
}

DedicatedMeasurementValue ::= CHOICE {
    sIR-Value                SIR-Value,
    sIR-ErrorValue          SIR-Error-Value,
    transmittedCodePowerValue  Transmitted-Code-Power-Value,
    rSCP                    RSCP-Value,
    rxTimingDeviationValue    Rx-Timing-Deviation-Value,
    roundTripTime            Round-Trip-Time-Value,
    ...
}

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

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

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

DedicatedMeasurementnotAvailable ::= NULL

Detected-PCPCH-access-preambles ::= INTEGER (0..240,...)

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

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

DiversityMode ::= ENUMERATED {

```

```

    none,
    sTTD,
    closed-loop-model1,
    closed-loop-mode2,
    ...
}

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

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

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

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

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

DL-or-Global-CapacityCredit ::= INTEGER (0..65535)

DL-Power ::= INTEGER (-350..150)
-- DL-Power = power * 10
-- If Power <=-35 DL-Power shall be set to -350
-- if Power >=15 DL-Power shall be set to 150
-- Unit dB, Range -35dB .. +15dB, Step +0.1dB

DLPowerAveragingWindowSize ::= INTEGER (1..60)

DL-ScramblingCode ::= INTEGER (0..15)
-- 0= Primary scrambling code of the cell, 1..15= Secondary scrambling code --

DL-TimeslotISCP ::= INTEGER (0..91)

DL-TimeslotISCPInfo ::= SEQUENCE (SIZE (1..maxNrOfDLTSs)) OF DL-TimeslotISCPInfoItem

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

```

```

DL-TimeslotISCPInfoItem-ExtIEs  NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DL-TPC-Pattern01Count ::= INTEGER (0..30,...)

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

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

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

DSCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-InformationResponseItem

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

DSCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

DSCH-FDD-Information ::= SEQUENCE (SIZE (1..maxNrOfDSCHs)) OF DSCH-FDD-InformationItem

DSCH-FDD-InformationItem ::= SEQUENCE {
  dSCH-ID                DSCH-ID,
  transportFormatSet     TransportFormatSet,
  allocationRetentionPriority AllocationRetentionPriority,
  frameHandlingPriority  FrameHandlingPriority,
  toAWS                  ToAWS,
  toAWE                  ToAWE,
  iE-Extensions          ProtocolExtensionContainer { { DSCH-FDD-InformationItem-ExtIEs } } OPTIONAL,
  ...
}

DSCH-FDD-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

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

```

```

DSCH-TDD-InformationItem ::= SEQUENCE {
    dSCH-ID,
    cCTrCH-ID,
    transportFormatSet,
    allocationRetentionPriority,
    frameHandlingPriority,
    toAWS,
    toAWE,
    iE-Extensions
    ...
}

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

-- =====
-- E
-- =====

End-Of-Audit-Sequence-Indicator ::= ENUMERATED {
    end-of-audit-sequence,
    not-end-of-audit-sequence
}

-- =====
-- F
-- =====

FDD-DL-ChannelisationCodeNumber ::= INTEGER(0.. 511)
-- According to the mapping in [9]. The maximum value is equal to the DL spreading factor -1--

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

FDD-DL-CodeInformationItem ::= SEQUENCE {
    dl-ScramblingCode,
    fdd-DL-ChannelisationCodeNumber,
    transmissionGapPatternSequenceCodeInformation,
    iE-Extensions
    ...
}

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

FDD-S-CCPCH-Offset ::= INTEGER (0..149)
-- 0: 0 chip, 1: 256 chip, 2: 512 chip, .. ,149: 38144 chip [7] --

FDD-TPC-DownlinkStepSize ::= ENUMERATED {
    step-size0-5,
    step-size1,
    DSCH-ID,
    CCTrCH-ID,
    TransportFormatSet,
    AllocationRetentionPriority,
    FrameHandlingPriority,
    ToAWS,
    ToAWE,
    ProtocolExtensionContainer { { DSCH-TDD-InformationItem-ExtIEs } } OPTIONAL,
}

```

```
    step-size1-5,
    step-size2,
    ...
}

FirstRLS-Indicator ::= ENUMERATED {
    first-RLS,
    not-first-RLS,
    ...
}

FNReportingIndicator ::= ENUMERATED {
    fN-reporting-required,
    fN-reporting-not-required
}

FrameHandlingPriority ::= INTEGER (0..15)
-- 0=lower priority, 15=higher priority --

FrameOffset ::= INTEGER (0..255)

-- =====
-- G
-- =====

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

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

-- =====
-- H
-- =====

-- =====
-- I
-- =====

IB-OC-ID ::= INTEGER (1..16)

IB-SG-DATA ::= BIT STRING
-- Contains SIB data fixed" or "SIB data variable" in segment as encoded in ref.[18].

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

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

IB-Type ::= ENUMERATED {
    mib,
```



```
sb1,
sb2,
sib1,
sib2,
sIB3,
sIB4,
sIB5,
sIB6,
sIB7,
sIB8,
sIB9,
sIB10,
sIB11,
sib12,
sIB13,
sIB13dot1,
sIB13dot2,
sIB13dot3,
sIB13dot4,
sIB14,
sIB15,
sIB15dot1,
sIB15dot2,
sIB15dot3,
sIB16,
...
}

IndicationType ::= ENUMERATED {
    noFailure,
    serviceImpacting,
    ...
}

InnerLoopDLPCStatus ::= ENUMERATED {
    active,
    inactive
}

-- =====
-- J
-- =====

-- =====
-- K
-- =====

-- =====
-- L
-- =====

Local-Cell-ID ::= INTEGER (0..268435455)
```

```

-- =====
-- M
-- =====

MaximumDL-PowerCapability ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

MaximumTransmissionPower ::= INTEGER(0..500)
-- Unit dBm, Range 0dBm .. 50dBm, Step +0.1dB

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

Max-Number-of-PCPCHes ::= INTEGER (1..64,...)

MaxPRACH-MidambleShifts ::= ENUMERATED {
    shift4,
    shift8,
    ...
}

MeasurementAvailabilityIndicator ::= ENUMERATED {
    measurementAvailable,
    measurementnotAvailable
}

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

MeasurementID ::= INTEGER (0..1048575)

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

MidambleShiftLong ::= INTEGER (0..15)

```

```
MidambleShiftShort ::= INTEGER (0..5)

MinimumDL-PowerCapability ::= INTEGER(0..800)
-- Unit dBm, Range -30dBm .. 50dBm, Step +0.1dB

MinSpreadingFactor ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
    v512
}

MinUL-ChannelisationCodeLength ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
    ...
}

MultiplexingPosition ::= ENUMERATED {
    fixed,
    flexible
}

-- =====
-- N
-- =====

NEOT ::= INTEGER (0..8)

NFmax ::= INTEGER (1..64,...)

N-INSYNC-IND ::= INTEGER (1..256)

N-OUTSYNC-IND ::= INTEGER (1..256)

NodeB-CommunicationContextID ::= INTEGER (0..1048575)

NStartMessage ::= INTEGER (1..8)

-- =====
-- O
-- =====
-- =====
```

```

-- P
-- =====

PagingIndicatorLength ::= ENUMERATED {
    v2,
    v4,
    v8,
    ...
}

PayloadCRC-PresenceIndicator ::= ENUMERATED {
    cRC-Included,
    cRC-NotIncluded,
    ...
}

PCCPCH-Power ::= INTEGER (-150..400,...)
-- PCCPCH-power = power * 10
-- If power <= -15 PCCPCH shall be set to -150
-- If power >= 40 PCCPCH shall be set to 400
-- Unit dBm, Range -15dBm .. +40 dBm, Step +0.1dBm

PCP-Length ::= ENUMERATED{
    v0,
    v8
}

PDSCH-CodeMapping ::= SEQUENCE {
    dl-ScramblingCode          DL-ScramblingCode,
    signallingMethod           CHOICE {
        code-Range             PDSCH-CodeMapping-PDSCH-CodeMappingInformationList,
        tFCI-Range             PDSCH-CodeMapping-DSCH-MappingInformationList,
        explicit                PDSCH-CodeMapping-PDSCH-CodeInformationList,
        ...
    },
    iE-Extensions              ProtocolExtensionContainer { { PDSCH-CodeMapping-ExtIEs } } OPTIONAL,
    ...
}

PDSCH-CodeMapping-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

PDSCH-CodeMapping-CodeNumberComp ::= INTEGER (0..maxCodeNrComp-1)

PDSCH-CodeMapping-SpreadingFactor ::= ENUMERATED {
    v4,
    v8,
    v16,
    v32,
    v64,
    v128,
    v256,
}

```

```

}
...
}
PDSCH-CodeMapping-PDSCH-CodeMappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfCodeGroups)) OF
SEQUENCE {
    spreadingFactor          PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo          PDSCH-Multi-CodeInfo,
    start-CodeNumber        PDSCH-CodeMapping-CodeNumberComp,
    stop-CodeNumber         PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions           ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs} } OPTIONAL,
    ...
}
PDSCH-CodeMapping-PDSCH-CodeMappingInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
PDSCH-CodeMapping-DSCH-MappingInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCIGroups)) OF
SEQUENCE {
    maxTFCI-field2-Value    PDSCH-CodeMapping-MaxTFCI-Field2-Value,
    spreadingFactor         PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo          PDSCH-Multi-CodeInfo,
    codeNumber              PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions           ProtocolExtensionContainer { { PDSCH-CodeMapping-DSCH-MappingInformationList-ExtIEs} } OPTIONAL,
    ...
}
PDSCH-CodeMapping-DSCH-MappingInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
PDSCH-CodeMapping-MaxTFCI-Field2-Value ::= INTEGER (1..1023)
PDSCH-CodeMapping-PDSCH-CodeInformationList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
SEQUENCE {
    spreadingFactor          PDSCH-CodeMapping-SpreadingFactor,
    multi-CodeInfo          PDSCH-Multi-CodeInfo,
    codeNumber              PDSCH-CodeMapping-CodeNumberComp,
    iE-Extensions           ProtocolExtensionContainer { { PDSCH-CodeMapping-PDSCH-CodeInformationList-ExtIEs} } OPTIONAL,
    ...
}
PDSCH-CodeMapping-PDSCH-CodeInformationList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}
PDSCH-Multi-CodeInfo ::= INTEGER (1..16)
PDSCH-ID ::= INTEGER (0..255)
PDSCHSet-ID ::= INTEGER (0..255)
PICH-Mode ::= ENUMERATED {

```

```
v18,  
v36,  
v72,  
v144,  
...  
}  
  
PICH-Power ::= INTEGER (-10..5)  
-- Unit dB, Range -10dB .. +5dB, Step +1dB  
  
PowerAdjustmentType ::= ENUMERATED {  
    none,  
    common,  
    individual  
}  
  
PowerOffset ::= INTEGER (0..24)  
-- PowerOffset = offset * 0.25  
-- Unit dB, Range 0dB .. +6dB, Step +0.25dB  
  
PowerRaiseLimit ::= INTEGER (0..10)  
  
PRACH-Midamble ::= ENUMERATED {  
    inverted,  
    direct,  
    ...  
}  
  
PreambleSignatures ::= BIT STRING (SIZE (16))  
-- Bit 0=P0, Bit 1=P1, .. ,Bit 15=P15 [9] --  
  
PreambleThreshold ::= INTEGER (0..72)  
-- 0= -36.0dB, 1= -35.5dB, ... , 72= 0.0dB  
  
Pre-emptionCapability ::= ENUMERATED {  
    shall-not-trigger-pre-emption,  
    may-trigger-pre-emption  
}  
  
Pre-emptionVulnerability ::= ENUMERATED {  
    not-pre-emptable,  
    pre-emptable  
}  
  
PrimaryCPICH-Power ::= INTEGER(-100..500)  
-- step 0.1 (Range -10.0..50.0) Unit is dBm  
  
PrimaryScramblingCode ::= INTEGER (0..511)  
  
PriorityLevel ::= INTEGER (0..15)  
-- 0 = spare, 1 = highest priority, ...14 = lowest priority and 15 = no priority  
  
PropagationDelay ::= INTEGER (0..255)
```

```
-- Unit: chips, step size 3 chips
-- example: 0 = 0chip, 1 = 3chips

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

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

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

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

-- =====
-- Q
-- =====

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

-- =====
-- R
-- =====

RACH-SlotFormat ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    ...
}

RACH-SubChannelNumbers ::= BIT STRING (SIZE (12))
-- Bit 0=Sub Channel Number 0, Bit 1=Sub Channel Number 1, ..., Bit 11=Sub Channel Number 11

RepetitionLength ::= INTEGER (1..63)

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

RepetitionNumber ::= INTEGER (1..256)

RefTFCNumber ::= INTEGER (0..3)
```

```

ReportCharacteristics ::= CHOICE {
    onDemand          NULL,
    periodic          ReportCharacteristicsType-ReportPeriodicity,
    event-a           ReportCharacteristicsType-EventA,
    event-b           ReportCharacteristicsType-EventB,
    event-c           ReportCharacteristicsType-EventC,
    event-d           ReportCharacteristicsType-EventD,
    event-e           ReportCharacteristicsType-EventE,
    event-f           ReportCharacteristicsType-EventF,
    ...
}

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

ReportCharacteristicsType-EventA-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

ReportCharacteristicsType-EventB-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventC ::= SEQUENCE {
    measurementIncreaseThreshold ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime       ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                ProtocolExtensionContainer { { ReportCharacteristicsType-EventC-ExtIEs } } OPTIONAL,
    ...
}

ReportCharacteristicsType-EventC-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

ReportCharacteristicsType-EventD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {

```



```

}
...
}

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

ReportCharacteristicsType-EventE-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

ReportCharacteristicsType-EventF-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold ::= CHOICE {
    received-total-wide-band-power          Received-total-wide-band-power-Value-IncrDecrThres,
    transmitted-carrier-power              Transmitted-Carrier-Power-Value,
    acknowledged-prach-preambles          Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                        UL-TimeslotISCP-Value-IncrDecrThres,
    sir                                     SIR-Value-IncrDecrThres,
    sir-error                               SIR-Error-Value-IncrDecrThres,
    transmitted-code-power                 Transmitted-Code-Power-Value-IncrDecrThres,
    rscp                                    RSCP-Value-IncrDecrThres,
    round-trip-time                        Round-Trip-Time-IncrDecrThres,
    acknowledged-PCPCH-access-preambles    Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles        Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    received-total-wide-band-power          Received-total-wide-band-power-Value,
    transmitted-carrier-power              Transmitted-Carrier-Power-Value,
    acknowledged-prach-preambles          Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                        UL-TimeslotISCP-Value,
    sir                                     SIR-Value,
    sir-error                               SIR-Error-Value,
    transmitted-code-power                 Transmitted-Code-Power-Value,
    rscp                                    RSCP-Value,

```

```

    rx-timing-deviation          Rx-Timing-Deviation-Value,
    round-trip-time              Round-Trip-Time-Value,
    acknowledged-PCPCH-access-preambles  Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles      Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-ScaledMeasurementChangeTime ::= CHOICE {
    msec          MeasurementChangeTime-Scaledmsec,
    ...
}

MeasurementChangeTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementChangeTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportCharacteristicsType-ScaledMeasurementHysteresisTime ::= CHOICE {
    msec          MeasurementHysteresisTime-Scaledmsec,
    ...
}

MeasurementHysteresisTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementHysteresisTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportCharacteristicsType-ReportPeriodicity ::= CHOICE {
    msec          ReportPeriodicity-Scaledmsec,
    min          ReportPeriodicity-Scaledmin,
    ...
}

ReportPeriodicity-Scaledmsec ::= INTEGER (1..6000,...)
-- ReportPeriodicity-msec = ReportPeriodicity * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms

ReportPeriodicity-Scaledmin ::= INTEGER (1..60,...)
-- Unit min, Range 1min .. 60min(hour), Step 1min

ResourceOperationalState ::= ENUMERATED {
    enabled,
    disabled
}

CommonTransportChannel-InformationResponse ::= SEQUENCE {
    commonTransportChannelID      CommonTransportChannelID,
    bindingID                    BindingID OPTIONAL,
    transportLayerAddress        TransportLayerAddress OPTIONAL,
    iE-Extensions                ProtocolExtensionContainer { { CommonTransportChannel-InformationResponse-ExtIEs } } OPTIONAL,
    ...
}

CommonTransportChannel-InformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

```

```
}

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

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

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

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

Round-Trip-Time-Value ::= INTEGER(0..32767)
-- According to mapping in [22]

RSCP-Value ::= INTEGER (0..81)
-- According to mapping in [23]

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

Received-total-wide-band-power-Value ::= INTEGER(0..621)
-- According to mapping in [22]/[23]

Received-total-wide-band-power-Value-IncrDecrThres ::= INTEGER (0..620)

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

-- =====
-- S
-- =====

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

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

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

ScramblingCodeNumber ::= INTEGER (0..15)

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

Segment-Type ::= ENUMERATED {
    first-segment,
    first-segment-short,
    subsequent-segment,
    last-segment,
    last-segment-short,
    complete-SIB,
    complete-SIB-short,
```

```
    ...
}
S-FieldLength ::= ENUMERATED {
    v1,
    v2,
    ...
}
SFN ::= INTEGER (0..4095)
ShutdownTimer ::= INTEGER (1..3600)
-- Unit sec
SIB-Originator ::= ENUMERATED {
    nodeB,
    cRNC,
    ...
}
SIR-Error-Value ::= INTEGER (0..125)
SIR-Error-Value-IncrDecrThres ::= INTEGER (0..124)
SIR-Value ::= INTEGER (0..63)
-- According to mapping in [22]/[23]
SIR-Value-IncrDecrThres ::= INTEGER (0..62)
SSDT-Cell-Identity ::= 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
}
Start-Of-Audit-Sequence-Indicator ::= ENUMERATED {
    start-of-audit-sequence,
    not-start-of-audit-sequence
}
STTD-Indicator ::= ENUMERATED {
    active,
    inactive,
    ...
}
```

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

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

-- =====
-- T
-- =====

T-Cell ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    v4,
    v5,
    v6,
    v7,
    v8,
    v9
}

T-RLFFAILURE ::= INTEGER (0..255)
-- Unit seconds, Range 0s .. 25.5s, Step 0.1s

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

```

    chCode16div10,
    chCode16div11,
    chCode16div12,
    chCode16div13,
    chCode16div14,
    chCode16div15,
    chCode16div16,
    ...
}

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

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

TDD-DL-Code-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

TransportFormatCombination-Beta ::= CHOICE {
    signalledGainFactors SEQUENCE {
        gainFactor CHOICE {
            fdd SEQUENCE {
                betaC BetaCD,
                betaD BetaCD,
                iE-Extensions ProtocolExtensionContainer { { GainFactorFDD-ExtIEs } } OPTIONAL,
                ...
            },
            tdd BetaCD,
            ...
        },
        refTFCNumber RefTFCNumber OPTIONAL,
        iE-Extensions ProtocolExtensionContainer { { SignalledGainFactors-ExtIEs } } OPTIONAL,
        ...
    },
}

```

```

    computedGainFactors          RefTFCNumber,
    ...
}

GainFactorFDD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

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

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

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

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

TFCI-SignallingMode ::= SEQUENCE {
    tFCI-SignallingOption          TFCI-SignallingMode-TFCI-SignallingOption,
    splitType                      TFCI-SignallingMode-SplitType OPTIONAL,
    -- This IE is only present if TFCI signalling option is split --
    lengthOfTFCI2                 TFCI-SignallingMode-LengthOfTFCI2 OPTIONAL,
    -- This IE is only present if split type is logical --
    iE-Extensions                 ProtocolExtensionContainer { { TFCI-SignallingMode-ExtIEs} } OPTIONAL,
    ...
}

TFCI-SignallingMode-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TFCI-SignallingMode-LengthOfTFCI2 ::= INTEGER (1..10)

```

```
TFCI-SignallingMode-SplitType ::= ENUMERATED {
    hard,
    logical
}

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

TFCI2-BearerInformationResponse ::= SEQUENCE {
    bindingID                               BindingID,
    transportLayerAddress                  TransportLayerAddress,
    iE-Extensions                          ProtocolExtensionContainer { { TFCI2-BearerInformationResponse-ExtIEs} } OPTIONAL,
    ...
}

TFCI2-BearerInformationResponse-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

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

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

TGPSID ::= INTEGER (1.. maxTGPS)

TGSN ::= INTEGER (0..14)

TimeSlot ::= INTEGER (0..14)

TimeSlotDirection ::= ENUMERATED {
    ul,
    dl,
    ...
}

TimeSlotStatus ::= ENUMERATED {
    active,
    not-active,
    ...
}

TimingAdvanceApplied ::= ENUMERATED {
    yes,
    no
}
```



```

}

ToAWE ::= INTEGER (0..2559)
-- Unit ms

ToAWS ::= INTEGER (0..1279)
-- Unit ms

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

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

TransmissionGapPatternSequenceCodeInformation ::= ENUMERATED{
  code-change,
  nocode-change
}

Transmitted-Carrier-Power-Value ::= INTEGER(0..100)
-- According to mapping in [4]/[5]

```

```

Transmitted-Code-Power-Value ::= INTEGER (0..127)
-- According to mapping in [4]/[5]

Transmitted-Code-Power-Value-IncrDecrThres ::= INTEGER (0..112,...)

TransmissionDiversityApplied ::= BOOLEAN
-- true: applied, false: not applied

TransmitDiversityIndicator ::= ENUMERATED {
    active,
    inactive
}

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

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

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

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

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

TFCS-CTFC ::= CHOICE {

```

```

ctfc2bit          INTEGER (0..3),
ctfc4bit          INTEGER (0..15),
ctfc6bit          INTEGER (0..63),
ctfc8bit          INTEGER (0..255),
ctfc12bit         INTEGER (0..4095),
ctfc16bit         INTEGER (0..65535),
ctfcmaxbit        INTEGER (0..maxCTFC)
}

TFCS-DCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI1Combs)) OF
  SEQUENCE {
    cTFC          TFCS-CTFC,
    iE-Extensions ProtocolExtensionContainer { { TFCS-DCHList-ExtIEs} } OPTIONAL,
    ...
  }

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

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

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

TFCS-MaxTFCI-field2-Value ::= INTEGER (1..maxNrOfTFCI2Combs-1)

TFCS-DSCHList ::= SEQUENCE (SIZE (1..maxNrOfTFCI2Combs)) OF
  SEQUENCE {
    cTFC-DSCH                 TFCS-CTFC,
    iE-Extensions             ProtocolExtensionContainer { { TFCS-DSCHList-ExtIEs} } OPTIONAL,
    ...
  }

TFCS-DSCHList-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}

TransportBearerRequestIndicator ::= ENUMERATED {
  bearerRequested,
  bearerNotRequested,
  ...
}

TransportFormatSet ::= SEQUENCE {
  dynamicParts                TransportFormatSet-DynamicPartList,

```

```

    semi-staticPart      TransportFormatSet-Semi-staticPart,
    iE-Extensions        ProtocolExtensionContainer { { TransportFormatSet-ExtIEs } }    OPTIONAL,
    ...
}

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

TransportFormatSet-DynamicPartList ::= SEQUENCE (SIZE (1..maxNrOfTFs)) OF
SEQUENCE {
    nrOfTransportBlocks      TransportFormatSet-NrOfTransportBlocks,
    transportBlockSize       TransportFormatSet-TransportBlockSize    OPTIONAL,
    -- This IE is only present if "Number of Transport Blocks" is greater than 0
    mode                     TransportFormatSet-ModeDP,
    iE-Extensions            ProtocolExtensionContainer { { TransportFormatSet-DynamicPartList-ExtIEs } }    OPTIONAL,
    ...
}

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

TDD-TransportFormatSet-ModeDP ::= SEQUENCE {
    transmissionTimeIntervalInformation    TransmissionTimeIntervalInformation    OPTIONAL,
    -- This IE is mandatory if the "Transmission Time Interval" of the "Semi-static Transport Format Information" is "dynamic". Otherwise it is
    absent.
    iE-Extensions                        ProtocolExtensionContainer { {TDD-TransportFormatSet-ModeDP-ExtIEs} }    OPTIONAL,
    ...
}

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

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

TransmissionTimeIntervalInformation-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

TransportFormatSet-Semi-staticPart ::= SEQUENCE {
    transmissionTimeInterval      TransportFormatSet-TransmissionTimeIntervalSemiStatic,
    channelCoding                 TransportFormatSet-ChannelCodingType,
    codingRate                    TransportFormatSet-CodingRate                OPTIONAL,
    -- This IE is only present if channelCoding is 'convolutional' or 'turbo'
    rateMatchingAttribute         TransportFormatSet-RateMatchingAttribute,
    crc-Size                      TransportFormatSet-CRC-Size,

```

```
mode                TransportFormatSet-ModeSSP ,
iE-Extensions       ProtocolExtensionContainer { { TransportFormatSet-Semi-staticPart-ExtIEs } } OPTIONAL,
...
}

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

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

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

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

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

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

TransportFormatSet-NrOfTransportBlocks ::= INTEGER (0..512)

TransportFormatSet-RateMatchingAttribute ::= INTEGER (1..maxRateMatching)

TransportFormatSet-SecondInterleavingMode ::= ENUMERATED {
frame-related,
timeSlot-related,
...
}
```

```
TransportFormatSet-TransmissionTimeIntervalDynamic ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80,
    ...
}

TransportFormatSet-TransmissionTimeIntervalSemiStatic ::= ENUMERATED {
    msec-10,
    msec-20,
    msec-40,
    msec-80,
    dynamic,
    ...
}

TransportFormatSet-TransportBlockSize ::= INTEGER (0..5000)

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

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

-- =====
-- U
-- =====

UARFCN ::= INTEGER (0..16383, ...)
-- corresponds to 1885.2MHz .. 2024.8MHz

UL-CapacityCredit ::= INTEGER (0..65535)

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

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

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

UL-Timeslot-InformationItem ::= SEQUENCE {
```

```

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

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

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

UL-SIR ::= INTEGER (-82..173)
-- According to mapping in [16]

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

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

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

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

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

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

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

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

```

```

}
UL-TimeSlot-ISCP-InfoItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
USCH-Information ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationItem
USCH-InformationItem ::= SEQUENCE {
  uSCH-ID                USCH-ID,
  cCTrCH-ID              CCTrCH-ID,
  transportFormatSet     TransportFormatSet,
  allocationRetentionPriority AllocationRetentionPriority,
  iE-Extensions          ProtocolExtensionContainer { { USCH-InformationItem-ExtIEs} } OPTIONAL,
  ...
}
USCH-InformationItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
USCH-InformationResponse ::= SEQUENCE (SIZE (1..maxNrOfUSCHs)) OF USCH-InformationResponseItem
USCH-InformationResponseItem ::= SEQUENCE {
  uSCH-ID                USCH-ID,
  bindingID              BindingID OPTIONAL,
  transportLayerAddress  TransportLayerAddress OPTIONAL,
  iE-Extensions          ProtocolExtensionContainer { { USCH-InformationResponseItem-ExtIEs} } OPTIONAL,
  ...
}
USCH-InformationResponseItem-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
  ...
}
UL-TimeslotISCP-Value ::= INTEGER (0..81)
-- According to mapping in [23]
UL-TimeslotISCP-Value-IncrDecrThres ::= INTEGER (0..80)
USCH-ID ::= INTEGER (0..255)
-- =====
-- V
-- =====
-- =====
-- W
-- =====
-- =====
-- X
-- =====

```



```

-- =====
-- Y
-- =====

-- =====
-- Z
-- =====

END

```

## 9.3.5 Common Definitions

```

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

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

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

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

MessageDiscriminator ::= ENUMERATED { common, dedicated }

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

PrivateIE-ID ::= CHOICE {
    local          INTEGER (0..maxPrivateIEs),

```

```

    global          OBJECT IDENTIFIER
  }

ProcedureCode ::= INTEGER (0..255)

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

ProtocolExtensionID ::= INTEGER (0..maxProtocolExtensions)

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

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

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

END

```

## 9.3.6 Constant Definitions

```

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

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

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS
    ProcedureCode,
    ProtocolIE-ID
FROM NBAP-CommonDataTypes;

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

id-audit ProcedureCode ::= 0

```

|   |                      |
|---|----------------------|
| id-auditRequired                                    | ProcedureCode ::= 1  |
| id-blockResource                                    | ProcedureCode ::= 2  |
| id-cellDeletion                                     | ProcedureCode ::= 3  |
| id-cellReconfiguration                              | ProcedureCode ::= 4  |
| id-cellSetup  | ProcedureCode ::= 5  |
| id-commonMeasurementFailure                         | ProcedureCode ::= 6  |
| id-commonMeasurementInitiation                      | ProcedureCode ::= 7  |
| id-commonMeasurementReport                          | ProcedureCode ::= 8  |
| id-commonMeasurementTermination                     | ProcedureCode ::= 9  |
| id-commonTransportChannelDelete                     | ProcedureCode ::= 10 |
| id-commonTransportChannelReconfigure                | ProcedureCode ::= 11 |
| id-commonTransportChannelSetup                      | ProcedureCode ::= 12 |
| id-compressedModeCommand                            | ProcedureCode ::= 14 |
| id-dedicatedMeasurementFailure                      | ProcedureCode ::= 16 |
| id-dedicatedMeasurementInitiation                   | ProcedureCode ::= 17 |
| id-dedicatedMeasurementReport                       | ProcedureCode ::= 18 |
| id-dedicatedMeasurementTermination                  | ProcedureCode ::= 19 |
| id-downlinkPowerControl                             | ProcedureCode ::= 20 |
| id-downlinkPowerTimeslotControl                     | ProcedureCode ::= 38 |
| id-errorIndicationForCommon                         | ProcedureCode ::= 35 |
| id-errorIndicationForDedicated                      | ProcedureCode ::= 21 |
| id-physicalSharedChannelReconfiguration             | ProcedureCode ::= 37 |
| id-privateMessageForCommon                          | ProcedureCode ::= 36 |
| id-privateMessageForDedicated                       | ProcedureCode ::= 22 |
| id-radioLinkAddition                                | ProcedureCode ::= 23 |
| id-radioLinkDeletion                                | ProcedureCode ::= 24 |
| id-radioLinkFailure                                 | ProcedureCode ::= 25 |
| id-radioLinkPreemption                              | ProcedureCode ::= 39 |
| id-radioLinkRestoration                             | ProcedureCode ::= 26 |
| id-radioLinkSetup                                   | ProcedureCode ::= 27 |
| id-reset  | ProcedureCode ::= 13 |
| id-resourceStatusIndication                         | ProcedureCode ::= 28 |
| id-synchronisedRadioLinkReconfigurationCancellation | ProcedureCode ::= 29 |
| id-synchronisedRadioLinkReconfigurationCommit       | ProcedureCode ::= 30 |
| id-synchronisedRadioLinkReconfigurationPreparation  | ProcedureCode ::= 31 |
| id-systemInformationUpdate                          | ProcedureCode ::= 32 |
| id-unblockResource                                  | ProcedureCode ::= 33 |
| id-unsynchronisedRadioLinkReconfiguration           | ProcedureCode ::= 34 |

-- \*\*\*\*\*

--

-- Lists

--

-- \*\*\*\*\*

|                |                        |
|----------------|------------------------|
| maxNrOfCodes   | INTEGER ::= 10         |
| maxNrOfDLTSs   | INTEGER ::= 15         |
| maxNrOfDLCodes | INTEGER ::= 8          |
| maxNrOfErrors  | INTEGER ::= 256        |
| maxNrOfTFs     | INTEGER ::= 32         |
| maxNrOfTFCs    | INTEGER ::= 1024       |
| maxNrOfRLs     | INTEGER ::= 16         |
| maxNrOfRLSets  | INTEGER ::= maxNrOfRLs |

```

maxNrOfDPCHs           INTEGER ::= 240
maxNrOfSCCPCHs         INTEGER ::= 8
maxNrOfCPCHs           INTEGER ::= 4
maxNrOfPCPCHs          INTEGER ::= 64
maxNrOfDCHs            INTEGER ::= 128
maxNrOfDSCHs           INTEGER ::= 32
maxNrOfFACHs           INTEGER ::= 8
maxNrOfCCTrCHs         INTEGER ::= 16
maxNrOfPDSCHs          INTEGER ::= 256
maxNrOfPUSCHs          INTEGER ::= 256
maxNrOfPDSCHSets       INTEGER ::= 256
maxNrOfPUSCHSets       INTEGER ::= 256
maxNrOfULTSs           INTEGER ::= 15
maxNrOfUSCHs           INTEGER ::= 32
maxAPSigNum            INTEGER ::= 16
maxNrOfSlotFormatsPRACH INTEGER ::= 8
maxCellInNodeB         INTEGER ::= 256
maxCCPinNodeB          INTEGER ::= 256
maxCPCHCell            INTEGER ::= maxNrOfCPCHs
maxCTFC                INTEGER ::= 16777215
maxLocalCellInNodeB    INTEGER ::= maxCellInNodeB
maxNoofLen             INTEGER ::= 7
maxRACHCell            INTEGER ::= maxPRACHCell
maxPRACHCell           INTEGER ::= 16
maxPCPCHCell           INTEGER ::= 64
maxSCCPCHCell          INTEGER ::= 32
maxSCPICHCell          INTEGER ::= 32
maxTTI-count           INTEGER ::= 4
maxIBSEG               INTEGER ::= 16
maxIB                  INTEGER ::= 64
maxFACHCell            INTEGER ::= 256 -- maxNrOfFACHs * maxSCCPCHCell
maxRateMatching        INTEGER ::= 256
maxCodeNrComp-1        INTEGER ::= 256
maxNrOfCodeGroups      INTEGER ::= 256
maxNrOfTFICGroups      INTEGER ::= 256
maxNrOfTFCI1Combs      INTEGER ::= 512
maxNrOfTFCI2Combs      INTEGER ::= 1024
maxNrOfTFCI2Combs-1    INTEGER ::= 1023
maxNrOfSF              INTEGER ::= 8
maxTGPS                INTEGER ::= 6
maxCommunicationContext INTEGER ::= 1048575

```

```

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

```

```

id-AICH-Information           ProtocolIE-ID ::= 0
id-AICH-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 1
id-BCH-Information           ProtocolIE-ID ::= 7
id-BCH-InformationItem-ResourceStatusInd ProtocolIE-ID ::= 8
id-BCCH-ModificationTime     ProtocolIE-ID ::= 9

```

id-BlockingPriorityIndicator  
 id-Cause  
 id-CCP-InformationItem-AuditRsp  
 id-CCP-InformationList-AuditRsp  
 id-CCP-InformationItem-ResourceStatusInd  
 id-Cell-InformationItem-AuditRsp  
 id-Cell-InformationItem-ResourceStatusInd  
 id-Cell-InformationList-AuditRsp  
 id-CellParameterID  
 id-CFN  
 id-C-ID  
 id-CommonMeasurementObjectType-CM-Rprt  
 id-CommonMeasurementObjectType-CM-Rqst  
 id-CommonMeasurementObjectType-CM-Rsp  
 id-CommonMeasurementType  
 id-CommonPhysicalChannelID  
 id-CommonPhysicalChannelType-CTCH-SetupRqstFDD  
 id-CommonPhysicalChannelType-CTCH-SetupRqstTDD  
 id-CommonTransportChannelType-CTCH-ReconfRqstTDD  
 id-CommunicationControlPortID  
 id-ConfigurationGenerationID  
 id-CRNC-CommunicationContextID  
 id-CriticalityDiagnostics  
 id-DCHs-to-Add-FDD  
 id-DCH-AddList-RL-ReconfPrepTDD  
 id-DCHs-to-Add-TDD  
 id-DCH-DeleteList-RL-ReconfPrepFDD  
 id-DCH-DeleteList-RL-ReconfPrepTDD  
 id-DCH-DeleteList-RL-ReconfRqstFDD  
 id-DCH-DeleteList-RL-ReconfRqstTDD  
 id-DCH-FDD-Information  
 id-DCH-TDD-Information  
 id-DCH-InformationResponse  
 id-FDD-DCHs-to-Modify  
 id-TDD-DCHs-to-Modify  
 id-DCH-ModifyList-RL-ReconfRqstTDD  
 id-DedicatedMeasurementObjectType-DM-Rprt  
 id-DedicatedMeasurementObjectType-DM-Rqst  
 id-DedicatedMeasurementObjectType-DM-Rsp  
 id-DedicatedMeasurementType  
 id-DL-CCTrCH-InformationItem-RL-SetupRqstTDD  
 id-DL-CCTrCH-InformationList-RL-AdditionRqstTDD  
 id-DL-CCTrCH-InformationList-RL-SetupRqstTDD  
 id-DL-DPCH-InformationItem-RL-AdditionRqstTDD  
 id-DL-DPCH-InformationList-RL-SetupRqstTDD  
 id-DL-DPCH-Information-RL-ReconfPrepFDD  
 id-DL-DPCH-Information-RL-ReconfRqstFDD  
 id-DL-DPCH-Information-RL-SetupRqstFDD  
 id-DL-ReferencePowerInformationItem-DL-PC-Rqst  
 id-DLReferencePower  
 id-DLReferencePowerList-DL-PC-Rqst  
 id-DSCH-AddItem-RL-ReconfPrepFDD  
 id-DSCH-AddItem-RL-ReconfRqstFDD

ProtocolIE-ID ::= 10  
 ProtocolIE-ID ::= 13  
 ProtocolIE-ID ::= 14  
 ProtocolIE-ID ::= 15  
 ProtocolIE-ID ::= 16  
 ProtocolIE-ID ::= 17  
 ProtocolIE-ID ::= 18  
 ProtocolIE-ID ::= 19  
 ProtocolIE-ID ::= 23  
 ProtocolIE-ID ::= 24  
 ProtocolIE-ID ::= 25  
 ProtocolIE-ID ::= 31  
 ProtocolIE-ID ::= 32  
 ProtocolIE-ID ::= 33  
 ProtocolIE-ID ::= 34  
 ProtocolIE-ID ::= 35  
 ProtocolIE-ID ::= 36  
 ProtocolIE-ID ::= 37  
 ProtocolIE-ID ::= 38  
 ProtocolIE-ID ::= 40  
 ProtocolIE-ID ::= 43  
 ProtocolIE-ID ::= 44  
 ProtocolIE-ID ::= 45  
 ProtocolIE-ID ::= 48  
 ProtocolIE-ID ::= 49  
 ProtocolIE-ID ::= 50  
 ProtocolIE-ID ::= 52  
 ProtocolIE-ID ::= 53  
 ProtocolIE-ID ::= 54  
 ProtocolIE-ID ::= 55  
 ProtocolIE-ID ::= 56  
 ProtocolIE-ID ::= 57  
 ProtocolIE-ID ::= 59  
 ProtocolIE-ID ::= 62  
 ProtocolIE-ID ::= 63  
 ProtocolIE-ID ::= 65  
 ProtocolIE-ID ::= 67  
 ProtocolIE-ID ::= 68  
 ProtocolIE-ID ::= 69  
 ProtocolIE-ID ::= 70  
 ProtocolIE-ID ::= 72  
 ProtocolIE-ID ::= 73  
 ProtocolIE-ID ::= 76  
 ProtocolIE-ID ::= 77  
 ProtocolIE-ID ::= 79  
 ProtocolIE-ID ::= 81  
 ProtocolIE-ID ::= 82  
 ProtocolIE-ID ::= 83  
 ProtocolIE-ID ::= 84  
 ProtocolIE-ID ::= 85  
 ProtocolIE-ID ::= 86  
 ProtocolIE-ID ::= 87  
 ProtocolIE-ID ::= 88

id-DSCHs-to-Add-FDD  
 id-DSCH-DeleteItem-RL-ReconfPrepFDD  
 id-DSCH-DeleteItem-RL-ReconfRqstFDD  
 id-DSCH-DeleteList-RL-ReconfPrepFDD  
 id-DSCH-ID  
 id-DSCHs-to-Add-TDD  
 id-DSCH-Information-DeleteList-RL-ReconfPrepTDD  
 id-DSCH-Information-ModifyList-RL-ReconfPrepTDD  
 id-DSCH-InformationResponse  
 id-DSCH-FDD-Information  
 id-DSCH-TDD-Information  
 id-DSCH-ModifyItem-RL-ReconfPrepFDD  
 id-DSCH-ModifyItem-RL-ReconfRqstFDD  
 id-DSCH-ModifyList-RL-ReconfPrepFDD  
 id-End-Of-Audit-Sequence-Indicator  
 id-FACH-Information  
 id-FACH-InformationItem-ResourceStatusInd  
 id-FACHItem-CTCH-SetupRsp  
 id-FACH-ParametersList-CTCH-ReconfRqstTDD  
 id-FACH-ParametersListIE-CTCH-SetupRqstFDD  
 id-FACH-ParametersListIE-CTCH-SetupRqstTDD  
 id-IndicationType-ResourceStatusInd  
 id-Local-Cell-ID  
 id-Local-Cell-Group-InformationItem-AuditRsp  
 id-Local-Cell-Group-InformationItem-ResourceStatusInd  
 id-Local-Cell-Group-InformationItem2-ResourceStatusInd  
 id-Local-Cell-Group-InformationList-AuditRsp  
 id-Local-Cell-InformationItem-AuditRsp  
 id-Local-Cell-InformationItem-ResourceStatusInd  
 id-Local-Cell-InformationItem2-ResourceStatusInd  
 id-Local-Cell-InformationList-AuditRsp  
 id-AdjustmentPeriod  
 id-MaxAdjustmentStep  
 id-MaximumTransmissionPower  
 id-MeasurementFilterCoefficient  
 id-MeasurementID  
 id-MIB-SB-SIB-InformationList-SystemInfoUpdateRqst  
 id-NodeB-CommunicationContextID  
 id-P-CCPCH-Information  
 id-P-CCPCH-InformationItem-ResourceStatusInd  
 id-P-CPICH-Information  
 id-P-CPICH-InformationItem-ResourceStatusInd  
 id-P-SCH-Information  
 id-PCCPCH-Information-Cell-ReconfRqstTDD  
 id-PCCPCH-Information-Cell-SetupRqstTDD  
 id-PCH-Parameters-CTCH-ReconfRqstTDD  
 id-PCH-ParametersItem-CTCH-SetupRqstFDD  
 id-PCH-ParametersItem-CTCH-SetupRqstTDD  
 id-PCH-Information  
 id-PD  
 id-PDSCH-Information-AddListIE-PSCH-ReconfRqst  
 id-PDSCH-Information-ModifyListIE-PSCH-ReconfRqst  
 id-PDSCHSets-AddList-PSCH-ReconfRqst

ProtocolIE-ID ::= 89  
 ProtocolIE-ID ::= 91  
 ProtocolIE-ID ::= 92  
 ProtocolIE-ID ::= 93  
 ProtocolIE-ID ::= 95  
 ProtocolIE-ID ::= 96  
 ProtocolIE-ID ::= 98  
 ProtocolIE-ID ::= 100  
 ProtocolIE-ID ::= 105  
 ProtocolIE-ID ::= 106  
 ProtocolIE-ID ::= 107  
 ProtocolIE-ID ::= 108  
 ProtocolIE-ID ::= 109  
 ProtocolIE-ID ::= 112  
 ProtocolIE-ID ::= 113  
 ProtocolIE-ID ::= 116  
 ProtocolIE-ID ::= 117  
 ProtocolIE-ID ::= 118  
 ProtocolIE-ID ::= 120  
 ProtocolIE-ID ::= 121  
 ProtocolIE-ID ::= 122  
 ProtocolIE-ID ::= 123  
 ProtocolIE-ID ::= 124  
 ProtocolIE-ID ::= 2  
 ProtocolIE-ID ::= 3  
 ProtocolIE-ID ::= 4  
 ProtocolIE-ID ::= 5  
 ProtocolIE-ID ::= 125  
 ProtocolIE-ID ::= 126  
 ProtocolIE-ID ::= 127  
 ProtocolIE-ID ::= 128  
 ProtocolIE-ID ::= 129  
 ProtocolIE-ID ::= 130  
 ProtocolIE-ID ::= 131  
 ProtocolIE-ID ::= 132  
 ProtocolIE-ID ::= 133  
 ProtocolIE-ID ::= 134  
 ProtocolIE-ID ::= 143  
 ProtocolIE-ID ::= 144  
 ProtocolIE-ID ::= 145  
 ProtocolIE-ID ::= 146  
 ProtocolIE-ID ::= 147  
 ProtocolIE-ID ::= 148  
 ProtocolIE-ID ::= 150  
 ProtocolIE-ID ::= 151  
 ProtocolIE-ID ::= 155  
 ProtocolIE-ID ::= 156  
 ProtocolIE-ID ::= 157  
 ProtocolIE-ID ::= 158  
 ProtocolIE-ID ::= 160  
 ProtocolIE-ID ::= 161  
 ProtocolIE-ID ::= 162  
 ProtocolIE-ID ::= 163

id-PDSCHSets-DeleteList-PSCH-ReconfRqst  
 id-PDSCHSets-ModifyList-PSCH-ReconfRqst  
 id-PICH-Information  
 id-PICH-Parameters-CTCH-ReconfRqstTDD  
 id-PowerAdjustmentType  
 id-PRACH-Information  
 id-PrimaryCCPCH-Information-Cell-ReconfRqstFDD  
 id-PrimaryCCPCH-Information-Cell-SetupRqstFDD  
 id-PrimaryCPICH-Information-Cell-ReconfRqstFDD  
 id-PrimaryCPICH-Information-Cell-SetupRqstFDD  
 id-PrimarySCH-Information-Cell-ReconfRqstFDD  
 id-PrimarySCH-Information-Cell-SetupRqstFDD  
 id-PrimaryScramblingCode  
 id-ProcedureScopeType-DL-PC-Rqst  
 id-SCH-Information-Cell-ReconfRqstTDD  
 id-SCH-Information-Cell-SetupRqstTDD  
 id-PUSCH-Information-AddListIE-PSCH-ReconfRqst  
 id-PUSCH-Information-ModifyListIE-PSCH-ReconfRqst  
 id-PUSCHSets-AddList-PSCH-ReconfRqst  
 id-PUSCHSets-DeleteList-PSCH-ReconfRqst  
 id-PUSCHSets-ModifyList-PSCH-ReconfRqst  
 id-RACH-Information  
 id-RACHItem-CTCH-SetupRsp  
 id-RACH-ParametersItem-CTCH-SetupRqstFDD  
 id-RACH-ParameterItem-CTCH-SetupRqstTDD  
 id-ReportCharacteristics  
 id-Reporting-Object-RL-FailureInd  
 id-Reporting-Object-RL-RestoreInd  
 id-RL-ID  
 id-RL-InformationItem-DM-Rprt  
 id-RL-InformationItem-DM-Rqst  
 id-RL-InformationItem-DM-Rsp  
 id-RL-InformationItem-RL-AdditionRqstFDD  
 id-RL-informationItem-RL-DeletionRqst  
 id-RL-InformationItem-RL-FailureInd  
 id-RL-InformationItem-RL-PreemptRequiredInd  
 id-RL-InformationItem-RL-ReconfPrepFDD  
 id-RL-InformationItem-RL-ReconfRqstFDD  
 id-RL-InformationItem-RL-RestoreInd  
 id-RL-InformationItem-RL-SetupRqstFDD  
 id-RL-InformationList-RL-AdditionRqstFDD  
 id-RL-informationList-RL-DeletionRqst  
 id-RL-InformationList-RL-PreemptRequiredInd  
 id-RL-InformationList-RL-ReconfPrepFDD  
 id-RL-InformationList-RL-ReconfRqstFDD  
 id-RL-InformationList-RL-SetupRqstFDD  
 id-RL-InformationResponseItem-RL-AdditionRspFDD  
 id-RL-InformationResponseItem-RL-ReconfReady  
 id-RL-InformationResponseItem-RL-ReconfRsp  
 id-RL-InformationResponseItem-RL-SetupRspFDD  
 id-RL-InformationResponseList-RL-AdditionRspFDD  
 id-RL-InformationResponseList-RL-ReconfReady  
 id-RL-InformationResponseList-RL-ReconfRsp

ProtocolIE-ID ::= 164  
 ProtocolIE-ID ::= 165  
 ProtocolIE-ID ::= 166  
 ProtocolIE-ID ::= 168  
 ProtocolIE-ID ::= 169  
 ProtocolIE-ID ::= 170  
 ProtocolIE-ID ::= 175  
 ProtocolIE-ID ::= 176  
 ProtocolIE-ID ::= 177  
 ProtocolIE-ID ::= 178  
 ProtocolIE-ID ::= 179  
 ProtocolIE-ID ::= 180  
 ProtocolIE-ID ::= 181  
 ProtocolIE-ID ::= 182  
 ProtocolIE-ID ::= 183  
 ProtocolIE-ID ::= 184  
 ProtocolIE-ID ::= 185  
 ProtocolIE-ID ::= 186  
 ProtocolIE-ID ::= 187  
 ProtocolIE-ID ::= 188  
 ProtocolIE-ID ::= 189  
 ProtocolIE-ID ::= 190  
 ProtocolIE-ID ::= 192  
 ProtocolIE-ID ::= 196  
 ProtocolIE-ID ::= 197  
 ProtocolIE-ID ::= 198  
 ProtocolIE-ID ::= 199  
 ProtocolIE-ID ::= 200  
 ProtocolIE-ID ::= 201  
 ProtocolIE-ID ::= 202  
 ProtocolIE-ID ::= 203  
 ProtocolIE-ID ::= 204  
 ProtocolIE-ID ::= 205  
 ProtocolIE-ID ::= 206  
 ProtocolIE-ID ::= 207  
 ProtocolIE-ID ::= 286  
 ProtocolIE-ID ::= 208  
 ProtocolIE-ID ::= 209  
 ProtocolIE-ID ::= 210  
 ProtocolIE-ID ::= 211  
 ProtocolIE-ID ::= 212  
 ProtocolIE-ID ::= 213  
 ProtocolIE-ID ::= 237  
 ProtocolIE-ID ::= 214  
 ProtocolIE-ID ::= 215  
 ProtocolIE-ID ::= 216  
 ProtocolIE-ID ::= 217  
 ProtocolIE-ID ::= 218  
 ProtocolIE-ID ::= 219  
 ProtocolIE-ID ::= 220  
 ProtocolIE-ID ::= 221  
 ProtocolIE-ID ::= 222  
 ProtocolIE-ID ::= 223

|  |                       |
|--|-----------------------|
| id-RL-InformationResponseList-RL-SetupRspFDD                 | ProtocolIE-ID ::= 224 |
| id-RL-InformationResponse-RL-AdditionRspTDD                  | ProtocolIE-ID ::= 225 |
| id-RL-InformationResponse-RL-SetupRspTDD                     | ProtocolIE-ID ::= 226 |
| id-RL-Information-RL-AdditionRqstTDD                         | ProtocolIE-ID ::= 227 |
| id-RL-Information-RL-ReconfRqstTDD                           | ProtocolIE-ID ::= 228 |
| id-RL-Information-RL-ReconfPrepTDD                           | ProtocolIE-ID ::= 229 |
| id-RL-Information-RL-SetupRqstTDD                            | ProtocolIE-ID ::= 230 |
| id-RL-ReconfigurationFailureItem-RL-ReconfFailure            | ProtocolIE-ID ::= 236 |
| id-RL-Set-InformationItem-DM-Rprt                            | ProtocolIE-ID ::= 238 |
| id-RL-Set-InformationItem-DM-Rsp                             | ProtocolIE-ID ::= 240 |
| id-RL-Set-InformationItem-RL-FailureInd                      | ProtocolIE-ID ::= 241 |
| id-RL-Set-InformationItem-RL-RestoreInd                      | ProtocolIE-ID ::= 242 |
| id-S-CCPCH-Information                                       | ProtocolIE-ID ::= 247 |
| id-S-CPICH-Information                                       | ProtocolIE-ID ::= 249 |
| id-SCH-Information   | ProtocolIE-ID ::= 251 |
| id-S-SCH-Information   | ProtocolIE-ID ::= 253 |
| id-Secondary-CCPCHListIE-CTCH-ReconfRqstTDD                  | ProtocolIE-ID ::= 257 |
| id-Secondary-CCPCH-parameterListIE-CTCH-SetupRqstTDD         | ProtocolIE-ID ::= 258 |
| id-Secondary-CCPCH-Parameters-CTCH-ReconfRqstTDD             | ProtocolIE-ID ::= 259 |
| id-SecondaryCPICH-InformationItem-Cell-ReconfRqstFDD         | ProtocolIE-ID ::= 260 |
| id-SecondaryCPICH-InformationItem-Cell-SetupRqstFDD          | ProtocolIE-ID ::= 261 |
| id-SecondaryCPICH-InformationList-Cell-ReconfRqstFDD         | ProtocolIE-ID ::= 262 |
| id-SecondaryCPICH-InformationList-Cell-SetupRqstFDD          | ProtocolIE-ID ::= 263 |
| id-SecondarySCH-Information-Cell-ReconfRqstFDD               | ProtocolIE-ID ::= 264 |
| id-SecondarySCH-Information-Cell-SetupRqstFDD                | ProtocolIE-ID ::= 265 |
| id-SegmentInformationListIE-SystemInfoUpdate                 | ProtocolIE-ID ::= 266 |
| id-SFN   | ProtocolIE-ID ::= 268 |
| id-ShutdownTimer   | ProtocolIE-ID ::= 269 |
| id-Start-Of-Audit-Sequence-Indicator                         | ProtocolIE-ID ::= 114 |
| id-Successful-RL-InformationRespItem-RL-AdditionFailureFDD   | ProtocolIE-ID ::= 270 |
| id-Successful-RL-InformationRespItem-RL-SetupFailureFDD      | ProtocolIE-ID ::= 271 |
| id-Successful-RL-InformationRespList-RL-AdditionFailureFDD   | ProtocolIE-ID ::= 272 |
| id-Successful-RL-InformationRespList-RL-SetupFailureFDD      | ProtocolIE-ID ::= 273 |
| id-SyncCase  | ProtocolIE-ID ::= 274 |
| id-SyncCaseIndicatorItem-Cell-SetupRqstTDD-PSCH              | ProtocolIE-ID ::= 275 |
| id-T-Cell  | ProtocolIE-ID ::= 276 |
| id-TimeSlotConfigurationList-Cell-ReconfRqstTDD              | ProtocolIE-ID ::= 277 |
| id-TimeSlotConfigurationList-Cell-SetupRqstTDD               | ProtocolIE-ID ::= 278 |
| id-TransmissionDiversityApplied                              | ProtocolIE-ID ::= 279 |
| id-UARFCNforNt   | ProtocolIE-ID ::= 280 |
| id-UARFCNforNd   | ProtocolIE-ID ::= 281 |
| id-UARFCNforNu   | ProtocolIE-ID ::= 282 |
| id-UL-CCTrCH-InformationItem-RL-SetupRqstTDD                 | ProtocolIE-ID ::= 284 |
| id-UL-CCTrCH-InformationList-RL-AdditionRqstTDD              | ProtocolIE-ID ::= 285 |
| id-UL-CCTrCH-InformationList-RL-SetupRqstTDD                 | ProtocolIE-ID ::= 288 |
| id-UL-DPCH-InformationItem-RL-AdditionRqstTDD                | ProtocolIE-ID ::= 289 |
| id-UL-DPCH-InformationList-RL-SetupRqstTDD                   | ProtocolIE-ID ::= 291 |
| id-UL-DPCH-Information-RL-ReconfPrepFDD                      | ProtocolIE-ID ::= 293 |
| id-UL-DPCH-Information-RL-ReconfRqstFDD                      | ProtocolIE-ID ::= 294 |
| id-UL-DPCH-Information-RL-SetupRqstFDD                       | ProtocolIE-ID ::= 295 |
| id-Unsuccessful-RL-InformationRespItem-RL-AdditionFailureFDD | ProtocolIE-ID ::= 296 |
| id-Unsuccessful-RL-InformationRespItem-RL-SetupFailureFDD    | ProtocolIE-ID ::= 297 |
| id-Unsuccessful-RL-InformationRespList-RL-AdditionFailureFDD | ProtocolIE-ID ::= 298 |



|  |                       |
|--|-----------------------|
| id-Unsuccessful-RL-InformationRespList-RL-SetupFailureFDD  | ProtocolIE-ID ::= 299 |
| id-Unsuccessful-RL-InformationResp-RL-AdditionFailureTDD   | ProtocolIE-ID ::= 300 |
| id-Unsuccessful-RL-InformationResp-RL-SetupFailureTDD      | ProtocolIE-ID ::= 301 |
| id-USCH-Information-Add                                    | ProtocolIE-ID ::= 302 |
| id-USCH-Information-AddList-RL-ReconfRqstTDD               | ProtocolIE-ID ::= 303 |
| id-USCH-Information-DeleteList-RL-ReconfPrepTDD            | ProtocolIE-ID ::= 304 |
| id-USCH-Information-DeleteList-RL-ReconfRqstTDD            | ProtocolIE-ID ::= 305 |
| id-USCH-Information-ModifyList-RL-ReconfPrepTDD            | ProtocolIE-ID ::= 306 |
| id-USCH-Information-ModifyList-RL-ReconfRqstTDD            | ProtocolIE-ID ::= 307 |
| id-USCH-InformationResponse                                | ProtocolIE-ID ::= 309 |
| id-USCH-Information  | ProtocolIE-ID ::= 310 |
| id-Active-Pattern-Sequence-Information                     | ProtocolIE-ID ::= 315 |
| id-AICH-ParametersListIE-CTCH-ReconfRqstFDD                | ProtocolIE-ID ::= 316 |
| id-AdjustmentRatio   | ProtocolIE-ID ::= 317 |
| id-AP-AICH-Information                                     | ProtocolIE-ID ::= 320 |
| id-AP-AICH-ParametersListIE-CTCH-ReconfRqstFDD             | ProtocolIE-ID ::= 322 |
| id-FACH-ParametersListIE-CTCH-ReconfRqstFDD                | ProtocolIE-ID ::= 323 |
| id-CauseLevel-PSCH-ReconfFailureTDD                        | ProtocolIE-ID ::= 324 |
| id-CauseLevel-RL-AdditionFailureFDD                        | ProtocolIE-ID ::= 325 |
| id-CauseLevel-RL-AdditionFailureTDD                        | ProtocolIE-ID ::= 326 |
| id-CauseLevel-RL-ReconfFailure                             | ProtocolIE-ID ::= 327 |
| id-CauseLevel-RL-SetupFailureFDD                           | ProtocolIE-ID ::= 328 |
| id-CauseLevel-RL-SetupFailureTDD                           | ProtocolIE-ID ::= 329 |
| id-CDCA-ICH-Information                                    | ProtocolIE-ID ::= 330 |
| id-CDCA-ICH-ParametersListIE-CTCH-ReconfRqstFDD            | ProtocolIE-ID ::= 332 |
| id-Closed-Loop-Timing-Adjustment-Mode                      | ProtocolIE-ID ::= 333 |
| id-CommonPhysicalChannelType-CTCH-ReconfRqstFDD            | ProtocolIE-ID ::= 334 |
| id-Compressed-Mode-Deactivation-Flag-RL-AdditionRqstFDD    | ProtocolIE-ID ::= 335 |
| id-CPCH-Information  | ProtocolIE-ID ::= 336 |
| id-CPCH-Parameters-CTCH-SetupRsp                           | ProtocolIE-ID ::= 342 |
| id-CPCH-ParametersListIE-CTCH-ReconfRqstFDD                | ProtocolIE-ID ::= 343 |
| id-DL-CCTrCH-InformationAddList-RL-ReconfPrepTDD           | ProtocolIE-ID ::= 346 |
| id-DL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD        | ProtocolIE-ID ::= 347 |
| id-DL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD        | ProtocolIE-ID ::= 348 |
| id-DL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD        | ProtocolIE-ID ::= 349 |
| id-DL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD        | ProtocolIE-ID ::= 350 |
| id-DL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD        | ProtocolIE-ID ::= 351 |
| id-DL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD        | ProtocolIE-ID ::= 352 |
| id-DL-DPCH-InformationAddListIE-RL-ReconfPrepTDD           | ProtocolIE-ID ::= 353 |
| id-DL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD        | ProtocolIE-ID ::= 354 |
| id-DL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD    | ProtocolIE-ID ::= 355 |
| id-DL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD | ProtocolIE-ID ::= 356 |
| id-DL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD | ProtocolIE-ID ::= 357 |
| id-DL-TPC-Pattern01Count                                   | ProtocolIE-ID ::= 358 |
| id-DPCHConstant  | ProtocolIE-ID ::= 359 |
| id-FACH-ParametersList-CTCH-SetupRsp                       | ProtocolIE-ID ::= 362 |
| id-Limited-power-increase-information-Cell-SetupRqstFDD    | ProtocolIE-ID ::= 369 |
| id-PCH-Parameters-CTCH-SetupRsp                            | ProtocolIE-ID ::= 374 |
| id-PCH-ParametersItem-CTCH-ReconfRqstFDD                   | ProtocolIE-ID ::= 375 |
| id-PCPCH-Information                                       | ProtocolIE-ID ::= 376 |
| id-PCPCH-ParametersList-CTCH-ReconfRqstFDD                 | ProtocolIE-ID ::= 379 |
| id-PICH-ParametersItem-CTCH-ReconfRqstFDD                  | ProtocolIE-ID ::= 380 |
| id-PRACHConstant   | ProtocolIE-ID ::= 381 |

|  |                       |
|--|-----------------------|
| id-PRACH-ParametersListIE-CTCH-ReconfRqstFDD               | ProtocolIE-ID ::= 383 |
| id-PUSCHConstant   | ProtocolIE-ID ::= 384 |
| id-RACH-Parameters-CTCH-SetupRsp                           | ProtocolIE-ID ::= 385 |
| id-Synchronisation-Configuration-Cell-ReconfRqst           | ProtocolIE-ID ::= 393 |
| id-Synchronisation-Configuration-Cell-SetupRqst            | ProtocolIE-ID ::= 394 |
| id-Transmission-Gap-Pattern-Sequence-Information           | ProtocolIE-ID ::= 395 |
| id-UL-CCTrCH-InformationAddList-RL-ReconfPrepTDD           | ProtocolIE-ID ::= 396 |
| id-UL-CCTrCH-InformationDeleteItem-RL-ReconfRqstTDD        | ProtocolIE-ID ::= 397 |
| id-UL-CCTrCH-InformationDeleteList-RL-ReconfPrepTDD        | ProtocolIE-ID ::= 398 |
| id-UL-CCTrCH-InformationDeleteList-RL-ReconfRqstTDD        | ProtocolIE-ID ::= 399 |
| id-UL-CCTrCH-InformationModifyItem-RL-ReconfRqstTDD        | ProtocolIE-ID ::= 400 |
| id-UL-CCTrCH-InformationModifyList-RL-ReconfPrepTDD        | ProtocolIE-ID ::= 401 |
| id-UL-CCTrCH-InformationModifyList-RL-ReconfRqstTDD        | ProtocolIE-ID ::= 402 |
| id-UL-DPCH-InformationAddListIE-RL-ReconfPrepTDD           | ProtocolIE-ID ::= 403 |
| id-UL-DPCH-InformationDeleteListIE-RL-ReconfPrepTDD        | ProtocolIE-ID ::= 404 |
| id-UL-DPCH-InformationModify-AddListIE-RL-ReconfPrepTDD    | ProtocolIE-ID ::= 405 |
| id-UL-DPCH-InformationModify-DeleteListIE-RL-ReconfPrepTDD | ProtocolIE-ID ::= 406 |
| id-UL-DPCH-InformationModify-ModifyListIE-RL-ReconfPrepTDD | ProtocolIE-ID ::= 407 |
| id-Unsuccessful-PDSCHSetItem-PSCH-ReconfFailureTDD         | ProtocolIE-ID ::= 408 |
| id-Unsuccessful-PUSCHSetItem-PSCH-ReconfFailureTDD         | ProtocolIE-ID ::= 409 |
| id-CommunicationContextInfoItem-Reset                      | ProtocolIE-ID ::= 412 |
| id-CommunicationControlPortInfoItem-Reset                  | ProtocolIE-ID ::= 414 |
| id-ResetIndicator  | ProtocolIE-ID ::= 416 |
| id-TFCl2-Bearer-Information-RL-SetupRqstFDD                | ProtocolIE-ID ::= 417 |
| id-TFCl2-BearerSpecificInformation-RL-ReconfPrepFDD        | ProtocolIE-ID ::= 418 |
| id-TFCl2-BearerInformationResponse                         | ProtocolIE-ID ::= 419 |
| id-TimingAdvanceApplied                                    | ProtocolIE-ID ::= 287 |
| id-CFNReportingIndicator                                   | ProtocolIE-ID ::= 6   |
| id-SFNReportingIndicator                                   | ProtocolIE-ID ::= 11  |
| id-InnerLoopDLPCStatus                                     | ProtocolIE-ID ::= 12  |
| id-TimeslotISCPInfoList-DL-PC-RqstTDD                      | ProtocolIE-ID ::= 283 |
| id-PICH-ParametersItem-CTCH-SetupRqstTDD                   | ProtocolIE-ID ::= 167 |
| id-PRACH-ParametersItem-CTCH-SetupRqstTDD                  | ProtocolIE-ID ::= 20  |

END

### 9.3.7 Container Definitions

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

NBAP-Containers {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-Containers (5) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN
```

```

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

IMPORTS
    maxProtocolExtensions,
    maxPrivateIEs,
    maxProtocolIEs,
    Criticality,
    Presence,
    PrivateIE-ID,
    ProtocolExtensionID,
    ProtocolIE-ID
FROM NBAP-CommonDataTypes;

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

NBAP-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
--
-- *****

NBAP-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
--
-- *****

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

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

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

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

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

```

```

ProtocolIE-Field {{IEsSetParam}}

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

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

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

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

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

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

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

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

-- *****
--
-- Container for Protocol Extensions
--
-- *****

ProtocolExtensionContainer {NBAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::=
  SEQUENCE (SIZE (1..maxProtocolExtensions)) OF
  ProtocolExtensionField {{ExtensionSetParam}}

```

```
ProtocolExtensionField {NBAP-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {
    id          NBAP-PROTOCOL-EXTENSION.&id  ({ExtensionSetParam}),
    criticality NBAP-PROTOCOL-EXTENSION.&criticality  ({ExtensionSetParam}{@id}),
    extensionValue NBAP-PROTOCOL-EXTENSION.&Extension  ({ExtensionSetParam}{@id})
}

-- *****
--
-- Container for Private IEs
--
-- *****

PrivateIE-Container {NBAP-PRIVATE-IES : IEsSetParam} ::=
    SEQUENCE (SIZE (1..maxPrivateIEs)) OF
        PrivateIE-Field {{IEsSetParam}}

PrivateIE-Field {NBAP-PRIVATE-IES : IEsSetParam} ::= SEQUENCE {
    id          NBAP-PRIVATE-IES.&id
    ({IEsSetParam}),
    criticality NBAP-PRIVATE-IES.&criticality
    ({IEsSetParam}{@id}),
    value      NBAP-PRIVATE-IES.&Value
    ({IEsSetParam}{@id})
}

END
```

## 9.4 Message Transfer Syntax

NBAP shall use the ASN.1 Basic Packed Encoding Rules (BASIC-PER) Aligned Variant as transfer syntax as specified in ref. [11].

## 9.5 Timers

$T_{\text{Preempt}}$

- Specifies the maximum time that a Node B may wait for pre-emption of resources for establishment or reconfiguration of Radio Links.

---

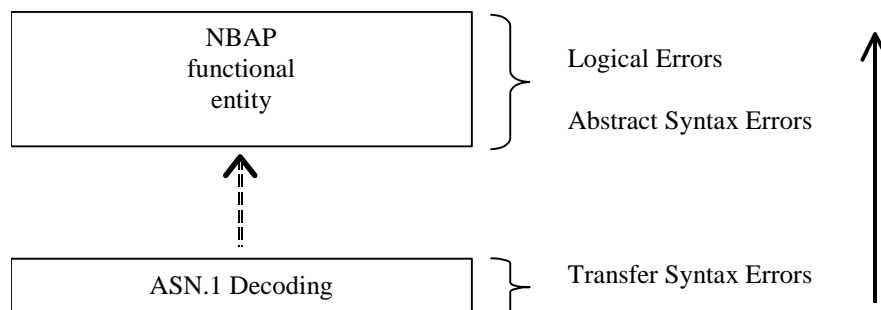
# 10 Handling of unknown, unforeseen and erroneous protocol data

## 10.1 General

Protocol Error cases can be divided into three classes:

- Transfer Syntax Error
- Abstract Syntax Error
- Logical Error

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



**Figure 38: Protocol Errors in NBAP.**

## 10.2 Transfer Syntax Error

A Transfer Syntax Error occurs when the receiver is not able to decode the received physical message. 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, then 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 NBAP entity:

1. receives IEs or IE groups that cannot be understood (unknown id);
2. receives IEs for which the logical range 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);
3. does not receive IEs or IE groups but according to the specified presence of the concerning object, the IEs or IE groups should have been present in the received message;
4. receives IEs or IE groups that are defined to be part of that message in wrong order or with too many occurrences of the same IE or IE group.

Cases 1 and 2 (not comprehended IE/IE group) are handled based on received Criticality information. Case 3 (missing IE/IE group) is handled based on Criticality information and Presence information for the missing IE/IE group specified in the version of the specification used by the receiver. Case 4 (IEs or IE groups in wrong order or with too many occurrences) results in rejecting the procedure.

If an Abstract Syntax Error occurs, the receiver shall read the remaining message and shall then for each detected Abstract Syntax Error that belong to cases 1-3 act according to the Criticality Information and Presence Information for the IE/IE group due to which Abstract Syntax Error occurred in accordance with subclauses 10.3.4 and 10.3.5. The handling of case 4 is specified in subclause 10.3.6.

### 10.3.2 Criticality Information

In the NBAP messages there is criticality information set for individual IEs and/or 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 10.3.4.

In addition, the criticality information is used in case of the missing IE/IE group abstract syntax error (see subclause 10.3.5).

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:

- Reject IE
- Ignore IE and Notify Sender
- Ignore IE

The following rules restrict when a receiving entity may consider an IE, an IE group or an EP not comprehended (not implemented), and when action based on criticality information is applicable:

1. IE or IE group: When one new or modified IE or IE group is implemented for one EP from a standard version, then other new or modified IEs or IE groups specified for that EP in that standard version shall be considered comprehended by the receiving entity (some may still remain unsupported).

Note that this restriction is applicable to a sending entity for constructing messages.

2. EP: The comprehension of different EPs within a standard version or between different standard versions is not mandated. Any EP that is not supported may be considered not comprehended, even if another EP from that standard version is comprehended, and action based on criticality shall be applied.



### 10.3.3 Presence Information

For many IEs/IE groups which are optional according to the ASN.1 transfer syntax, NBAP specifies separately if the presence of these IEs/IE groups is optional or mandatory with respect to RNS application by means of the presence field of the concerning object of class NBAP-PROTOCOL-IES, NBAP-PROTOCOL-IES-PAIR, NBAP-PROTOCOL-EXTENSION or NBAP-PRIVATE-IES.

The presence field of the indicated classes supports three values:

1. Optional;
2. Conditional;
3. Mandatory.

If an IE/IE group is not included in a received message and the presence of the IE/IE group is mandatory or the presence is conditional and the condition is true according to the version of the specification used by the receiver, an abstract syntax error occurs due to a missing IE/IE group.

### 10.3.4 Not comprehended IE/IE group

#### 10.3.4.1 Procedure ID

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

**Reject IE:**

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

**Ignore IE and Notify Sender:**

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

**Ignore IE:**

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

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

#### 10.3.4.2 IEs other than the Procedure ID

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

**Reject IE:**

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

**Ignore IE and Notify Sender:**

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

**Ignore IE:**

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

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

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

### 10.3.5 Missing IE or IE group

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

**Reject IE:**

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

**Ignore IE and Notify Sender:**

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

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

#### **Ignore IE:**

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

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

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

### 10.3.6 IEs or IE groups received in wrong order or with too many occurrences

If a message with IEs or IE groups in wrong order or with too many occurrences is received, the receiving node shall behave according to the following:

- If a message *initiating* a procedure is received containing IEs or IE groups in wrong order or with too many occurrences, none of the functional requests of the message shall be executed. The receiving node shall reject the procedure and report the cause value "Abstract Syntax Error (Falsely Constructed Message)" 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 IEs or IE groups in wrong order or with too many occurrences, the receiving node shall initiate the Error Indication procedure, and use cause value "Abstract Syntax Error (Falsely Constructed Message)".
- If a *response* message is received containing IEs or IE groups in wrong order or with too many occurrences, the receiving node shall initiate local error handling.

## 10.4 Logical Error

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 (unless otherwise specified) as defined by the class of the elementary procedure, irrespective of the criticality 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.

---

## Annex A (normative): Allocation and Pre-emption of Radio Links in the Node B

### A.1 Deriving Allocation Information for a Radio Link

#### A.1.1 Establishment of a New Radio Link

The Allocation Information for a Radio Link in the case of establishment of a new Radio Link shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in

- a) the procedure that establishes the first Radio Link for the Node B Communication Context in the Node B or
- b) a procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels that are intended to use the Radio Link is set to “not used”, the pre-emption capability of the Radio Link shall be set to “shall not trigger pre-emption”.
- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for one or more of the transport channels that are intended to use the Radio Link is not set to “not used”, the allocation priority and the pre-emption capability of the Radio Link shall be set according to the following:
  - The transport channels that have the *Priority Level* IE in the *Allocation/Retention Priority* IE set to “not used” shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link.
  - The allocation priority for a Radio Link shall be set to highest priority level, given by the *Priority Level* IE in the *Allocation/Retention Priority* IE, for all non excluded transport channels that are intended to use the Radio Link.
  - If all non-excluded transport channels that are intended to use a Radio Link to be established have the pre-emption capability, given by the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE, set to “shall not trigger pre-emption”, the pre-emption capability of the Radio Link shall be set to “shall not trigger pre-emption”.  
If one or more non-excluded transport channels that are intended to use the Radio Link to be established have the value of the *Pre-emption Capability* IE in the *Allocation/Retention Priority* IE set to “may trigger pre-emption”, the pre-emption capability of the Radio Link shall be set to “may trigger pre-emption”.

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

#### A.1.2 Modification of an Existing Radio Link

The Allocation Information for a Radio Link in the case of modification of a Radio Link (addition or modification of transport channels using the Radio Link) shall be derived as follows:

- The latest received *Allocation/Retention Priority* IE for each transport channel shall be used.

Note: The *Allocation/Retention Priority* IE for a transport channel may have been received in

- a) the procedure that establishes the first Radio Link for the Node B Communication Context in the Node B,
- b) a previous procedure adding or modifying the transport channel, or
- c) the current procedure adding or modifying the transport channel.

- If the *Priority Level* IE in the *Allocation/Retention Priority* IE for all transport channels to be added or modified in the Radio Link is set to “not used”, the pre-emption capability of the Radio Link to be modified shall be set to “shall not trigger pre-emption”.

- If the *Priority Level IE* in the *Allocation/Retention Priority IE* for one or more of the transport channels to be added or modified in the Radio Link is not set to “not used”, the allocation priority of and the pre-emption capability of the Radio Link to be modified shall be set according to the following:
  - The transport channels to be added or modified that have the *Priority Level IE* in the *Allocation/Retention Priority IE* set to “not used” shall be excluded when setting the allocation priority and pre-emption capability of a Radio Link to be modified.
  - The allocation priority for a Radio Link to be modified shall be set to highest priority level, given by the *Priority Level IE* in the *Allocation/Retention Priority IE*, for all the non-excluded transport channels that are to be added or modified.
  - If all non-excluded transport channels that are to be added or modified in the Radio Link have the pre-emption capability, given by the *Pre-emption Capability IE* in the *Allocation/Retention Priority IE*, set to “shall not trigger pre-emption”, the pre-emption capability of the Radio Link to be modified shall be set to “shall not trigger pre-emption”.  
If one or more of the non-excluded transport channels to be added or modified in the Radio Link have the value of the *Pre-emption Capability IE* in the *Allocation/Retention Priority IE* set to “may trigger pre-emption”, the pre-emption capability of the Radio Link to be modified shall be set to “may trigger pre-emption”.

The derived allocation priority and pre-emption capability are only valid during this allocation/retention process.

---

## A.2 Deriving Retention Information for a Radio Link

The Retention Information for an existing Radio Link shall be derived as follows:

- The latest received *Allocation/Retention Priority IE* for each transport channel shall be used.
- Note: The *Allocation/Retention Priority IE* for a transport channel may have been received in
- a) the procedure that establishes the first Radio Link for the Node B Communication Context in the Node B or
  - b) a procedure adding or modifying the transport channel.
- If the *Priority Level IE* in the *Allocation/Retention Priority IE* for one or more transport channels using the Radio Link is set to “not used”, the pre-emption vulnerability of the Radio Link shall be set to “not pre-emptable”.
  - If the *Priority Level IE* in the *Allocation/Retention Priority IE* for all the transport channels using the Radio Link is not set to “not used”, the retention priority of the Radio Link and the pre-emption vulnerability of the Radio Link shall be set according to the following:
    - The retention priority for a Radio Link shall be set to highest priority level, given by the *Priority Level IE* in the *Allocation/Retention Priority IE*, for all transport channels that uses the Radio Link.
    - If all transport channels that uses the Radio Link have the pre-emption vulnerability, given by the *Pre-emption Vulnerability IE* in the *Allocation/Retention Priority IE*, set to “pre-emptable”, the pre-emption vulnerability of the Radio Link shall be set to “pre-emptable”.  
If one or more transport channels that uses the Radio Link have the value of the *Pre-emption Vulnerability IE* in the *Allocation/Retention Priority IE* set to “not pre-emptable”, the pre-emption vulnerability of the Radio Link shall be set to “not pre-emptable”.

The derived retention priority and pre-emption vulnerability are valid until they are changed, or until the Radio Link is deleted. When new transport channels are added to or deleted from the Radio Link or when existing transport channels are modified with regards to the *Allocation/Retention Priority IE*, the retention information shall be derived again according to above.

---

## A.3 The Allocation/Retention Process

The Node B shall establish or modify the resources for a Radio Link according to:

- The value of the Allocation Information (allocation priority and pre-emption capability) of the Radio Link to be established or modified. The Allocation Information is derived according to clause A.1.
- The value of the Retention Information (retention priority and pre-emption vulnerability) of existing Radio Links. The Retention Information derived according to clause A.2.
- The resource situation in the cell.

Whilst the process and the extent of the pre-emption functionality is operator dependent, the pre-emption indicators (pre-emption capability and pre-emption vulnerability) shall be treated as follows:

- If the pre-emption capability for a Radio Link to be established or modified is set to “may trigger pre-emption” and the resource situation so requires, the Node B may trigger the pre-emption process in clause A.4 to free resources for this allocation request.
- If the pre-emption capability for a Radio Link to be established or modified is set to “shall not trigger pre-emption”, then this allocation request shall not trigger the pre-emption process in clause A.4.
- If the pre-emption vulnerability for an existing Radio Link is set to “pre-emptable”, then this Radio Link shall be included in the pre-emption process in clause A.4.
- If the pre-emption vulnerability for an existing Radio Link is set to “not pre-emptable”, then this Radio Link shall not be included in the pre-emption process in clause A.4.

---

## A.4 The Pre-emption Process

The pre-emption process shall only pre-empt Radio Links with lower retention priority than the allocation priority of the Radio Link to be established or modified. The Radio Links to be pre-empted shall be selected in ascending order of the retention priority.

When the pre-emption process detects that one or more Radio Links have to be pre-empted to free resources for a Radio Link(s) to be established or modified, the Node B shall initiate the Radio Link Pre-emption procedure for all the Node B Communication Contexts having Radio Links selected for pre-emption and start the  $T_{\text{Preempt}}$  timer.

When enough resources are freed to establish or modify the Radio Link(s) according to the request, the Node B shall stop the  $T_{\text{Preempt}}$  timer and complete the procedure that triggered the pre-emption process in accordance with the “Successful Operation” subclause of the procedure.

If the  $T_{\text{Preempt}}$  timer expires, the Node B shall regard the procedure that triggered the pre-emption process as failed and complete the procedure in accordance with the “Unsuccessful Operation” subclause of the procedure.

## Annex B (informative): Change history

| Change history |         |   |  |             |  |
|----------------|---------|---|--|-------------|--|
| TSG RAN#       | Version | CR  | Tdoc RAN   | New Version | Subject/Comment  |
| RAN_06         | -       | -   | RP-99764   | 3.0.0       | Approved at TSG RAN #6 and placed under Change Control |
| RAN_07         | 3.0.0   | -   | -  | 3.1.0       | Approved at TSG RAN #7                                 |
| RAN_08         | 3.1.0   | -   | RP-000250  | 3.2.0       | Approved at TSG RAN #8                                 |
| RAN_08         | 3.1.0   | -   | RP-000251  | 3.2.0       | Approved at TSG RAN #8                                 |
| RAN_08         | 3.1.0   | -   | RP-000252  | 3.2.0       | Approved at TSG RAN #8                                 |
| RAN_08         | 3.1.0   | -   | RP-000253  | 3.2.0       | Approved at TSG RAN #8                                 |
| RAN_09         | 3.2.0   | 165<br>168-<br>170,<br>173-<br>178,<br>180-<br>189                    | RP-000386  | 3.3.0       | Approved at TSG RAN #9                                 |
| RAN_09         | 3.2.0   | 190-<br>200,<br>203<br>205<br>207<br>208<br>211<br>214<br>218-<br>219 | RP-000387  | 3.3.0       | Approved at TSG RAN #9                                 |
| RAN_09         | 3.2.0   | 221<br>222<br>224-<br>228<br>233<br>244,<br>246                       | RP-000388  | 3.3.0       | Approved at TSG RAN #9                                 |
| RAN_09         | 3.2.0   | 247-<br>248   | RP-000389  | 3.3.0       | Approved at TSG RAN #9                                 |
| RAN_10         | 3.3.0   | 250-<br>324   | RP-000627<br>RP-000628<br>RP-000630<br>RP-000697 | 3.4.0       | Approved at TSG RAN #10                                |
| RAN_10         | 3.4.0   |   |  | 3.4.1       | Correct of headers                                     |



---

# History

| <b>Document history</b> |                |             |
|-------------------------|----------------|-------------|
| V3.0.0                  | January 2000   | Publication |
| V3.1.0                  | March 2000     | Publication |
| V3.2.0                  | June 2000      | Publication |
| V3.3.0                  | September 2000 | Publication |
| V3.4.1                  | December 2000  | Publication |