**3GPP TSG-RAN WG3 Meeting #128 R3-253876**

**Malta, MT, 19th – 23rd May 2025**

**Agenda item:** 19.2

**Source:** Samsung

**Title:** (TP to BL CR for 38.473) introduction of Evolution of NR duplex operation Sub-band full duplex (SBFD)

**Document for:** Agreement

# Introduction

This paper provides the text proposals to the BLCR for 38.473 based on the discussion in RAN3#128.

# Text Proposals to TS38.473

<<<<<<<<<<<<<<<<<<<< Start of Changes >>>>>>>>>>>>>>>>>>>>

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following apply.
An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

5GC 5G Core Network

5QI 5G QoS Identifier

A2X Aircraft-to-Everything

AMF Access and Mobility Management Function

ARP Antenna Reference Point

ARPI Additional RRM Policy Index

BH Backhaul

CAG Closed Access Group

CG Cell Group

CG-SDT Configured Grant-Small Data Transmission

CGI Cell Global Identifier

CHO Conditional Handover

CLI Cross Link Interference

CN Core Network

CP Control Plane

CPA Conditional PSCell Addition

CPAC Conditional PSCell Addition or Change

CPC Conditional PSCell Change

DAPS Dual Active Protocol Stack

DL Downlink

DL-PRS Downlink Positioning Reference Signal

EN-DC E-UTRA-NR Dual Connectivity

EPC Evolved Packet Core

eRedCap Enhanced Reduced Capability

FSA ID MBS Frequency Selection Area (FSA) ID

GPSI Generic Public Subscription Identifier

IAB Integrated Access and Backhaul

IMEISV International Mobile station Equipment Identity and Software Version number

LMF Location Management Function

LTM L1/L2 Triggered Mobility

MBS Multicast/Broadcast Service

MP Multi-path

MT-SDT Mobile Terminated Small Data Transmission

N3C Non-3GPP Connection

NID Network Identifier

NPN Non-Public Network

NSAG Network Slice AS Group

NSSAI Network Slice Selection Assistance Information

PDC Propagation Delay Compensation

PEIPS Paging Early Indication with Paging Subgrouping

PNI-NPN Public Network Integrated NPN

posSIB Positioning SIB

PSI PDU Set Importance

PTM Point to Multipoint

PTP Point to Point

QMC QoE Measurement Collection

QoE Quality of Experience

RANAC RAN Area Code

RedCap Reduced Capability

RIM Remote Interference Management

RIM-RS RIM Reference Signal

RRC Radio Resource Control

RSPP Ranging/Sidelink Positioning Protocol

RSRP Reference Signal Received Power

S-CPAC Subsequent Conditional PSCell Addition or Change

S-NSSAI Single Network Slice Selection Assistance Information

SDT Small Data Transmission

SNPN Stand-alone Non-Public Network

SUL Supplementary Uplink

TAC Tracking Area Code

TAG Timing Advance Group

TAI Tracking Area Identity

TEG Timing Error Group

TRP Transmission-Reception Point

TSS Timing Synchronisation Status

U2N UE-to-Network

U2U UE-to-UE

UL-AoA Uplink Angle of Arrival

UL-RSCP UL Reference Signal Carrier Phase

UL-RTOA Uplink Relative Time of Arrival

UL-SRS Uplink Sounding Reference Signal

V2X Vehicle-to-Everything

Z-AoA Zenith Angles of Arrival

<<<<<<<<<<<<<<<<<<<< Next Changes >>>>>>>>>>>>>>>>>>>>

8.1 List of F1AP Elementary procedures

In the following tables, all EPs are divided into Class 1 and Class 2 EPs (see subclause 3.1 for explanation of the different classes):

<unchanged part omitted>

**Table 2: Class 2 procedures**

| **Elementary Procedure** | **Message** |
| --- | --- |
| Error Indication | ERROR INDICATION |
| UE Context Release Request (gNB-DU initiated) | UE CONTEXT RELEASE REQUEST |
| Initial UL RRC Message Transfer | INITIAL UL RRC MESSAGE TRANSFER |
| DL RRC Message Transfer | DL RRC MESSAGE TRANSFER |
| UL RRC Message Transfer | UL RRC MESSAGE TRANSFER |
| UE Inactivity Notification  | UE INACTIVITY NOTIFICATION |
| System Information Delivery | SYSTEM INFORMATION DELIVERY COMMAND |
| Paging | PAGING |
| Notify | NOTIFY |
| PWS Restart Indication | PWS RESTART INDICATION |
| PWS Failure Indication | PWS FAILURE INDICATION |
| gNB-DU Status Indication | GNB-DU STATUS INDICATION |
| RRC Delivery Report | RRC DELIVERY REPORT |
| Network Access Rate Reduction | NETWORK ACCESS RATE REDUCTION |
| Trace Start | TRACE START |
| Deactivate Trace | DEACTIVATE TRACE |
| DU-CU Radio Information Transfer | DU-CU RADIO INFORMATION TRANSFER |
| CU-DU Radio Information Transfer | CU-DU RADIO INFORMATION TRANSFER |
| Resource Status Reporting | RESOURCE STATUS UPDATE |
| Access And Mobility Indication | ACCESS AND MOBILITY INDICATION |
| Reference Time Information Reporting Control | REFERENCE TIME INFORMATION REPORTING CONTROL |
| Reference Time Information Report | REFERENCE TIME INFORMATION REPORT |
| Access Success | ACCESS SUCCESS |
| Cell Traffic Trace | CELL TRAFFIC TRACE |
| Positioning Assistance Information Control | POSITIONING ASSISTANCE INFORMATION CONTROL |
| Positioning Assistance Information Feedback | POSITIONING ASSISTANCE INFORMATION FEEDBACK |
| Positioning Measurement Report | POSITIONING MEASUREMENT REPORT |
| Positioning Measurement Abort | POSITIONING MEASUREMENT ABORT |
| Positioning Measurement Failure Indication | POSITIONING MEASUREMENT FAILURE INDICATION |
| Positioning Measurement Update | POSITIONING MEASUREMENT UPDATE |
| Positioning Deactivation | POSITIONING DEACTIVATION |
| E-CID Measurement Failure Indication | E-CID MEASUREMENT FAILURE INDICATION |
| E-CID Measurement Report | E-CID MEASUREMENT REPORT |
| E-CID Measurement Termination | E-CID MEASUREMENT TERMINATION COMMAND |
| Positioning Information Update | POSITIONING INFORMATION UPDATE |
| Multicast Group Paging | MULTICAST GROUP PAGING |
| Broadcast Context Release Request | BROADCAST CONTEXT RELEASE REQUEST |
| Multicast Context Release Request | MULTICAST CONTEXT RELEASE REQUEST |
| PDC Measurement Report | PDC MEASUREMENT REPORT |
| PDC Measurement Failure Indication | PDC MEASUREMENT FAILURE INDICATION |
| PDC Measurement Termination | PDC MEASUREMENT TERMINATION COMMAND |
| Measurement Activation  | MEASUREMENT ACTIVATION  |
| QoE Information Transfer | QOE INFORMATION TRANSFER |
| Positioning System Information Delivery | POSITIONING SYSTEM INFORMATION DELIVERY COMMAND |
| DU-CU Cell Switch Notification | DU-CU CELL SWITCH NOTIFICATION |
| CU-DU Cell Switch Notification | CU-DU CELL SWITCH NOTIFICATION |
| DU-CU TA Information Transfer | DU-CU TA INFORMATION TRANSFER |
| CU-DU TA Information Transfer | CU-DU TA INFORMATION TRANSFER |
| QoE Information Transfer Control | QOE INFORMATION TRANSFER CONTROL |
| RACH Indication | RACH INDICATION |
| Timing Synchronisation Status Report | TIMING SYNCHRONISATION STATUS REPORT |
| Mobile IAB F1 Setup Triggering | MIAB F1 SETUP TRIGGERING |
| Mobile IAB F1 Setup Outcome Notification | MIAB F1 SETUP OUTCOME NOTIFICATION |
| Broadcast Transport Resource Request | BROADCAST TRANSPORT RESOURCE REQUEST |
| SRS Information Reservation Notification | SRS INFORMATION RESERVATION NOTIFICATION  |
| DU-CU Access And Mobility Indication | DU-CU ACCESS AND MOBILITY INDICATION |
| CLI Indication | CLI INDICATION |

<<<<<<<<<<<<<<<<<<<< Next Change >>>>>>>>>>>>>>>>>>>>

8.2.y CLI Indication

8.2.y.1 General

This procedure is initiated by gNB-DU or gNB-CU to report the result of CLI measurements and to request the CLI mitigation.

The procedure uses non UE-associated signalling.

8.2.y.2 Successful Operation



**Figure 8.2.y.2-1: CLI Measurement Reporting initiated from the gNB-DU, successful operation**

The gNB-DU initiates the procedure by sending the CLI INDICATION message to gNB-CU. The gNB-DU reports the results of the CLI measurements and possible CLI mitigation request in CLI MEASUREMENT UPDATE message to gNB-CU.

If the CLI INDICATION message is received, the gNB-CU may act as specified in TS38.401 [4]



**Figure 8.2.y.2-2: CLI Measurement Reporting initiated from the gNB-CU, successful operation**

The gNB-CU initiates the procedure by sending the CLI INDICATION message to gNB-DU. The gNB-CU forwards the received results of the CLI measurements and possible CLI mitigation request in CLI MEASUREMENT UPDATE message to gNB-DU.

If the CLI INDICATION message is received, the gNB-DU may act as specified in TS38.401 [4]

<<<<<<<<<<<<<<<<<<<< Next Change >>>>>>>>>>>>>>>>>>>>

#### 9.2.1.10 GNB-CU CONFIGURATION UPDATE

This message is sent by the gNB-CU to transfer updated information associated to an F1-C interface instance.

NOTE: If F1-C signalling transport is shared among several F1-C interface instances, this message may transfer updated information associated to several F1-C interface instances.

Direction: gNB-CU → gNB-DU

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| Transaction ID | M |  | 9.3.1.23 |  | YES | reject |
| **Cells to be Activated List** |  | *0..1* |  | List of cells to be activated or modified | YES | reject |
| **>Cells to be Activated List Item** |  | *1.. <maxCellingNBDU>* |  |  | EACH | reject |
| >>NR CGI | M |  | 9.3.1.12 |  | - |  |
| >>NR PCI  | O |  | INTEGER (0..1007) | Physical Cell ID | - |  |
| >>gNB-CU System Information | O |  | 9.3.1.42 | RRC container with system information owned by gNB-CU | YES | reject |
| >>Available PLMN List | O |  | 9.3.1.65 |  | YES | ignore |
| >>Extended Available PLMN List | O |  | 9.3.1.76 | This is included if *Available PLMN List* IE is included and if more than 6 Available PLMNs is to be signalled. | YES | ignore |
| >>IAB Info IAB-donor-CU | O |  | 9.3.1.105 | IAB-related configuration sent by the IAB-donor-CU. | YES | ignore |
| >>Available SNPN ID List | O |  | 9.3.1.163 | Indicates the available SNPN ID list.If this IE is included, the content of the *Available PLMN List* IE and *Extended Available PLMN List* IE if present in the *Cells to be Activated List Item* IE is ignored. | YES | ignore |
| >>MBS Broadcast Neighbour Cell List | O |  | 9.3.1.226 |  | YES | ignore |
| >>SSBs within the cell to be Activated List | O |  | 9.3.1.326 | List of SSB beams within the cell requested to be activated. | YES | reject |
| **Cells to be Deactivated List** |  | *0..1* |  | List of cells to be deactivated | YES | reject |
| **>Cells to be Deactivated List Item** |  | *1.. <maxCellingNBDU>* |  |  | EACH | reject |
| >>NR CGI | M |  | 9.3.1.12 |  | - |  |
| **gNB-CU TNL Association To Add List**  |  | *0..1* |  |  | YES | ignore |
| **>gNB-CU TNL Association To Add Item IEs** |  | *1..<maxnoofTNLAssociations>* |  |  | EACH | ignore |
| >>TNL Association Transport Layer Information | M |  | CP Transport Layer Information9.3.2.4 | Transport Layer Address of the gNB-CU. | - |  |
| >>TNL Association Usage | M |  | ENUMERATED (ue, non-ue, both, ...) | Indicates whether the TNL association is only used for UE-associated signalling, or non-UE-associated signalling, or both. For usage of this IE, refer to TS 38.472 [22]. | - |  |
| **gNB-CU TNL Association To Remove List**  |  | *0..1* |  |  | YES | ignore |
| **>gNB-CU TNL Association To Remove Item IEs** |  | *1..<maxnoofTNLAssociation>* |  |  | EACH | ignore |
| >>TNL Association Transport Layer Address | M |  | CP Transport Layer Information9.3.2.4 | Transport Layer Address of the gNB-CU. | - |  |
| >>TNL Association Transport Layer Address gNB-DU | O |  | CP Transport Layer Information9.3.2.4 | Transport Layer Address of the gNB-DU. | YES | reject |
| **gNB-CU TNL Association To Update List**  |  | *0..1* |  |  | YES | ignore |
| **>gNB-CU TNL Association To Update Item IEs** |  | *1..<maxnoofTNLAssociations>* |  |  | EACH | ignore |
| >>TNL Association Transport Layer Address | M |  | CP Transport Layer Information9.3.2.4 | Transport Layer Address of the gNB-CU. | - |  |
| >>TNL Association Usage | O |  | ENUMERATED (ue, non-ue, both, ...) | Indicates whether the TNL association is only used for UE-associated signalling, or non-UE-associated signalling, or both. For usage of this IE, refer to TS 38.472 [22]. | - |  |
| **Cells to be barred List** |  | *0..1* |  | List of cells to be barred. | YES | ignore |
| **>Cells to be barred List Item** |  | *1.. <maxCellingNBDU>* |  |  | EACH | ignore |
| >>NR CGI | M |  | 9.3.1.12 |  | - |  |
| >>Cell Barred | M |  | ENUMERATED (barred, not-barred, ...) |  | - |  |
| >>IAB Barred | O |  | ENUMERATED (barred, not-barred, ...) | Corresponds to information provided in the *iab-Support* contained in the *PLMN-IdentityInfo* IE or contained inthe *NPN-IdentityInfo* IE as defined in TS 38.331 [8]. The codepoint value “barred” indicates that the *iab-Support* is not sent in SIB1, and the codepoint value “not-barred” indicates that the *iab-Support* is sent in SIB1. | - |  |
| >>Mobile IAB Barred | O |  | ENUMERATED (barred, not-barred, ...) | Corresponds to information provided in the *mobileIAB-Support* contained in the *PLMN-IdentityInfo* IE or contained inthe *NPN-IdentityInfo* IE as defined in TS 38.331 [8]. The codepoint value “barred” indicates that the *mobileIAB-Support* is not sent in SIB1, and the codepoint value “not-barred” indicates that the *mobileIAB-Support* is sent in SIB1. | - |  |
| **Protected E-UTRA Resources List** |  | *0..1* |  | List of Protected E-UTRA Resources. | YES | reject |
| **>Protected E-UTRA Resources List Item** |  | *1.. <maxCellineNB>* |  |  | EACH | reject |
| >>Spectrum Sharing Group ID | M |  | INTEGER (1.. maxCellineNB) | Indicates the E-UTRA cells involved in resource coordination with the NR cells affiliated with the same Spectrum Sharing Group ID. | - |  |
| **>>E-UTRA Cells List** |  | *1* |  | List of applicable E-UTRA cells.  | - |  |
| **>>>E-UTRA Cells List Item** |  | *1 .. <maxCellineNB>* |  |  | - |  |
| >>>>EUTRA Cell ID | M |  | BIT STRING (SIZE(28)) | Indicates the E-UTRAN Cell Identifier IE contained in the ECGI as defined in subclause 9.2.14 in TS 36.423 [9]. | - |  |
| >>>>Served E-UTRA Cell Information | M |  | 9.3.1.64 |  | - |  |
| **Neighbour Cell Information List** |  | *0..1* |  |  | YES | ignore |
| **>Neighbour Cell Information List Item** |  | *1 .. <maxCellingNBDU>* |  |  | EACH | ignore |
| >>NR CGI | M |  | 9.3.1.12 |  | - |  |
| >>Intended TDD DL-UL Configuration | O |  | 9.3.1.89 |  | - |  |
| >>SBFD Configuration | O |  | FFS (pending on RAN2 progress) | FFS | - |  |
| >>SSB Resource Configuration |  |  | OCTET STRING | Includes the *MeasTiming* contained in the MeasurementTimingConfiguration message as defined in 38.331 [10]. | - | - |
| >>NZP CSI-RS ResourcesConfiguration | O |  | 9.3.1.y |  | - | - |
| Transport Layer Address Info | O |  | 9.3.2.5 |  | YES | ignore |
| Uplink BH Non-UP Traffic Mapping | O |  | 9.3.1.103 |  | YES | reject |
| BAP Address | O |  | 9.3.1.111 | Indicates a BAP address assigned to the IAB-donor-DU. | YES | ignore |
| CCO Assistance Information | O |  | 9.3.1.211 | Indicates CCO Assistance Information for cells and beams served by the gNB-DU of the same NG-RAN node or for cells and beams not served by the gNB-DU. | YES | ignore |
| Cells for SON List | O |  | 9.3.1.214 |  | YES | ignore |
| gNB-CU Name | O |  | PrintableString(SIZE(1..150,...)) | Human readable name of the gNB-CU.  | YES | ignore |
| Extended gNB-CU Name | O |  | 9.3.1.206 |  | YES | ignore |
| **Cells Allowed to be Deactivated List** |  | *0..1* |  |  | YES | ignore |
| >**Cells Allowed to be Deactivated List Item** |  | *1 .. <maxCellingNBDU>* |  |  | EACH | ignore |
| >>NR CGI | M |  | 9.3.1.12 |  | - |  |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxCellingNBDU | Maximum numbers of cells that can be served by a gNB-DU. Value is 512. |
| maxnoofTNLAssociations | Maximum numbers of TNL Associations between the gNB-CU and the gNB-DU. Value is 32. |
| maxCellineNB | Maximum no. cells that can be served by an eNB. Value is 256. |
| *maxnoofSSBAreas* | Maximum no. SSB Areas that can be served by a cell. Value is 64.  |

<<<<<<<<<<<<<<<<<<<< Next Change >>>>>>>>>>>>>>>>>>>>

### 9.2.y CLI Indication Message

#### 9.2.y.1 CLI INDICATION

This message is sent by gNB-DU to report the results of the CLI measurements or sent by gNB-CU to forward the results of the CLI measurements.

Direction: gNB-DU → gNB-CU and gNB-CU → gNB-DU.

| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.3.1.1 |  | YES | ignore |
| Transaction ID | M |  | 9.3.1.23 |  | YES | reject |
| **CLI Measurement Result** |  | *1* |  |  | YES | ignore |
| **>CLI Measurement Result Item** |  | *1 .. < maxCellingNBDU >* |  |  | YES | ignore |
| >>Cell ID | M |  | NR CGI9.3.1.12 |  | – |  |
| >>SSB index | O |  | INTEGER (0..63) | Strongest DL SSB beam information |  |  |
| >>CRI | O |  | INTEGER (1..64) | Strongest DL NZP CSI-RS beam information |  |  |
| >>CLI Mitigation Indication | O |  | ENUMERATED (true, …) | Indicates to request CLI mitigation |  |  |

|  |  |
| --- | --- |
| **Range bound** | **Explanation** |
| maxCellingNBDU | Maximum no. cells that can be served by a gNB-DU. Value is 512. |

<<<<<<<<<<<<<<<<<<<< Next Change >>>>>>>>>>>>>>>>>>>>

#### 9.3.1.10 Served Cell Information

This IE contains cell configuration information of a cell in the gNB-DU.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| NR CGI | M |  | 9.3.1.12 |  | - |  |
| NR PCI | M |  | INTEGER (0..1007) | Physical Cell ID | - |  |
| 5GS TAC | O |  | 9.3.1.29 | 5GS Tracking Area Code | - |  |
| Configured EPS TAC | O |  | 9.3.1.29a |  | - |  |
| **Served PLMNs** |  | *1..<maxnoofBPLMNs>* |  | Broadcast PLMNs in SIB 1 associated to the NR Cell Identity in the *NR CGI* IE | - |  |
| >PLMN Identity | M |  | 9.3.1.14 |  | - |  |
| >TAI Slice Support List | O |  | Slice Support List9.3.1.37 | Supported S-NSSAIs per PLMN or per SNPN.  | YES | ignore |
| >NPN Support Information | O |  | 9.3.1.156 | Supported NPNs per PLMN. | YES | reject |
| >Extended TAI Slice Support List | O |  | Extended Slice Support List9.3.1.165 | Additional Supported S-NSSAIs per PLMN or per SNPN.  | YES | reject |
| >TAI NSAG Support List | O |  | 9.3.1.273 | NSAG information associated with the slices per TAC, per PLMN or per SNPN. | YES | ignore |
| CHOICE *NR-Mode-Info*  | M |  |  |  | - |  |
| *>FDD* |  |  |  |  | - |  |
| **>>FDD Info** |  | *1* |  |  | - |  |
| >>>UL FreqInfo | M |  | NR Frequency Info9.3.1.17 | This IE is ignored if the *Cell Direction* IE is included and set to “dl-only”. | - |  |
| >>>DL FreqInfo | M |  | NR Frequency Info9.3.1.17 | This IE is ignored if the *Cell Direction* IE is included and set to “ul-only”. | - |  |
| >>>UL Transmission Bandwidth | M |  | Transmission Bandwidth9.3.1.15 | This IE is ignored if the *Cell Direction* IE is included and set to “dl-only”. | - |  |
| >>>DL Transmission Bandwidth | M |  | Transmission Bandwidth9.3.1.15 | This IE is ignored if the *Cell Direction* IE is included and set to “ul-only”. | - |  |
| >>>UL Carrier List  | O |  | NR Carrier List9.3.1.137 | If included, the *UL Transmission Bandwidth* IE shall be ignored. | YES | ignore |
| >>>DL Carrier List | O |  | NR Carrier List9.3.1.137 | If included, the *DL Transmission Bandwidth* IE shall be ignored. | YES | ignore |
| *>TDD* |  |  |  |  | - |  |
| **>>TDD Info** |  | *1* |  |  | - |  |
| >>>NR FreqInfo | M |  | NR Frequency Info9.3.1.17 |  | - |  |
| >>>Transmission Bandwidth | M |  | 9.3.1.15 | This IE is ignored if the *Transmission Bandwidth asymmetric* IE is present. | - |  |
| >>>Intended TDD DL-UL Configuration | O |  | 9.3.1.89 |  |  YES | ignore |
| >>>TDD UL-DL Configuration Common NR | O |  | OCTET STRING | Includes the *tdd-UL-DL-ConfigurationCommon* contained in the *ServingCellConfigCommon* IE as defined in TS 38.331 [8] | YES | ignore |
| >>>Carrier List | O |  | NR Carrier List9.3.1.137 | If included, the *Transmission Bandwidth* IE shall be ignored. | YES | ignore |
|  |  |  |  |  |  |  |
| **>>>Transmission Bandwidth asymmetric** |  | *0..1* |  | Indicates the asymmetric UL and DL transmission bandwidth. | YES | ignore |
| >>>>UL Transmission Bandwidth | M |  | Transmission Bandwidth9.3.1.15 | .  | – |  |
| >>>>DL Transmission Bandwidth | M |  | Transmission Bandwidth9.3.1.15 |  | – |  |
| >>>SBFD Configuration | O |  | FFS (pending on RAN2 progress) | FFS | YES | ignore |
| *>NR-U* |  |  |  |  | YES | ignore |
| **>>NR-U Channel Info List** |  | *1..< maxnoofNR-UChannelIDs>* |  |  | - |  |
| **>>>NR-U Channel Info Item** |  |  |  |  | - |  |
| >>>>NR-U Channel ID | M |  | INTEGER (1.. maxnoofNR-UChannelIDs, …) | Index to uniquely identify the part of the NR-U Channel Bandwidth consisting of a contiguous set of resource blocks (RBs) on which a channel access procedure is performed in shared spectrum.Value 1 represents the first part of the NR-U Channel Bandwidth on which a channel access procedure is performed. Value 2 represents the second part of the NR-U Channel Bandwidth on which a channel access procedure is performed, and so on. | - |  |
| >>>>NR-U ARFCN | M |  | INTEGER (0.. maxNRARFCN) | It represents the centre frequency of the NR-U Channel Bandwidth for NR bands restricted to operation with shared spectrum channel access, as defined in TS 37.213 [46]. Allowed values are specified in TS 38.101-1 [26] in Table 5.4.2.3-2, Table 5.4.2.3-3 and Table 5.4.2.3-4. | - |  |
| >>>>NR-U Channel Bandwidth | M |  | ENUMERATED (10MHz, 20MHz, 40MHz, 60 MHz, 80 MHz, …, 100MHz) |  | - |  |
| Measurement Timing Configuration | M |  | OCTET STRING | Includes the *MeasurementTimingConfiguration* inter-node message defined in TS 38.331 [8]. | - |  |
| RANAC | O |  | RAN Area Code9.3.1.57 |  | YES | ignore |
| **Extended Served PLMNs List** |  | *0..1* |  | This is included if more than 6 Served PLMNs is to be signalled. | YES | ignore |
| **>Extended Served PLMNs Item** |  | *1 ..<maxnoofExtendedBPLMNs>* |  |  | - |  |
| >>PLMN Identity | M |  | 9.3.1.14 |  | - |  |
| >>TAI Slice Support List | O |  | Slice Support List9.3.1.37 | Supported S-NSSAIs per PLMN or per SNPN.  | - |  |
| >>NPN Support Information | O |  | 9.3.1.156 | Supported NPNs per PLMN. | YES | reject |
| >>Extended TAI Slice Support List | O |  | Extended Slice Support List9.3.1.165 | Additional Supported S-NSSAIs per PLMN or per SNPN.  | YES | reject |
| >>TAI NSAG Support List | O |  | 9.3.1.273 | NSAG information associated with the slices per TAC, per PLMN or per SNPN. | YES | ignore |
| Cell Direction | O |  | 9.3.1.78 |  | YES | ignore |
| **Broadcast PLMN Identity Info List** |  | *0..<maxnoofBPLMNsNR>* |  | This IE corresponds to the *PLMN-IdentityInfoList* IE and the *NPN-IdentityInfoList* IE (if available) in *SIB1* as specified in TS 38.331 [8]. All PLMN Identities and associated information contained in the *PLMN-IdentityInfoList* IE and NPN identities and associated information contained in the *NPN-IdentityInfoList* IE (if available) are included and provided in the same order as broadcast in SIB1.NOTE: In case of NPN-only cell, the PLMN Identities and associated information contained in the *PLMN-IdentityInfoList* IE are not included. | YES | ignore |
| >PLMN Identity List | M |  | Available PLMN List9.3.1.65 | Broadcast PLMN IDs in SIB1 associated to the *NR Cell Identity* IE | - |  |
| >Extended PLMN Identity List | O |  | Extended Available PLMN List9.3.1.76 |  | - |  |
| >5GS-TAC | O |  | OCTET STRING (3) |  | - |  |
| >NR Cell Identity | M |  | BIT STRING (36) |  | - |  |
| >RANAC | O |  | RAN Area Code9.3.1.57 |  | - |  |
| >Configured TAC Indication | O |  | 9.3.1.87a | NOTE: This IE is associated with the 5GS TAC in the *Broadcast PLMN Identity Info List* IE | YES | ignore |
| >NPN Broadcast Information | O |  | 9.3.1.157 | If this IE is included the content of the *PLMN Identity List* IE and *Extended PLMN Identity List* IE if present in the *Broadcast PLMN Identity Info List* IE is ignored. | YES | reject |
| Cell Type  | O |  | 9.3.1.87 |  | YES | ignore |
| Configured TAC Indication | O |  | 9.3.1.87a | NOTE: This IE is associated with the 5GS TAC on top-level of the *Served Cell Information* IE | YES | ignore |
| Aggressor gNB Set ID | O |  | gNB Set ID9.3.1.93 | This IE indicates the associated aggressor gNB Set ID of the cell | YES | ignore |
| Victim gNB Set ID | O |  | gNB Set ID9.3.1.93 | This IE indicates the associated Victim gNB Set ID of the cell | YES | ignore |
| IAB Info IAB-DU | O |  | 9.3.1.106 |  | YES | ignore |
| SSB Positions In Burst  | O |  | 9.3.1.138 |  | YES | ignore |
| NR PRACH Configuration | O |  | 9.3.1.139 |  | YES | ignore |
| SFN Offset | O |  | 9.3.1.208 |  | YES | ignore |
| NPN Broadcast Information | O |  | 9.3.1.157 |  | YES | reject |
| **Supported MBS FSA ID List** |  | *0..<maxnoofMBSFSAs>* |  | Shall contain all MBS Frequency Selection Area Identities associated with the NR CGI. | YES | ignore |
| >MBS Frequency Selection Area Identity | M |  | OCTET STRING(3) |  | – |  |
| RedCap Broadcast Information | O |  | BIT STRING (SIZE(8))  | The presence of this IE indicates that the intraFreqReselectionRedCap IE is broadcast in SIB1 of the corresponding cell, see TS 38.331 [8].Each position in the bitmap indicates which RedCap UEs are allowed access, according to the setting of RedCap barring indicators in SIB1, see TS 38.331 [8].First bit = 1Rx, second bit = 2Rx,third bit = halfDuplex, other bits reserved for future use. Value '1' indicates 'access allowed'. Value '0' indicates 'access not allowed”. | YES | ignore |
| eRedCap Broadcast Information | O |  | BIT STRING (SIZE(8)) | The presence of this IE indicates that the *intraFreqReselection-eRedCap* IE is broadcast in SIB1 of the corresponding cell, see TS 38.331 [8].Each position in the bitmap indicates which eRedCap UEs are allowed access, according to the setting of the barring indicators in SIB1, see TS 38.331 [8].First bit = 1Rx, second bit = 2Rx, third bit=half-duplex,other bits reserved for future use. Value '1' indicates 'access allowed'. Value '0' indicates 'access not allowed”. | YES | ignore |
| XR Broadcast Information | O |  | ENUMERATED (true, …) | Corresponds to information provided in the *cellBarred2RxXR* contained in the *SIB1* message as defined in TS 38.331 [8]. | YES | ignore |
| Barring Exemption for Emergency Call Information | O |  | ENUMERATED (true, …) | Corresponds to information provided in the *barringExemptEmergencyCall*  contained in the *SIB1* message as defined in 38.331 [10]. | YES | ignore |
| NZP CSI-RS Resources Configuration | O |  | 9.3.1.y |  | YES | ignore |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofBPLMNs | Maximum no. of Broadcast PLMN Ids. Value is 6. |
| maxnoofExtendedBPLMNs | Maximum no. of Extended Broadcast PLMN Ids. Value is 6. |
| maxnoofBPLMNsNR | Maximum no. of PLMN Ids.broadcast in an NR cell. Value is 12. |
| maxnoofNR-UChannelIDs | Maximum no. NR-U Channel IDs in a cell. Value is 16. |
| maxnoofMBSFSAs | Maximum no. of MBS FSAs by a cell. Value is 256. |

<<<<<<<<<<<<<<<<<<<< Next Changes >>>>>>>>>>>>>>>>

9.4.3 Elementary Procedure Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Elementary Procedure definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

F1AP-PDU-Descriptions {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-access (22) modules (3) f1ap (3) version1 (1) f1ap-PDU-Descriptions (0)}

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- IE parameter types from other modules.

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

IMPORTS

 Criticality,

 ProcedureCode

FROM F1AP-CommonDataTypes

 Reset,

 ResetAcknowledge,

 F1SetupRequest,

 F1SetupResponse,

 F1SetupFailure,

 GNBDUConfigurationUpdate,

////Skip Unchanged Part

 TimingSynchronisationStatusRequest,

 TimingSynchronisationStatusResponse,

 TimingSynchronisationStatusFailure,

 TimingSynchronisationStatusReport,

 MIABF1SetupTriggering,

 MIABF1SetupOutcomeNotification,

 MulticastContextNotificationIndication,

 MulticastContextNotificationConfirm,

 MulticastContextNotificationRefuse,

 MulticastCommonConfigurationRequest,

 MulticastCommonConfigurationResponse,

 MulticastCommonConfigurationRefuse,

 BroadcastTransportResourceRequest,

 DUCUAccessAndMobilityIndication,

 SRSInformationReservationNotification,

 CLI-Indication

FROM F1AP-PDU-Contents

 id-Reset,

 id-F1Setup,

 id-gNBDUConfigurationUpdate,

 id-gNBCUConfigurationUpdate,

 id-UEContextSetup,

 id-UEContextRelease,

 id-UEContextModification,

 id-UEContextModificationRequired,

 id-DUCUAccessAndMobilityIndication,

 id-ErrorIndication,

 id-UEContextReleaseRequest,

 id-DLRRCMessageTransfer,

 id-ULRRCMessageTransfer,

 id-GNBDUResourceCoordination,

 id-privateMessage,

 id-UEInactivityNotification,

 id-InitialULRRCMessageTransfer,

 id-SystemInformationDeliveryCommand,

 id-Paging,

 id-Notify,

 id-WriteReplaceWarning,

 id-PWSCancel,

 id-PWSRestartIndication,

 id-PWSFailureIndication,

 id-GNBDUStatusIndication,

 id-RRCDeliveryReport,

 id-F1Removal,

 id-NetworkAccessRateReduction,

 id-TraceStart,

 id-DeactivateTrace,

 id-DUCURadioInformationTransfer,

 id-CUDURadioInformationTransfer,

 id-BAPMappingConfiguration,

 id-GNBDUResourceConfiguration,

 id-IABTNLAddressAllocation,

 id-IABUPConfigurationUpdate,

 id-resourceStatusReportingInitiation,

 id-resourceStatusReporting,

 id-accessAndMobilityIndication,

 id-ReferenceTimeInformationReportingControl,

 id-ReferenceTimeInformationReport,

 id-accessSuccess,

 id-cellTrafficTrace,

 id-PositioningMeasurementExchange,

 id-PositioningAssistanceInformationControl,

 id-PositioningAssistanceInformationFeedback,

 id-PositioningMeasurementReport,

 id-PositioningMeasurementAbort,

 id-PositioningMeasurementFailureIndication,

 id-PositioningMeasurementUpdate,

 id-TRPInformationExchange,

 id-PositioningInformationExchange,

 id-PositioningActivation,

 id-PositioningDeactivation,

 id-PositioningInformationUpdate,

 id-E-CIDMeasurementInitiation,

 id-E-CIDMeasurementFailureIndication,

 id-E-CIDMeasurementReport,

 id-E-CIDMeasurementTermination,

 id-BroadcastContextSetup,

 id-BroadcastContextRelease,

 id-BroadcastContextReleaseRequest,

 id-BroadcastContextModification,

 id-MulticastGroupPaging,

 id-MulticastContextSetup,

 id-MulticastContextRelease,

 id-MulticastContextReleaseRequest,

 id-MulticastContextModification,

 id-MulticastDistributionSetup,

 id-MulticastDistributionRelease,

 id-PDCMeasurementInitiation,

 id-PDCMeasurementTerminationCommand,

 id-PDCMeasurementFailureIndication,

 id-PDCMeasurementReport,

 id-pRSConfigurationExchange,

 id-measurementPreconfiguration,

 id-measurementActivation,

 id-QoEInformationTransfer,

 id-PosSystemInformationDeliveryCommand,

 id-DUCUCellSwitchNotification,

 id-CUDUCellSwitchNotification,

 id-DUCUTAInformationTransfer,

 id-CUDUTAInformationTransfer,

 id-QoEInformationTransferControl,

 id-RachIndication,

 id-TimingSynchronisationStatus,

 id-TimingSynchronisationStatusReport,

 id-MIABF1SetupTriggering,

 id-MIABF1SetupOutcomeNotification,

 id-MulticastContextNotification,

 id-MulticastCommonConfiguration,

 id-BroadcastTransportResourceRequest,

 id-SRSInformationReservationNotification,

 id-CLI-Indication

////Skip Unchanged Part

 measurementPreconfiguration |

 timingSynchronisationStatus |

 multicastContextNotification |

 multicastCommonConfiguration ,

 ...

}

F1AP-ELEMENTARY-PROCEDURES-CLASS-2 F1AP-ELEMENTARY-PROCEDURE ::= {

 errorIndication |

 uEContextReleaseRequest |

 dLRRCMessageTransfer |

 uLRRCMessageTransfer |

 uEInactivityNotification |

 privateMessage |

 initialULRRCMessageTransfer |

 systemInformationDelivery |

 paging |

////Skip Unchanged Part

 rachIndication |

 timingSynchronisationStatusReport |

 mIABF1SetupTriggering |

 mIABF1SetupOutcomeNotification |

 broadcastTransportResourceRequest |

 dUCUAccessAndMobilityIndication |

 sRSInformationReservationNotification|

 cLI-Indication,

 ...

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Interface Elementary Procedures

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

reset F1AP-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE Reset

 SUCCESSFUL OUTCOME ResetAcknowledge

 PROCEDURE CODE id-Reset

 CRITICALITY reject

}

broadcastTransportResourceRequest F1AP-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE BroadcastTransportResourceRequest

 PROCEDURE CODE id-BroadcastTransportResourceRequest

 CRITICALITY reject

}

dUCUAccessAndMobilityIndication F1AP-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE DUCUAccessAndMobilityIndication

 PROCEDURE CODE id-DUCUAccessAndMobilityIndication

 CRITICALITY ignore

}

sRSInformationReservationNotification F1AP-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE SRSInformationReservationNotification

 PROCEDURE CODE id-SRSInformationReservationNotification

 CRITICALITY reject

}

////Skip Unchanged Part

cLI-Indication F1AP-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE CLI-Indication

 PROCEDURE CODE id-CLI-Indication

 CRITICALITY ignore

}

END

-- ASN1STOP

9.4.4 PDU Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- PDU definitions for F1AP.

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

F1AP-PDU-Contents {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-access (22) modules (3) f1ap (3) version1 (1) f1ap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- IE parameter types from other modules.

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

IMPORTS

 AssociatedSessionID,

 BroadcastMRBs-FailedToBeModified-Item,

 BroadcastMRBs-FailedToBeSetup-Item,

 BroadcastMRBs-FailedToBeSetupMod-Item,

 BroadcastMRBs-Modified-Item,

 BroadcastMRBs-Setup-Item,

 BroadcastMRBs-SetupMod-Item,

 BroadcastMRBs-ToBeModified-Item,

 BroadcastMRBs-ToBeReleased-Item,

 BroadcastMRBs-ToBeSetup-Item,

 BroadcastMRBs-ToBeSetupMod-Item,

 Candidate-SpCell-Item,

 Cause,

 Cells-Allowed-to-be-Deactivated-List-Item,

 Cells-Failed-to-be-Activated-List-Item,

 Cells-Status-Item,

 Cells-to-be-Activated-List-Item,

 Cells-to-be-Deactivated-List-Item,

 CellULConfigured,

 CriticalityDiagnostics,

 C-RNTI,

 CUtoDURRCInformation,

 DRB-Activity-Item,

 DRBs-FailedToBeModified-Item,

 DRBs-FailedToBeSetup-Item,

 DRBs-FailedToBeSetupMod-Item,

 DRB-Notify-Item,

 DRBs-ModifiedConf-Item,

////Skip Unchanged Part

 SRSReservationType,

 RequestedSRSPreconfigurationCharacteristics-List,

 SRSPreconfiguration-List,

 Broadcast-MRBs-Transport-Request-Item,

 TAInformation-List,

 NonIntegerDRXCycle,

 AggregatedPosSRSResourceSetList,

 F1U-PathFailure,

 LTMResetInformation,

 CLI-MeasurementResult-List

FROM F1AP-IEs

 PrivateIE-Container{},

 ProtocolExtensionContainer{},

 ProtocolIE-Container{},

 ProtocolIE-ContainerPair{},

 ProtocolIE-SingleContainer{},

 F1AP-PRIVATE-IES,

 F1AP-PROTOCOL-EXTENSION,

 F1AP-PROTOCOL-IES,

 F1AP-PROTOCOL-IES-PAIR

FROM F1AP-Containers

 id-AssociatedSessionID,

 id-BroadcastMRBs-FailedToBeModified-List,

 id-BroadcastMRBs-FailedToBeModified-Item,

 id-BroadcastMRBs-FailedToBeSetup-List,

 id-BroadcastMRBs-FailedToBeSetup-Item,

////Skip Unchanged Part

id-TAInformation-List,

 id-NonIntegerDRXCycle,

 id-AggregatedPosSRSResourceSetList,

 id-RANSharingAssistanceInformation,

 id-F1U-PathFailure,

 id-LTMResetInformation,

 id-PreconfiguredSRSInformation,

 id-CLI-MeasurementResult-List,

 maxCellingNBDU,

 maxnoofCandidateSpCells,

 maxnoofDRBs,

 maxnoofIndividualF1ConnectionsToReset,

 maxnoofPotentialSpCells,

 maxnoofSCells,

 maxnoofSRBs,

 maxnoofPagingCells,

 maxnoofTNLAssociations,

 maxCellineNB,

 maxnoofUEIDs,

 maxnoofBHRLCChannels,

 maxnoofRoutingEntries,

 maxnoofTLAsIAB,

 maxnoofULUPTNLInformationforIAB,

 maxnoofUPTNLAddresses,

 maxnoofSLDRBs,

 maxnoofTRPInfoTypes,

 maxnoofTRPs,

 maxnoofMRBs,

 maxnoofUEIDforPaging,

 maxnoofMRBsforUE,

 maxnoofServingCellMOs

////Skip Unchanged Part

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- DU-CU Access And Mobility Indication

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

DUCUAccessAndMobilityIndication ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { { DUCUAccessAndMobilityIndicationIEs} },

 ...

}

DUCUAccessAndMobilityIndicationIEs F1AP-PROTOCOL-IES ::= {

 { ID id-TransactionID CRITICALITY reject TYPE TransactionID PRESENCE mandatory }|

 { ID id-DLLBTFailureInformationList CRITICALITY ignore TYPE DLLBTFailureInformationList PRESENCE optional},

 ...

}

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- CLI Indication

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

CLI-Indication ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{CLI-Indication-IEs}},

 ...

}

CLI-Indication-IEs F1AP-PROTOCOL-IES ::= {

 { ID id-TransactionID CRITICALITY reject TYPE TransactionID PRESENCE mandatory }|

 { ID id-CLI-MeasurementResult-List CRITICALITY ignore TYPE CLI-MeasurementResult-List PRESENCE mandatory },

 ...

}

END

-- ASN1STOP

9.4.5 Information Element Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Information Element Definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

F1AP-IEs {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-access (22) modules (3) f1ap (3) version1 (1) f1ap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

 id-gNB-CUSystemInformation,

 id-HandoverPreparationInformation,

 id-TAISliceSupportList,

 id-RANAC,

 id-BearerTypeChange,

 id-Coverage-Modification-Cause,

 id-Cell-Direction,

 id-Cell-Type,

 id-CellGroupConfig,

////Skip Unchanged Part

 id-ReportingIntervalIMs,

 id-Transmission-Bandwidth-asymmetric,

 id-TagIDPointer,

 id-LocalOrigin,

 id-SRSPosPeriodicConfigHyperSFNIndex,

 id-SBFD-Configuration,

 id-SSB-resource-config,

 id-NZP-CSI-RS-Resources-Config,

 maxNRARFCN,

 maxnoofErrors,

 maxnoofBPLMNs,

 maxnoofBPLMNsNR,

 maxnoofDLUPTNLInformation,

////Skip Unchanged Part

-- C

CAGID ::= BIT STRING (SIZE(32))

Cancel-all-Warning-Messages-Indicator ::= ENUMERATED {true, ...}

Candidate-SpCell-Item ::= SEQUENCE {

 candidate-SpCell-ID NRCGI ,

 iE-Extensions ProtocolExtensionContainer { { Candidate-SpCell-ItemExtIEs } } OPTIONAL,

 ...

}

Candidate-SpCell-ItemExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 ...

}

////Skip Unchanged Part

CHOtrigger-IntraDU ::= ENUMERATED {

 cho-initiation,

 cho-replace,

 cho-cancel,

 ...

}

CLI-MeasurementResult-List ::= SEQUENCE (SIZE(1..maxnoofCellsinNG-RANnode)) OF CLI-MeasurementResult-Item

CLI-MeasurementResult-Item ::= SEQUENCE {

 cellID GlobalNG-RANCell-ID,

 ssbIndex INTEGER(0..63,...) OPTIONAL,

 nZP-CSI-RS-ResourceIndication INTEGER(1..64,...) OPTIONAL,

 cLI-MitigationIndication CLI-MitigationIndication OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {CLI-MeasurementResult-Item-ExtIEs} } OPTIONAL,

 ...

}

CLI-MeasurementResult-Item-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 ...

}

CLI-MitigationIndication ::= ENUMERATED {true,...}

CNSubgroupID ::= INTEGER (0..7, ...)

CNUEPagingIdentity ::= CHOICE {

 fiveG-S-TMSI BIT STRING (SIZE(48)),

 choice-extension ProtocolIE-SingleContainer { { CNUEPagingIdentity-ExtIEs } }

}

////Skip Unchanged Part

NeedForGapNCSGInfoNR ::= OCTET STRING

NeedForGapNCSGInfoEUTRA ::= OCTET STRING

NeedForInterruptionInfoNR ::= OCTET STRING

Neighbour-Cell-Information-Item ::= SEQUENCE {

 nRCGI NRCGI,

 intendedTDD-DL-ULConfig IntendedTDD-DL-ULConfig OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { Neighbour-Cell-Information-ItemExtIEs } } OPTIONAL

}

Neighbour-Cell-Information-ItemExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 {ID id-SBFD-Configuration CRITICALITY ignore EXTENSION SBFD-Configuration PRESENCE optional}|

 {ID id-SSB-resource-config CRITICALITY ignore EXTENSION SSB-resource-config PRESENCE optional}|

 {ID id-NZP-CSI-RS-Resources-Config CRITICALITY ignore EXTENSION NZP-CSI-RS-Resources-Config PRESENCE optional},

 ...

}

NeighbourNR-CellsForSON-List ::= SEQUENCE (SIZE(1.. maxNeighbourCellforSON)) OF NeighbourNR-CellsForSON-Item

////Skip Unchanged Part

NRUESidelinkAggregateMaximumBitrate ::= SEQUENCE {

 uENRSidelinkAggregateMaximumBitrate BitRate,

 iE-Extensions ProtocolExtensionContainer { {NRUESidelinkAggregateMaximumBitrate-ExtIEs} } OPTIONAL

}

NRUESidelinkAggregateMaximumBitrate-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 ...

}

NZP-CSI-RS-ResourceID::= INTEGER (0..191)

NZP-CSI-RS-Resources-Config ::= SEQUENCE {

 nZP-CSI-RS-ResourceSet OCTET STRING,

 nZP-CSI-RS-Resource-List NZP-CSI-RS-Resource-List,

 iE-Extensions ProtocolExtensionContainer { {NZP-CSI-RS-Resources-Config-ExtIEs} } OPTIONAL,

 ...

}

NZP-CSI-RS-Resources-Config-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 ...

}

NZP-CSI-RS-Resource-List ::= SEQUENCE (SIZE(1..maxnoofNZP-CSI-RS-ResourcesPerSet)) OF NZP-CSI-RS-Resource-Item

NZP-CSI-RS-Resource-Item ::= SEQUENCE {

 nZP-CSI-RS-Resource OCTET STRING,

 iE-Extensions ProtocolExtensionContainer { {NZP-CSI-RS-Resource-Item-ExtIEs} } OPTIONAL,

 ...

}

NZP-CSI-RS-Resource-Item-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 ...

}

N6JitterInformation ::= SEQUENCE {

 n6JitterLowerBound INTEGER (-127..127),

 n6JitterUpperBound INTEGER (-127..127),

 iE-Extensions ProtocolExtensionContainer { { N6JitterInformationExtIEs } } OPTIONAL,

 ...}

N6JitterInformationExtIEs   F1AP-PROTOCOL-EXTENSION ::= {

 ...

}

////Skip Unchanged Part

ServingCellMO-encoded-in-CGC-Item-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 { ID id-BWP-Id CRITICALITY ignore EXTENSION BWP-Id PRESENCE optional },

 ...

}

Served-Cell-Information ::= SEQUENCE {

 nRCGI NRCGI,

 nRPCI NRPCI,

 fiveGS-TAC FiveGS-TAC OPTIONAL,

 configured-EPS-TAC Configured-EPS-TAC OPTIONAL,

 servedPLMNs ServedPLMNs-List,

 nR-Mode-Info NR-Mode-Info,

 measurementTimingConfiguration OCTET STRING,

 iE-Extensions ProtocolExtensionContainer { {Served-Cell-Information-ExtIEs} } OPTIONAL,

 ...

}

Served-Cell-Information-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 { ID id-RANAC CRITICALITY ignore EXTENSION RANAC PRESENCE optional }|

 { ID id-ExtendedServedPLMNs-List CRITICALITY ignore EXTENSION ExtendedServedPLMNs-List PRESENCE optional }|

 { ID id-Cell-Direction CRITICALITY ignore EXTENSION Cell-Direction PRESENCE optional }|

 { ID id-BPLMN-ID-Info-List CRITICALITY ignore EXTENSION BPLMN-ID-Info-List PRESENCE optional }|

 { ID id-Cell-Type CRITICALITY ignore EXTENSION CellType PRESENCE optional}|

 { ID id-ConfiguredTACIndication CRITICALITY ignore EXTENSION ConfiguredTACIndication PRESENCE optional }|

 { ID id-AggressorgNBSetID CRITICALITY ignore EXTENSION AggressorgNBSetID PRESENCE optional}|

 { ID id-VictimgNBSetID CRITICALITY ignore EXTENSION VictimgNBSetID PRESENCE optional}|

 { ID id-IAB-Info-IAB-DU CRITICALITY ignore EXTENSION IAB-Info-IAB-DU PRESENCE optional}|

 { ID id-SSB-PositionsInBurst CRITICALITY ignore EXTENSION SSB-PositionsInBurst PRESENCE optional }|

 { ID id-NRPRACHConfig CRITICALITY ignore EXTENSION NRPRACHConfig PRESENCE optional }|

 { ID id-SFN-Offset CRITICALITY ignore EXTENSION SFN-Offset PRESENCE optional }|

 { ID id-NPNBroadcastInformation CRITICALITY reject EXTENSION NPNBroadcastInformation PRESENCE optional }|

 { ID id-Supported-MBS-FSA-ID-List CRITICALITY ignore EXTENSION Supported-MBS-FSA-ID-List PRESENCE optional }|

 { ID id-Redcap-Bcast-Information CRITICALITY ignore EXTENSION Redcap-Bcast-Information PRESENCE optional }|

 { ID id-ERedcap-Bcast-Information CRITICALITY ignore EXTENSION ERedcap-Bcast-Information PRESENCE optional }|

 { ID id-XR-Bcast-Information CRITICALITY ignore EXTENSION XR-Bcast-Information PRESENCE optional }|

 { ID id-BarringExemptionforEmerCallInfo CRITICALITY ignore EXTENSION BarringExemptionforEmerCallInfo PRESENCE optional }|

 { ID id-NZP-CSI-RS-Resources-Config CRITICALITY ignore EXTENSION NZP-CSI-RS-Resources-Config PRESENCE optional },

 ...

}

Serving-Cells-List ::= SEQUENCE (SIZE(1..maxnoofServingCells)) OF Serving-Cells-List-Item

Serving-Cells-List-Item ::= SEQUENCE{

 nRCGI NRCGI,

 iAB-MT-Cell-NA-Resource-Configuration-Mode-Info IAB-MT-Cell-NA-Resource-Configuration-Mode-Info OPTIONAL,

 iE-Extensions ProtocolExtensionContainer {{Serving-Cells-List-Item-ExtIEs}} OPTIONAL

}

////Skip Unchanged Part

TDD-Info ::= SEQUENCE {

 nRFreqInfo NRFreqInfo,

 transmission-Bandwidth Transmission-Bandwidth,

 iE-Extensions ProtocolExtensionContainer { {TDD-Info-ExtIEs} } OPTIONAL,

 ...

}

TDD-Info-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 {ID id-IntendedTDD-DL-ULConfig CRITICALITY ignore EXTENSION IntendedTDD-DL-ULConfig PRESENCE optional}|

 {ID id-TDD-UL-DLConfigCommonNR CRITICALITY ignore EXTENSION TDD-UL-DLConfigCommonNR PRESENCE optional }|

 {ID id-CarrierList CRITICALITY ignore EXTENSION NRCarrierList PRESENCE optional }|

 {ID id-Transmission-Bandwidth-asymmetric CRITICALITY ignore EXTENSION Transmission-Bandwidth-asymmetric PRESENCE optional }|

 {ID id-SBFD-Configuration CRITICALITY ignore EXTENSION SBFD-Configuration PRESENCE optional },

 ...

}

<<<<<<<<<<<<<<<<<<<< Next Change >>>>>>>>>>>>>>>>>>>>

9.4.7 Constant Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Constant definitions

--

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

////Skip Unchanged Part

id-QoEInformationTransfer ProcedureCode ::= 78

id-PDCMeasurementTerminationCommand ProcedureCode ::= 79

id-PDCMeasurementFailureIndication ProcedureCode ::= 80

id-PosSystemInformationDeliveryCommand ProcedureCode ::= 81

id-DUCUCellSwitchNotification ProcedureCode ::= 82

id-CUDUCellSwitchNotification ProcedureCode ::= 83

id-DUCUTAInformationTransfer ProcedureCode ::= 84

id-CUDUTAInformationTransfer ProcedureCode ::= 85

id-QoEInformationTransferControl ProcedureCode ::= 86

id-RachIndication ProcedureCode ::= 87

id-TimingSynchronisationStatus ProcedureCode ::= 88

id-TimingSynchronisationStatusReport ProcedureCode ::= 89

id-MIABF1SetupTriggering ProcedureCode ::= 90

id-MIABF1SetupOutcomeNotification ProcedureCode ::= 91

id-MulticastContextNotification ProcedureCode ::= 92

id-MulticastCommonConfiguration ProcedureCode ::= 93

id-BroadcastTransportResourceRequest ProcedureCode ::= 94

id-DUCUAccessAndMobilityIndication ProcedureCode ::= 95

id-SRSInformationReservationNotification ProcedureCode ::= 96

id-CLI-Indication ProcedureCode ::= xx

////Skip Unchanged Part

maxnoVACell INTEGER ::= 32

maxnoAggregatedSRS-Resources INTEGER ::= 3

maxnoAggregatedPosSRSResourceSets INTEGER ::= 3

maxnoAggregatedPosPRSResourceSets INTEGER ::= 3

maxnoofTimeWindowSRS INTEGER ::= 16

maxnoofTimeWindowMea INTEGER ::= 16

maxnoPreconfiguredSRS INTEGER ::= 16

maxnoHopsMinusOne INTEGER ::= 5

maxnoAggCombinations INTEGER ::= 2

maxnoAggregatedPosSRSCombinations INTEGER ::= 32maxnoofNZP-CSI-RS-ResourcesPerSet INTEGER ::= 64

////Skip Unchanged Part

id-F1U-PathFailure ProtocolIE-ID ::= 846

id-MeasBasedOnAggregatedResources ProtocolIE-ID ::= 847

id-SIB23-message ProtocolIE-ID ::= 848

id-BarringExemptionforEmerCallInfo ProtocolIE-ID ::= 849

id-SIB17bis-message ProtocolIE-ID ::= 850

id-ReportingIntervalIMs ProtocolIE-ID ::= 851

id-Transmission-Bandwidth-asymmetric ProtocolIE-ID ::= 852

id-TagIDPointer ProtocolIE-ID ::= 853

id-LocalOrigin ProtocolIE-ID ::= 854

id-LTMResetInformation ProtocolIE-ID ::= 855

id-SRSPosPeriodicConfigHyperSFNIndex ProtocolIE-ID ::= 856

id-PreconfiguredSRSInformation ProtocolIE-ID ::= 857

id-CLI-MeasurementResult-List ProtocolIE-ID ::= xx1

id-SBFD-Configuration ProtocolIE-ID ::= xx2

id-SSB-resource-config ProtocolIE-ID ::= xx3

id-NZP-CSI-RS-Resources-Config ProtocolIE-ID ::= xx4

END

-- ASN1STOP

<<<<<<<<<<<<<<<<<<<< End of Changes >>>>>>>>>>>>>>>>>>>>