**3GPP TSG-RAN WG3 Meeting #110-e *R3-207017***

**E-meeting, 2 – 12 Nov 2020**

|  |
| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **38.455** | **CR** | **0021** | **rev** | **1** | **Current version:** | **16.1.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
|  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **X** |

|  |
| --- |
|  |
| ***Title:***  | RRC alignement and various correction including ASN.1  |
|  |  |
| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | R3 |
|  |  |
| ***Work item code:*** | NR\_POS-Core  |  | ***Date:*** | 2020-11-02 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-16 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | There are mutiple misalignments between the ASN.1 and the tabular and some misalignments with the RRC |
|  |  |
| ***Summary of change:*** | Correct the tabular or the ASN.1 including the following misalignments:1. The current measurement report periodicity is aligned with LTE RRC 36.331. It should be revised to be aligned with NR RRC TS 38.3312. Semantic clarification on the *Measurement Periodicity* IE codepoint 60mn usage for ng-eNB only due to RRC supportImpact assessment towards the previous version of the specification (same release): This change has isolated impact with the previous version of the specification (same release).The impact can be considered isolated because the change only affects the the TRP Information Request procedure. |
|  |  |
| ***Consequences if not approved:*** | Misalignment in ASN.1 which leads to wrong functionalities |
|  |  |
| ***Clauses affected:*** | 9.1.1.1, 9.1.4.1, 9.3.5 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS/TR 38.473 CR 0689  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | Rev 1: removal of overlap with R3-206205 and cover corrections |

<<<<<<<<<<<<<<<<<<<< Changes Begin >>>>>>>>>>>>>>>>>>>>

### 9.1.1 Messages for Location Information Transfer Procedures

#### 9.1.1.1 E-CID MEASUREMENT INITIATION REQUEST

This message is sent by LMF to initiate E-CID measurements.

Direction: LMF → NG-RAN node.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.2.3 |  | YES | reject |
| NRPPa Transaction ID | M |  | 9.2.4 |  | - |  |
| LMF UE Measurement ID | M |  | INTEGER (1..15 ,…,256) |  | YES | reject |
| Report Characteristics | M |  | ENUMERATED (OnDemand, Periodic,…) |  | YES | reject |
| Measurement Periodicity | C-ifReportCharacteristicsPeriodic |  | ENUMERATED (120ms, 240ms, 480ms, 640ms, 1024ms, 2048ms, 5120ms, 10240ms, 1min, 6min, 12min, 30min, 60min,…, 20480ms, 40960ms) | The codepoint 60min applies only for ng-eNB. | YES | reject |
| **Measurement Quantities** |  | *1 .. <maxnoMeas>* |  |  | EACH | reject |
| >Measurement Quantities Item | M |  | ENUMERATED (Cell-ID, Angle of Arrival, Timing Advance Type 1, Timing Advance Type 2, RSRP, RSRQ,…, SS-RSRP, SS-RSRQ, CSI-RSRP, CSI-RSRQ, NR Angle of Arrival) |  | - | - |
| Other-RAT Measurement Quantities |  | *0 .. <maxnoMeas>* |  |  | EACH | ignore |
| >Other-RAT Measurement Quantities Item | M |  | ENUMERATED (GERAN, UTRAN,…, NR, EUTRA) |  |  |  |
| WLAN Measurement Quantities |  | *0 .. <maxnoMeas>* |  |  | EACH | ignore |
| >WLAN Measurement Quantities Item | M |  | ENUMERATED (WLAN, ...) |  | - |  |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoMeas | Maximum no. of measured quantities that can be configured and reported with one message. Value is 64. |

|  |  |
| --- | --- |
| Condition | Explanation |
| ifReportCharacteristicsPeriodic | This IE shall be present if the *Report Characteristics* IE is set to the value "Periodic". |

<<<<<<<<<<<<<<<<<<<< Unchanged Text Omitted >>>>>>>>>>>>>>>>>>>>

### 9.1.4 Messages for Measurement Information Transfer Procedures

#### 9.1.4.1 MEASUREMENT REQUEST

This message is sent by the LMF to request the NG-RAN node to configure a positioning measurement.

Direction: LMF → NG-RAN node.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.2.3 |  | YES | reject |
| NRPPa Transaction ID | M |  | 9.2.4 |  | - |  |
| LMF Measurement ID | M |  | INTEGER (1..65536)  |  | YES | reject |
| **TRP Measurement Request List** |  | *1* |  |  | YES | reject |
| >TRP Measurement Request Item  |  | *1..<maxnoofMeasTRPs>* |  |  |  |  |
| >>TRP ID | M |  | 9.2.24 |  |  |  |
| >>Search Window Information | O |  | 9.2.26 |  |  |  |
|  |  |  |  |  |  |  |
| Report Characteristics | M |  | ENUMERATED (OnDemand, Periodic, ...) |  | YES | reject |
| Measurement Periodicity | C-ifReportCharacteristicsPeriodic |  | ENUMERATED (120ms, 240ms, 480ms, 640ms, 1024ms, 2048ms, 5120ms, 10240ms, 1min, 6min, 12min, 30min, 60min,…, 20480ms, 40960ms)  | The codepoint 60min applies only for ng-eNB. | YES | reject |
| **TRP Measurement Quantities** |  | 1 |  |  | YES |  |
| **>TRP Measurement Quantities Item** |  | *1 .. <maxnoPosMeas>* |  |  | EACH | reject |
| >TRP Measurement Type | M |  | ENUMERATED (gNB-RxTxTimeDiff, UL-SRS-RSRP, UL-AoA, UL-RTOA,…) |  | - |  |
| >Timing Reporting Granularity Factor | O |  | INTEGER (0..5) | TS 38.133 [16] |  |  |
| SFN initialisation Time | O |  | 9.2.36 | If this IE is not present, the TRP may assume that the value is same as its own SFN initialisation time. | YES | ignore |
| SRS Configuration | O |  | 9.2.28 |  | YES | ignore |
| Measurement Beam Information Request | O |  | ENUMERATED (true,...) |  | YES | ignore |
| System Frame Number | O  |  | INTEGER(0..1023) |  | YES | ignore |
| Slot Number | O |  | INTEGER(0..79) |  | YES | ignore |

|  |  |
| --- | --- |
| Condition | Explanation |
| ifReportCharacteristicsPeriodic | This IE shall be present if the *Report Characteristics* IE is set to the value "Periodic". |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoPosMeas | Maximum no. of measured quantities that can be configured and reported with one positioning measurement message. Value is 16384. |
| maxnoofMeasTRPs | Maxmum no. of TRPs that can be included within one message. Value is 64.  |

<<<<<<<<<<<<<<<<<<<< Unchanged Text Omitted >>>>>>>>>>>>>>>>>>>>

#### 9.1.1.14 TRP INFORMATION REQUEST

This message is sent by an LMF to request information for TRPs hosted by an NG-RAN node.

Direction: LMF → NG-RAN node.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.2.3 |  | YES | reject |
| NRPPa Transaction ID | M |  | 9.2.4 |  | - |  |
| **TRP List** |  | *0 ..1* |  |  |  |  |
| **>TRP List Item** |  | *1 .. <maxnoTRPs>* |  |  | EACH | ignore |
| >>TRP ID | M |  | 9.2.24 |  |  |  |
| **TRP Information Type List** |  | *1* |  |  |  |  |
| **>TRP Information Type Item** |  | *1 .. <maxnoTRPInfoTypes>* |  |  | EACH | reject |
| >>TRP Information Type Item | M |  | ENUMERATED (nr pci, ng-ran cgi, nr arfcn, prs config, ssb config, sfn init time, spatial direction info, geo-coordinates, …)  |  |  |  |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoTRPs | Maximum no. of TRPs in a NG-RAN node. Value is 65535 |
| maxnoTRPInfoTypes | Maximum no of TRP information types that can be requested and reported with one message. Value is 64. |

<<<<<<<<<<<<<<<<<<<< Unchanged Text Omitted >>>>>>>>>>>>>>>>>>>>

#### 9.1.4.2 MEASUREMENT RESPONSE

This message is sent by the NG-RAN node to report positioning measurements for the target UE.

Direction: NG-RAN node → LMF.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.2.3 |  | YES | reject |
| NRPPa Transaction ID | M |  | 9.2.4 |  | - |  |
| LMF Measurement ID | M |  | INTEGER (1..65536)  |  | YES | reject |
| RAN Measurement ID | M |  | INTEGER (1..65536)  |  | YES | reject |
| **TRP Measurement Response List** |  | *0..1* |  |  | YES | reject |
| **>TRP Measurement Response Item**  |  | *1..<maxnoofMeasTRPs>* |  |  |  |  |
| >>TRP ID | M |  | 9.2.24 |  |  |  |
| >>Measurement Result | M |  | 9.2.37 |  |  |  |
| Criticality Diagnostics | O |  | 9.2.11 |  | YES | ignore |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofMeasTRPs | Maxmum no. of TRPs that can be included within one message. Value is 64.  |

<<<<<<<<<<<<<<<<<<<< Unchanged Text Omitted >>>>>>>>>>>>>>>>>>>>

### 9.3.3 Elementary Procedure Definitions

-- ASN1START

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

--

-- Elementary Procedure definitions

--

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

NRPPA-PDU-Descriptions {

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

ngran-access (22) modules (3) nrppa (4) version1 (1) nrppa-PDU-Descriptions (0) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules.

--

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

IMPORTS

 Criticality,

 ProcedureCode,

 NRPPATransactionID

FROM NRPPA-CommonDataTypes

 ErrorIndication,

 PrivateMessage,

 E-CIDMeasurementInitiationRequest,

 E-CIDMeasurementInitiationResponse,

 E-CIDMeasurementInitiationFailure,

 E-CIDMeasurementFailureIndication,

 E-CIDMeasurementReport,

 E-CIDMeasurementTerminationCommand,

 OTDOAInformationRequest,

 OTDOAInformationResponse,

 OTDOAInformationFailure,

 AssistanceInformationControl,

 AssistanceInformationFeedback,

 PositioningInformationRequest,

 PositioningInformationResponse,

 PositioningInformationFailure,

 PositioningInformationUpdate,

 MeasurementRequest,

 MeasurementResponse,

 MeasurementFailure,

 MeasurementReport,

 MeasurementUpdate,

 MeasurementAbort,

 MeasurementFailureIndication,

 TRPInformationRequest,

 TRPInformationResponse,

 TRPInformationFailure,

 PositioningActivationRequest,

 PositioningActivationResponse,

 PositioningActivationFailure,

 PositioningDeactivation

FROM NRPPA-PDU-Contents

 id-errorIndication,

 id-privateMessage,

 id-e-CIDMeasurementInitiation,

 id-e-CIDMeasurementFailureIndication,

 id-e-CIDMeasurementReport,

 id-e-CIDMeasurementTermination,

 id-oTDOAInformationExchange,

 id-assistanceInformationControl,

 id-assistanceInformationFeedback,

 id-positioningInformationExchange,

 id-positioningInformationUpdate,

 id-Measurement,

 id-MeasurementReport,

 id-MeasurementUpdate,

 id-MeasurementAbort,

 id-MeasurementFailureIndication,

 id-tRPInformationExchange,

 id-positioningActivation,

 id-positioningDeactivation

FROM NRPPA-Constants;

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

--

-- Interface Elementary Procedure Class

--

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

NRPPA-ELEMENTARY-PROCEDURE ::= CLASS {

 &InitiatingMessage ,

 &SuccessfulOutcome OPTIONAL,

 &UnsuccessfulOutcome OPTIONAL,

 &procedureCode ProcedureCode UNIQUE,

 &criticality Criticality DEFAULT ignore

}

WITH SYNTAX {

 INITIATING MESSAGE &InitiatingMessage

 [SUCCESSFUL OUTCOME &SuccessfulOutcome]

 [UNSUCCESSFUL OUTCOME &UnsuccessfulOutcome]

 PROCEDURE CODE &procedureCode

 [CRITICALITY &criticality]

}

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

--

-- Interface PDU Definition

--

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

NRPPA-PDU ::= CHOICE {

 initiatingMessage InitiatingMessage,

 successfulOutcome SuccessfulOutcome,

 unsuccessfulOutcome UnsuccessfulOutcome,

 ...

}

InitiatingMessage ::= SEQUENCE {

 procedureCode NRPPA-ELEMENTARY-PROCEDURE.&procedureCode ({NRPPA-ELEMENTARY-PROCEDURES}),

 criticality NRPPA-ELEMENTARY-PROCEDURE.&criticality ({NRPPA-ELEMENTARY-PROCEDURES}{@procedureCode}),

 nrppatransactionID NRPPATransactionID,

 value NRPPA-ELEMENTARY-PROCEDURE.&InitiatingMessage ({NRPPA-ELEMENTARY-PROCEDURES}{@procedureCode})

}

SuccessfulOutcome ::= SEQUENCE {

 procedureCode NRPPA-ELEMENTARY-PROCEDURE.&procedureCode ({NRPPA-ELEMENTARY-PROCEDURES}),

 criticality NRPPA-ELEMENTARY-PROCEDURE.&criticality ({NRPPA-ELEMENTARY-PROCEDURES}{@procedureCode}),

 nrppatransactionID NRPPATransactionID,

 value NRPPA-ELEMENTARY-PROCEDURE.&SuccessfulOutcome ({NRPPA-ELEMENTARY-PROCEDURES}{@procedureCode})

}

UnsuccessfulOutcome ::= SEQUENCE {

 procedureCode NRPPA-ELEMENTARY-PROCEDURE.&procedureCode ({NRPPA-ELEMENTARY-PROCEDURES}),

 criticality NRPPA-ELEMENTARY-PROCEDURE.&criticality ({NRPPA-ELEMENTARY-PROCEDURES}{@procedureCode}),

 nrppatransactionID NRPPATransactionID,

 value NRPPA-ELEMENTARY-PROCEDURE.&UnsuccessfulOutcome ({NRPPA-ELEMENTARY-PROCEDURES}{@procedureCode})

}

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

--

-- Interface Elementary Procedure List

--

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

NRPPA-ELEMENTARY-PROCEDURES NRPPA-ELEMENTARY-PROCEDURE ::= {

 NRPPA-ELEMENTARY-PROCEDURES-CLASS-1 |

 NRPPA-ELEMENTARY-PROCEDURES-CLASS-2 ,

 ...

}

NRPPA-ELEMENTARY-PROCEDURES-CLASS-1 NRPPA-ELEMENTARY-PROCEDURE ::= {

 e-CIDMeasurementInitiation |

 oTDOAInformationExchange |

 positioningInformationExchange |

 measurement |

 tRPInformationExchange |

 positioningActivation,

 ...

}

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

 e-CIDMeasurementFailureIndication |

 e-CIDMeasurementReport |

 e-CIDMeasurementTermination |

 errorIndication |

 privateMessage |

 assistanceInformationControl |

 assistanceInformationFeedback |

 positioningInformationUpdate |

 measurementReport |

 measurementUpdate |

 measurementAbort |

 measurementFailureIndication |

 positioningDeactivation,

 ...

}

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

--

-- Interface Elementary Procedures

--

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

e-CIDMeasurementInitiation NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE E-CIDMeasurementInitiationRequest

 SUCCESSFUL OUTCOME E-CIDMeasurementInitiationResponse

 UNSUCCESSFUL OUTCOME E-CIDMeasurementInitiationFailure

 PROCEDURE CODE id-e-CIDMeasurementInitiation

 CRITICALITY reject

}

e-CIDMeasurementFailureIndication NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE E-CIDMeasurementFailureIndication

 PROCEDURE CODE id-e-CIDMeasurementFailureIndication

 CRITICALITY ignore

}

e-CIDMeasurementReport NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE E-CIDMeasurementReport

 PROCEDURE CODE id-e-CIDMeasurementReport

 CRITICALITY ignore

}

e-CIDMeasurementTermination NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE E-CIDMeasurementTerminationCommand

 PROCEDURE CODE id-e-CIDMeasurementTermination

 CRITICALITY reject

}

oTDOAInformationExchange NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE OTDOAInformationRequest

 SUCCESSFUL OUTCOME OTDOAInformationResponse

 UNSUCCESSFUL OUTCOME OTDOAInformationFailure

 PROCEDURE CODE id-oTDOAInformationExchange

 CRITICALITY reject

}

assistanceInformationControl NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE AssistanceInformationControl

 PROCEDURE CODE id-assistanceInformationControl

 CRITICALITY reject

}

assistanceInformationFeedback NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE AssistanceInformationFeedback

 PROCEDURE CODE id-assistanceInformationFeedback

 CRITICALITY reject

}

errorIndication NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE ErrorIndication

 PROCEDURE CODE id-errorIndication

 CRITICALITY ignore

}

privateMessage NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE PrivateMessage

 PROCEDURE CODE id-privateMessage

 CRITICALITY ignore

}

positioningInformationExchange NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE PositioningInformationRequest

 SUCCESSFUL OUTCOME PositioningInformationResponse

 UNSUCCESSFUL OUTCOME PositioningInformationFailure

 PROCEDURE CODE id-positioningInformationExchange

 CRITICALITY reject

}

positioningInformationUpdate NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE PositioningInformationUpdate

 PROCEDURE CODE id-positioningInformationUpdate

 CRITICALITY ignore

}

measurement NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE MeasurementRequest

 SUCCESSFUL OUTCOME MeasurementResponse

 UNSUCCESSFUL OUTCOME MeasurementFailure

 PROCEDURE CODE id-Measurement

 CRITICALITY reject

}

measurementReport NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE MeasurementReport

 PROCEDURE CODE id-MeasurementReport

 CRITICALITY ignore

}

measurementUpdate NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE MeasurementUpdate

 PROCEDURE CODE id-MeasurementUpdate

 CRITICALITY ignore

}

measurementAbort NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE MeasurementAbort

 PROCEDURE CODE id-MeasurementAbort

 CRITICALITY ignore

}

measurementFailureIndication NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE MeasurementFailureIndication

 PROCEDURE CODE id-MeasurementFailureIndication

 CRITICALITY ignore

}

tRPInformationExchange NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE TRPInformationRequest

 SUCCESSFUL OUTCOME TRPInformationResponse

 UNSUCCESSFUL OUTCOME TRPInformationFailure

 PROCEDURE CODE id-tRPInformationExchange

 CRITICALITY reject

}

positioningActivation NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE PositioningActivationRequest

 SUCCESSFUL OUTCOME PositioningActivationResponse

 UNSUCCESSFUL OUTCOME PositioningActivationFailure

 PROCEDURE CODE id-positioningActivation

 CRITICALITY reject

}

positioningDeactivation NRPPA-ELEMENTARY-PROCEDURE ::= {

 INITIATING MESSAGE PositioningDeactivation

 PROCEDURE CODE id-positioningDeactivation

 CRITICALITY ignore

}

END

-- ASN1STOP

### 9.3.4 PDU Definitions

-- ASN1START

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

--

-- PDU definitions for NRPPa

--

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

NRPPA-PDU-Contents {

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

ngran-access (22) modules (3) nrppa (4) version1 (1) nrppa-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules

--

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

IMPORTS

 Cause,

 CriticalityDiagnostics,

 E-CID-MeasurementResult,

 OTDOACells,

 OTDOA-Information-Item,

 Measurement-ID,

 UE-Measurement-ID,

 MeasurementPeriodicity,

 MeasurementQuantities,

 ReportCharacteristics,

 RequestedSRSTransmissionCharacteristics,

 Cell-Portion-ID,

 OtherRATMeasurementQuantities,

 OtherRATMeasurementResult,

 WLANMeasurementQuantities,

 WLANMeasurementResult,

 Assistance-Information,

 Broadcast,

 AssistanceInformationFailureList,

 SRSConfiguration,

 TRPMeasurementQuantities,

 TrpMeasurementResult,

 TRP-ID,

 TRPInformationTypeList,

 TRPInformationList,

 TRP-MeasurementRequestList,

 TRP-MeasurementResponseList,

 MeasurementBeamInfoRequest,

 PositioningBroadcastCells,

 ActivationTime,

 SRSResourceSetID,

 SRSSpatialRelation,

 SRSResourceTrigger,

 TRPList,

 AbortTransmission,

 SystemFrameNumber,

 SlotNumber,

 SFNInitialisationTime

FROM NRPPA-IEs

 PrivateIE-Container{},

 ProtocolExtensionContainer{},

 ProtocolIE-Container{},

 ProtocolIE-ContainerList{},

 ProtocolIE-Single-Container{},

 NRPPA-PRIVATE-IES,

 NRPPA-PROTOCOL-EXTENSION,

 NRPPA-PROTOCOL-IES

FROM NRPPA-Containers

 maxnoOTDOAtypes,

 id-Cause,

 id-CriticalityDiagnostics,

 id-LMF-Measurement-ID,

 id-LMF-UE-Measurement-ID,

 id-OTDOACells,

 id-OTDOA-Information-Type-Group,

 id-OTDOA-Information-Type-Item,

 id-ReportCharacteristics,

 id-MeasurementPeriodicity,

 id-MeasurementQuantities,

 id-RAN-Measurement-ID,

 id-RAN-UE-Measurement-ID,

 id-E-CID-MeasurementResult,

 id-RequestedSRSTransmissionCharacteristics,

 id-Cell-Portion-ID,

 id-OtherRATMeasurementQuantities,

 id-OtherRATMeasurementResult,

 id-WLANMeasurementQuantities,

 id-WLANMeasurementResult,

 id-Assistance-Information,

 id-Broadcast,

 id-AssistanceInformationFailureList,

 id-SRSConfiguration,

 id-TRPMeasurementQuantities,

 id-MeasurementResult,

 id-TRP-ID,

 id-TRPInformationTypeList,

 id-TRPInformationList,

 id-TRP-MeasurementRequestList,

 id-TRP-MeasurementResponseList,

 id-TRP-MeasurementReportList,

 id-MeasurementBeamInfoRequest,

 id-PositioningBroadcastCells,

 id-SRSType,

 id-ActivationTime,

 id-SRSResourceSetID,

 id-TRPList,

 id-SRSSpatialRelation,

 id-AbortTransmission,

 id-SystemFrameNumber,

 id-SlotNumber,

 id-SRSResourceTrigger,

 id-SFNInitialisationTime

FROM NRPPA-Constants;

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

--

-- E-CID MEASUREMENT INITIATION REQUEST

--

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

E-CIDMeasurementInitiationRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{E-CIDMeasurementInitiationRequest-IEs}},

 ...

}

E-CIDMeasurementInitiationRequest-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-UE-Measurement-ID CRITICALITY reject TYPE UE-Measurement-ID PRESENCE mandatory}|

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

 { ID id-MeasurementPeriodicity CRITICALITY reject TYPE MeasurementPeriodicity PRESENCE conditional}|

-- The IE shall be present if the Report Characteritics IE is set to “periodic” --

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

 { ID id-OtherRATMeasurementQuantities CRITICALITY ignore TYPE OtherRATMeasurementQuantities PRESENCE optional}|

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

 ...

}

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

--

-- E-CID MEASUREMENT INITIATION RESPONSE

--

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

E-CIDMeasurementInitiationResponse ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{E-CIDMeasurementInitiationResponse-IEs}},

 ...

}

E-CIDMeasurementInitiationResponse-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-UE-Measurement-ID CRITICALITY reject TYPE UE-Measurement-ID PRESENCE mandatory}|

 { ID id-RAN-UE-Measurement-ID CRITICALITY reject TYPE UE-Measurement-ID PRESENCE mandatory}|

 { ID id-E-CID-MeasurementResult CRITICALITY ignore TYPE E-CID-MeasurementResult PRESENCE optional}|

 { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional}|

 { ID id-Cell-Portion-ID CRITICALITY ignore TYPE Cell-Portion-ID PRESENCE optional}|

 { ID id-OtherRATMeasurementResult CRITICALITY ignore TYPE OtherRATMeasurementResult PRESENCE optional}|

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

 ...

}

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

--

-- E-CID MEASUREMENT INITIATION FAILURE

--

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

E-CIDMeasurementInitiationFailure ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{E-CIDMeasurementInitiationFailure-IEs}},

 ...

}

E-CIDMeasurementInitiationFailure-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-UE-Measurement-ID CRITICALITY reject TYPE UE-Measurement-ID PRESENCE mandatory}|

 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory}|

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

 ...

}

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

--

-- E-CID MEASUREMENT FAILURE INDICATION

--

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

E-CIDMeasurementFailureIndication ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{E-CIDMeasurementFailureIndication-IEs}},

 ...

}

E-CIDMeasurementFailureIndication-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-UE-Measurement-ID CRITICALITY reject TYPE UE-Measurement-ID PRESENCE mandatory}|

 { ID id-RAN-UE-Measurement-ID CRITICALITY reject TYPE UE-Measurement-ID PRESENCE mandatory}|

 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory},

 ...

}

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

--

-- E-CID MEASUREMENT REPORT

--

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

E-CIDMeasurementReport ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{E-CIDMeasurementReport-IEs}},

 ...

}

E-CIDMeasurementReport-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-UE-Measurement-ID CRITICALITY reject TYPE UE-Measurement-ID PRESENCE mandatory}|

 { ID id-RAN-UE-Measurement-ID CRITICALITY reject TYPE UE-Measurement-ID PRESENCE mandatory}|

 { ID id-E-CID-MeasurementResult CRITICALITY ignore TYPE E-CID-MeasurementResult PRESENCE mandatory}|

 { ID id-Cell-Portion-ID CRITICALITY ignore TYPE Cell-Portion-ID PRESENCE optional},

 ...

}

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

--

-- E-CID MEASUREMENT TERMINATION

--

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

E-CIDMeasurementTerminationCommand ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{E-CIDMeasurementTerminationCommand-IEs}},

 ...

}

E-CIDMeasurementTerminationCommand-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-UE-Measurement-ID CRITICALITY reject TYPE UE-Measurement-ID PRESENCE mandatory}|

 { ID id-RAN-UE-Measurement-ID CRITICALITY reject TYPE UE-Measurement-ID PRESENCE mandatory},

 ...

}

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

--

-- OTDOA INFORMATION REQUEST

--

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

OTDOAInformationRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{OTDOAInformationRequest-IEs}},

 ...

}

OTDOAInformationRequest-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-OTDOA-Information-Type-Group CRITICALITY reject TYPE OTDOA-Information-Type PRESENCE mandatory},

 ...

}

OTDOA-Information-Type ::= SEQUENCE (SIZE(1..maxnoOTDOAtypes)) OF ProtocolIE-Single-Container { { OTDOA-Information-TypeIEs} }

OTDOA-Information-TypeIEs NRPPA-PROTOCOL-IES ::= {

 { ID id-OTDOA-Information-Type-Item CRITICALITY reject TYPE OTDOA-Information-Type-Item PRESENCE mandatory},

 ...

}

OTDOA-Information-Type-Item ::= SEQUENCE {

 oTDOA-Information-Type-Item OTDOA-Information-Item,

 iE-Extensions ProtocolExtensionContainer { { OTDOA-Information-Type-ItemExtIEs} } OPTIONAL,

 ...

}

OTDOA-Information-Type-ItemExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

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

--

-- OTDOA INFORMATION RESPONSE

--

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

OTDOAInformationResponse ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{OTDOAInformationResponse-IEs}},

 ...

}

OTDOAInformationResponse-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-OTDOACells CRITICALITY ignore TYPE OTDOACells PRESENCE mandatory}|

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

 ...

}

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

--

-- OTDOA INFORMATION FAILURE

--

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

OTDOAInformationFailure ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{OTDOAInformationFailure-IEs}},

 ...

}

OTDOAInformationFailure-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory}|

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

 ...

}

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

--

-- ASSISTANCE INFORMATION CONTROL

--

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

AssistanceInformationControl ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{AssistanceInformationControl-IEs}},

 ...

}

AssistanceInformationControl-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-Assistance-Information CRITICALITY reject TYPE Assistance-Information PRESENCE optional}|

 { ID id-Broadcast CRITICALITY reject TYPE Broadcast PRESENCE optional}|

 { ID id-PositioningBroadcastCells CRITICALITY reject TYPE PositioningBroadcastCells PRESENCE optional},

 ...

}

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

--

-- ASSISTANCE INFORMATION FEEDBACK

--

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

AssistanceInformationFeedback ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{AssistanceInformationFeedback-IEs}},

 ...

}

AssistanceInformationFeedback-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-AssistanceInformationFailureList CRITICALITY reject TYPE AssistanceInformationFailureList PRESENCE optional}|

 { ID id-PositioningBroadcastCells CRITICALITY reject TYPE PositioningBroadcastCells PRESENCE optional}|

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

 ...

}

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

--

-- ERROR INDICATION

--

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

ErrorIndication ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{ErrorIndication-IEs}},

 ...

}

ErrorIndication-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE optional}|

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

 ...

}

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

--

-- PRIVATE MESSAGE

--

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

PrivateMessage ::= SEQUENCE {

 privateIEs PrivateIE-Container {{PrivateMessage-IEs}},

 ...

}

PrivateMessage-IEs NRPPA-PRIVATE-IES ::= {

 ...

}

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

--

-- POSITIONING INFORMATION REQUEST

--

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

PositioningInformationRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{PositioningInformationRequest-IEs}},

 ...

}

PositioningInformationRequest-IEs NRPPA-PROTOCOL-IES ::= {

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

 ...

}

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

--

-- POSITIONING INFORMATION RESPONSE

--

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

PositioningInformationResponse ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{PositioningInformationResponse-IEs}},

 ...

}

PositioningInformationResponse-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-SRSConfiguration CRITICALITY ignore TYPE SRSConfiguration PRESENCE optional}|

 { ID id-SFNInitialisationTime CRITICALITY ignore TYPE SFNInitialisationTime PRESENCE optional}|

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

 ...

}

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

--

-- POSITIONING INFORMATION FAILURE

--

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

PositioningInformationFailure ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{PositioningInformationFailure-IEs}},

 ...

}

PositioningInformationFailure-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory}|

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

 ...

}

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

--

-- POSITIONING INFORMATION UPDATE

--

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

PositioningInformationUpdate ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{PositioningInformationUpdate-IEs}},

 ...

}

PositioningInformationUpdate-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-SRSConfiguration CRITICALITY ignore TYPE SRSConfiguration PRESENCE optional}|

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

 ...

}

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

--

-- MEASUREMENT REQUEST

--

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

MeasurementRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{MeasurementRequest-IEs}},

 ...

}

MeasurementRequest-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

 { ID id-TRP-MeasurementRequestList CRITICALITY reject TYPE TRP-MeasurementRequestList PRESENCE mandatory}|

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

 { ID id-MeasurementPeriodicity CRITICALITY reject TYPE MeasurementPeriodicity PRESENCE conditional}|

-- The IE shall be present if the Report Characteritics IE is set to “periodic” –

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

 { ID id-SRSConfiguration CRITICALITY ignore TYPE SRSConfiguration PRESENCE optional}|

 { ID id-SFNInitialisationTime CRITICALITY ignore TYPE SFNInitialisationTime PRESENCE optional}|

 { ID id-MeasurementBeamInfoRequest CRITICALITY ignore TYPE MeasurementBeamInfoRequest PRESENCE optional}|

 { ID id-SystemFrameNumber CRITICALITY ignore TYPE SystemFrameNumber PRESENCE optional}|

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

 ...

}

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

--

-- MEASUREMENT RESPONSE

--

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

MeasurementResponse ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{MeasurementResponse-IEs}},

 ...

}

MeasurementResponse-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

 { ID id-RAN-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

 { ID id-TRP-MeasurementResponseList CRITICALITY reject TYPE TRP-MeasurementResponseList PRESENCE mandatory}|

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

 ...

}

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

--

-- MEASUREMENT FAILURE

--

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

MeasurementFailure ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{MeasurementFailure-IEs}},

 ...

}

MeasurementFailure-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory}|

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

 ...

}

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

--

-- MEASUREMENT REPORT

--

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

MeasurementReport ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{MeasurementReport-IEs}},

 ...

}

MeasurementReport-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

 { ID id-RAN-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

 { ID id-TRP-MeasurementReportList CRITICALITY reject TYPE TRP-MeasurementResponseList PRESENCE mandatory},

 ...

}

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

--

-- MEASUREMENT UPDATE

--

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

MeasurementUpdate ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{MeasurementUpdate-IEs}},

 ...

}

MeasurementUpdate-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

 { ID id-RAN-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

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

 ...

}

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

--

-- MEASUREMENT ABORT

--

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

MeasurementAbort ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{MeasurementAbort-IEs}},

 ...

}

MeasurementAbort-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

 { ID id-RAN-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory},

 ...

}

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

--

-- MEASUREMENT FAILURE INDICATION

--

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

MeasurementFailureIndication ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{MeasurementFailureIndication-IEs}},

 ...

}

MeasurementFailureIndication-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-LMF-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

 { ID id-RAN-Measurement-ID CRITICALITY reject TYPE Measurement-ID PRESENCE mandatory}|

 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory},

 ...

}

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

--

-- TRP INFORMATION REQUEST

--

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

TRPInformationRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{TRPInformationRequest-IEs}},

 ...

}

TRPInformationRequest-IEs NRPPA-PROTOCOL-IES ::= {

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

 { ID id-TRPInformationTypeList CRITICALITY reject TYPE TRPInformationTypeList PRESENCE mandatory}, ...

}

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

--

-- TRP INFORMATION RESPONSE

--

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

TRPInformationResponse ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{TRPInformationResponse-IEs}},

 ...

}

TRPInformationResponse-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-TRPInformationList CRITICALITY ignore TYPE TRPInformationList PRESENCE mandatory}|

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

 ...

}

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

--

-- TRP INFORMATION FAILURE

--

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

TRPInformationFailure ::= SEQUENCE {

 protocolIEs ProtocolIE-Container {{TRPInformationFailure-IEs}},

 ...

}

TRPInformationFailure-IEs NRPPA-PROTOCOL-IES ::= {

 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory}|

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

 ...

}

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

--

-- POSITIONING ACTIVATION REQUEST

--

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

PositioningActivationRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { { PositioningActivationRequestIEs} },

 ...

}

PositioningActivationRequestIEs NRPPA-PROTOCOL-IES ::= {

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

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

 ...

}

SRSType ::= CHOICE {

 semipersistentSRS SemipersistentSRS,

 aperiodicSRS AperiodicSRS,

 sRSType-extension ProtocolIE-Single-Container { { SRSType-ExtIEs} }

}

SRSType-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

SemipersistentSRS ::= SEQUENCE {

 sRSResourceSetID SRSResourceSetID,

 iE-Extensions ProtocolExtensionContainer { {SemipersistentSRS-ExtIEs} } OPTIONAL,

 ...

}

SemipersistentSRS-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

{ ID id-SRSSpatialRelation CRITICALITY ignore EXTENSION SRSSpatialRelation PRESENCE optional},

...

}

AperiodicSRS ::= SEQUENCE {

 aperiodic ENUMERATED{true,...},

 sRSResourceTrigger SRSResourceTrigger OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {AperiodicSRS-ExtIEs} } OPTIONAL,

 ...

}

AperiodicSRS-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

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

--

-- POSITIONING ACTIVATION RESPONSE

--

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

PositioningActivationResponse ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { { PositioningActivationResponseIEs} },

 ...

}

PositioningActivationResponseIEs NRPPA-PROTOCOL-IES ::= {

 { ID id-CriticalityDiagnostics CRITICALITY ignore TYPE CriticalityDiagnostics PRESENCE optional }|

 { ID id-SystemFrameNumber CRITICALITY ignore TYPE SystemFrameNumber PRESENCE optional }|

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

 ...

}

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

--

-- POSITIONING ACTIVATION FAILURE

--

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

PositioningActivationFailure ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { { PositioningActivationFailureIEs} },

 ...

}

PositioningActivationFailureIEs NRPPA-PROTOCOL-IES ::= {

 { ID id-Cause CRITICALITY ignore TYPE Cause PRESENCE mandatory }|

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

 ...

}

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

--

-- POSITIONING DEACTIVATION

--

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

PositioningDeactivation ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { { PositioningDeactivationIEs} },

 ...

}

PositioningDeactivationIEs NRPPA-PROTOCOL-IES ::= {

 { ID id-AbortTransmission CRITICALITY ignore TYPE AbortTransmission PRESENCE mandatory } ,

 ...

}

END

-- ASN1STOP

### 9.3.5 Information Element definitions

-- ASN1START

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

--

-- Information Element Definitions

--

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

NRPPA-IEs {

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

ngran-access (22) modules (3) nrppa (4) version1 (1) nrppa-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

 id-MeasurementQuantities-Item,

 id-GeographicalCoordinates,

 id-ResultSS-RSRP,

 id-ResultSS-RSRQ,

 id-ResultCSI-RSRP,

 id-ResultCSI-RSRQ,

 id-AngleOfArrivalNR,

 id-SRSSpatialRelation,

 id-ResultNR,

 id-ResultEUTRA,

 maxCellinRANnode,

 maxCellReport,

 maxNrOfErrors,

 maxNoMeas,

 maxnoOTDOAtypes,

 maxServCell,

 id-OtherRATMeasurementQuantities-Item,

 id-WLANMeasurementQuantities-Item,

 maxGERANMeas,

 maxUTRANMeas,

 maxWLANchannels,

 maxnoFreqHoppingBandsMinusOne,

 id-TDD-Config-EUTRA-Item,

 maxNrOfPosSImessage,

 maxnoAssistInfoFailureListItems,

 maxNrOfSegments,

 maxNrOfPosSIBs,

 maxnoPosMeas,

 maxnoTRPs,

 maxnoTRPInfoTypes,

 maxNoOfMeasTRPs,

 maxNoPath,

 maxnoofAngleInfo,

 maxnolcs-gcs-translation,

 maxnoBcastCell,

 maxnoSRSTriggerStates,

 maxnoSpatialRelations,

 maxNRMeas,

 maxEUTRAMeas,

 maxIndexesReport,

 maxCellReportNR,

 maxnoSRS-Carriers,

 maxnoSCSs,

 maxnoSRS-Resources,

 maxnoSRS-PosResources,

 maxnoSRS-ResourceSets,

 maxnoSRS-ResourcePerSet,

 maxnoSRS-PosResourceSets,

 maxnoSRS-PosResourcePerSet,

 maxPRS-ResourceSets,

 maxPRS-ResourcesPerSet,

 maxNoSSBs,

 maxnoofPRSresourceSet,

 maxnoofPRSresource

FROM NRPPA-Constants

 Criticality,

 NRPPATransactionID,

 ProcedureCode,

 ProtocolIE-ID,

 TriggeringMessage

FROM NRPPA-CommonDataTypes

 ProtocolExtensionContainer{},

 ProtocolIE-Single-Container{},

 NRPPA-PROTOCOL-EXTENSION,

 NRPPA-PROTOCOL-IES

FROM NRPPA-Containers;

-- A

AbortTransmission ::= CHOICE {

 sRSResourceSetID SRSResourceSetID,

 releaseALL NULL,

 choice-extension ProtocolIE-Single-Container { { AbortTransmission-ExtIEs } }

}

AbortTransmission-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

ActiveULBWP ::= SEQUENCE {

 locationAndBandwidth INTEGER (0..37949,...),

 subcarrierSpacing ENUMERATED {kHz15, kHz30, kHz60, kHz120,...},

 cyclicPrefix ENUMERATED {normal, extended},

 txDirectCurrentLocation INTEGER (0..3301,...),

 shift7dot5kHz ENUMERATED {true, ...} OPTIONAL,

 sRSConfig SRSConfig,

 iE-Extensions ProtocolExtensionContainer { { ActiveULBWP-ExtIEs} } OPTIONAL,

 ...

}

ActiveULBWP-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ActivationTime ::= SFNInitialisationTime

AdditionalPathList ::= SEQUENCE (SIZE (1.. maxNoPath)) OF AdditionalPathListItem

AdditionalPathListItem ::= SEQUENCE {

 relativeTimeOfPath RelativePathDelay,

 pathQuality TrpMeasurementQuality OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { AdditionalPathListItem-ExtIEs} } OPTIONAL,

 ...

}

AdditionalPathListItem-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

AperiodicSRSResourceTriggerList ::= SEQUENCE (SIZE(1..maxnoSRSTriggerStates)) OF AperiodicSRSResourceTrigger

AperiodicSRSResourceTrigger ::= INTEGER (0..3, ...)

Assistance-Information ::= SEQUENCE {

 systemInformation SystemInformation,

 iE-Extensions ProtocolExtensionContainer { { Assistance-Information-ExtIEs} } OPTIONAL,

 ...

}

Assistance-Information-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

AssistanceInformationFailureList ::= SEQUENCE (SIZE (1..maxnoAssistInfoFailureListItems)) OF SEQUENCE {

 posSIB-Type PosSIB-Type,

 outcome Outcome,

 iE-Extensions ProtocolExtensionContainer { {AssistanceInformationFailureList-ExtIEs} } OPTIONAL,

 ...

}

AssistanceInformationFailureList-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

AssistanceInformationMetaData ::= SEQUENCE {

 encrypted ENUMERATED {true, ...} OPTIONAL,

 gNSSID ENUMERATED {gps, sbas, qzss, galileo, glonass, bds, navic, ...} OPTIONAL,

 sBASID ENUMERATED {waas, egnos, msas, gagan, ...} OPTIONAL, iE-Extensions ProtocolExtensionContainer { { AssistanceInformationMetaData-ExtIEs} } OPTIONAL,

 ...

}

AssistanceInformationMetaData-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

-- B

BandwidthSRS ::= CHOICE {

 fR1 ENUMERATED {kHz5, kHz10, kHz20, kHz40, kHz50, kHz80, kHz100, ...},

 fR2 ENUMERATED {kHz50, kHz100, kHz200, kHz400, ...},

 ...

}

BCCH ::= INTEGER (0..1023, ...)

Broadcast ::= ENUMERATED {

 start,

 stop,

 ...

}

BroadcastPeriodicity ::= ENUMERATED {

 ms80,

 ms160,

 ms320,

 ms640,

 ms1280,

 ms2560,

 ms5120,

 ...

}

PositioningBroadcastCells ::= SEQUENCE (SIZE (1..maxnoBcastCell)) OF NG-RAN-CGI

BSSID ::= OCTET STRING (SIZE(6))

-- C

Cause ::= CHOICE {

 radioNetwork CauseRadioNetwork,

 protocol CauseProtocol,

 misc CauseMisc,

 cause-Extension ProtocolIE-Single-Container {{ Cause-ExtensionIE }}

}

Cause-ExtensionIE NRPPA-PROTOCOL-IES ::= {

 ...

}

CauseMisc ::= ENUMERATED {

 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 {

 unspecified,

 requested-item-not-supported,

 requested-item-temporarily-not-available,

 ...

}

Cell-Portion-ID ::= INTEGER (0..4095,...)

CGI-EUTRA ::= SEQUENCE {

 pLMN-Identity PLMN-Identity,

 eUTRAcellIdentifier EUTRACellIdentifier,

 iE-Extensions ProtocolExtensionContainer { {CGI-EUTRA-ExtIEs} } OPTIONAL,

 ...

}

CGI-EUTRA-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

CGI-NR ::= SEQUENCE {

 pLMN-Identity PLMN-Identity,

 nRcellIdentifier NRCellIdentifier,

 iE-Extensions ProtocolExtensionContainer { {CGI-NR-ExtIEs} } OPTIONAL,

 ...

}

CGI-NR-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

CPLength-EUTRA ::= ENUMERATED {

 normal,

 extended,

 ...

}

CriticalityDiagnostics ::= SEQUENCE {

 procedureCode ProcedureCode OPTIONAL,

 triggeringMessage TriggeringMessage OPTIONAL,

 procedureCriticality Criticality OPTIONAL,

 nrppatransactionID NRPPATransactionID OPTIONAL,

 iEsCriticalityDiagnostics CriticalityDiagnostics-IE-List OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {CriticalityDiagnostics-ExtIEs} } OPTIONAL,

 ...

}

CriticalityDiagnostics-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

CriticalityDiagnostics-IE-List ::= SEQUENCE (SIZE (1..maxNrOfErrors)) OF

 SEQUENCE {

 iECriticality Criticality,

 iE-ID ProtocolIE-ID,

 typeOfError TypeOfError,

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

 ...

}

CriticalityDiagnostics-IE-List-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

-- D

DL-Bandwidth-EUTRA ::= ENUMERATED {

 bw6,

 bw15,

 bw25,

 bw50,

 bw75,

 bw100,

 ...

}

DL-PRS ::= SEQUENCE {

 prsid INTEGER (0..255),

 dl-PRSResourceSetID INTEGER (0..7),

 dl-PRSResourceID INTEGER (0..63) OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {DL-PRS-ExtIEs} } OPTIONAL,

 ...

}

DL-PRS-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

DL-PRSMutingPattern ::= CHOICE {

 two BIT STRING (SIZE(2)),

 four BIT STRING (SIZE(4)),

 six BIT STRING (SIZE(6)),

 eight BIT STRING (SIZE(8)),

 sixteen BIT STRING (SIZE(16)),

 thirty-two BIT STRING (SIZE(32)),

 choice-extension ProtocolIE-Single-Container { { DL-PRSMutingPattern-ExtIEs } }

}

DL-PRSMutingPattern-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

DLPRSResourceCoordinates ::= SEQUENCE {

 listofDL-PRSResourceSetARP SEQUENCE (SIZE(1.. maxPRS-ResourceSets)) OF DLPRSResourceSetARP,

 iE-Extensions ProtocolExtensionContainer { { DLPRSResourceCoordinates-ExtIEs } } OPTIONAL,

 ...

}

DLPRSResourceCoordinates-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

DLPRSResourceSetARP ::= SEQUENCE {

 dl-PRSResourceSetID INTEGER (0..7),

 dL-PRSResourceSetARPLocation DL-PRSResourceSetARPLocation,

 listofDL-PRSResourceARP SEQUENCE (SIZE(1.. maxPRS-ResourcesPerSet)) OF DLPRSResourceARP,

 iE-Extensions ProtocolExtensionContainer { { DLPRSResourceSetARP-ExtIEs } } OPTIONAL,

 ...

}

DLPRSResourceSetARP-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

DL-PRSResourceSetARPLocation ::= CHOICE {

 relativeGeodeticLocation RelativeGeodeticLocation,

 relativeCartesianLocation RelativeCartesianLocation,

 choice-Extension ProtocolIE-Single-Container { { DL-PRSResourceSetARPLocation-ExtIEs } }

}

DL-PRSResourceSetARPLocation-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

DLPRSResourceARP ::= SEQUENCE {

 dl-PRSResourceID INTEGER (0..63),

 dL-PRSResourceARPLocation DL-PRSResourceARPLocation,

 iE-Extensions ProtocolExtensionContainer { { DLPRSResourceARP-ExtIEs } } OPTIONAL,

 ...

}

DLPRSResourceARP-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

DL-PRSResourceARPLocation ::= CHOICE {

 relativeGeodeticLocation RelativeGeodeticLocation,

 relativeCartesianLocation RelativeCartesianLocation,

 choice-Extension ProtocolIE-Single-Container { { DL-PRSResourceARPLocation-ExtIEs } }

}

DL-PRSResourceARPLocation-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

-- E

E-CID-MeasurementResult ::= SEQUENCE {

 servingCell-ID NG-RAN-CGI,

 servingCellTAC TAC,

 nG-RANAccessPointPosition NG-RANAccessPointPosition OPTIONAL,

 measuredResults MeasuredResults OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { E-CID-MeasurementResult-ExtIEs} } OPTIONAL,

 ...

}

E-CID-MeasurementResult-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 { ID id-GeographicalCoordinates CRITICALITY ignore EXTENSION GeographicalCoordinates PRESENCE optional},

 ...

}

EUTRACellIdentifier ::= BIT STRING (SIZE (28))

EARFCN ::= INTEGER (0..262143, ...)

-- F

-- G

GeographicalCoordinates ::= SEQUENCE {

 tRPPositionDefinitionType TRPPositionDefinitionType,

 dLPRSResourceCoordinates DLPRSResourceCoordinates OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { GeographicalCoordinates-ExtIEs } } OPTIONAL,

 ...

}

GeographicalCoordinates-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

GNB-RxTxTimeDiff ::= SEQUENCE {

 rxTxTimeDiff GNBRxTxTimeDiffMeas,

 additionalPathList AdditionalPathList OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { GNB-RxTxTimeDiff-ExtIEs} } OPTIONAL,

 ...

}

GNB-RxTxTimeDiff-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

GNBRxTxTimeDiffMeas ::= CHOICE {

 k0 INTEGER (0.. 1970049),

 k1 INTEGER (0.. 985025),

 k2 INTEGER (0.. 492513),

 k3 INTEGER (0.. 246257),

 k4 INTEGER (0.. 123129),

 k5 INTEGER (0.. 61565),

 choice-extension ProtocolIE-Single-Container { { GNBRxTxTimeDiffMeas-ExtIEs } }

}

GNBRxTxTimeDiffMeas-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

-- H

HESSID ::= OCTET STRING (SIZE(6))

-- I

-- J

-- K

-- L

LCG-to-GCS-TranslationItem::= SEQUENCE {

 alpha INTEGER (0..359) OPTIONAL,

 alphaFine INTEGER (0..9) OPTIONAL,

 beta INTEGER (0..359) OPTIONAL,

 betaFine INTEGER (0..9) OPTIONAL,

 gamma INTEGER (0..359) OPTIONAL,

 gammaFine INTEGER (0..9) OPTIONAL,

 ...

}

LocationUncertainty ::= SEQUENCE {

 horizontalUncertainty INTEGER (0..255),

 horizontalConfidence INTEGER (0..100),

 verticalUncertainty INTEGER (0..255),

 verticalConfidence INTEGER (0..100),

 iE-Extensions ProtocolExtensionContainer { { LocationUncertainty-ExtIEs} } OPTIONAL,

 ...

}

LocationUncertainty-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

-- M

Measurement-ID ::= INTEGER (1.. 65536)

MeasurementBeamInfoRequest ::= ENUMERATED {true, ...}

MeasurementBeamInfo ::= SEQUENCE {

 pRS-Resource-ID PRS-Resource-ID OPTIONAL,

 pRS-Resource-Set-ID PRS-Resource-Set-ID OPTIONAL,

 sSB-Index SSB-Index OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { MeasurementBeamInfo-ExtIEs} } OPTIONAL,

 ...

}

MeasurementBeamInfo-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

MeasurementPeriodicity ::= ENUMERATED {

 ms120,

 ms240,

 ms480,

 ms640,

 ms1024,

 ms2048,

 ms5120,

 ms10240,

 min1,

 min6,

 min12,

 min30,

 min60,

 ... ,

 ms20480,

 ms40960

}

MeasurementQuantities ::= SEQUENCE (SIZE (1.. maxNoMeas)) OF ProtocolIE-Single-Container { {MeasurementQuantities-ItemIEs} }

MeasurementQuantities-ItemIEs NRPPA-PROTOCOL-IES ::= {

 { ID id-MeasurementQuantities-Item CRITICALITY reject TYPE MeasurementQuantities-Item PRESENCE mandatory}

}

MeasurementQuantities-Item ::= SEQUENCE {

 measurementQuantitiesValue MeasurementQuantitiesValue,

 iE-Extensions ProtocolExtensionContainer { { MeasurementQuantitiesValue-ExtIEs} } OPTIONAL,

 ...

}

MeasurementQuantitiesValue-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

MeasurementQuantitiesValue ::= ENUMERATED {

 cell-ID,

 angleOfArrival,

 timingAdvanceType1,

 timingAdvanceType2,

 rSRP,

 rSRQ,

 ... ,

 sS-RSRP,

 sS-RSRQ,

 cSI-RSRP,

 cSI-RSRQ,

 angleOfArrivalNR

}

MeasuredResults ::= SEQUENCE (SIZE (1.. maxNoMeas)) OF MeasuredResultsValue

MeasuredResultsValue ::= CHOICE {

 valueAngleOfArrival-EUTRA INTEGER (0..719),

 valueTimingAdvanceType1-EUTRA INTEGER (0..7690),

 valueTimingAdvanceType2-EUTRA INTEGER (0..7690),

 resultRSRP-EUTRA ResultRSRP-EUTRA,

 resultRSRQ-EUTRA ResultRSRQ-EUTRA,

 measuredResultsValue-Extension ProtocolIE-Single-Container {{ MeasuredResultsValue-ExtensionIE }}

}

MeasuredResultsValue-ExtensionIE NRPPA-PROTOCOL-IES ::= {

{ ID id-ResultSS-RSRP CRITICALITY ignore TYPE ResultSS-RSRP PRESENCE mandatory }|

 { ID id-ResultSS-RSRQ CRITICALITY ignore TYPE ResultSS-RSRQ PRESENCE mandatory }|

 { ID id-ResultCSI-RSRP CRITICALITY ignore TYPE ResultCSI-RSRP PRESENCE mandatory }|

 { ID id-ResultCSI-RSRQ CRITICALITY ignore TYPE ResultCSI-RSRQ PRESENCE mandatory }|

 { ID id-AngleOfArrivalNR CRITICALITY ignore TYPE UL-AoA PRESENCE mandatory },

 ...

}

-- N

NarrowBandIndex ::= INTEGER (0..15,...)

NG-RANAccessPointPosition ::= SEQUENCE {

 latitudeSign ENUMERATED {north, south},

 latitude INTEGER (0..8388607),

 longitude INTEGER (-8388608..8388607),

 directionOfAltitude ENUMERATED {height, depth},

 altitude INTEGER (0..32767),

 uncertaintySemi-major INTEGER (0..127),

 uncertaintySemi-minor INTEGER (0..127),

 orientationOfMajorAxis INTEGER (0..179),

 uncertaintyAltitude INTEGER (0..127),

 confidence INTEGER (0..100),

 iE-Extensions ProtocolExtensionContainer { { NG-RANAccessPointPosition-ExtIEs} } OPTIONAL,

 ...

}

NG-RANAccessPointPosition-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

NGRANHighAccuracyAccessPointPosition ::= SEQUENCE {

 latitude INTEGER (-2147483648.. 2147483647),

 longitude INTEGER (-2147483648.. 2147483647),

 altitude INTEGER (-64000..1280000),

 uncertaintySemi-major INTEGER (0..255),

 uncertaintySemi-minor INTEGER (0..255),

 orientationOfMajorAxis INTEGER (0..179),

 horizontalConfidence INTEGER (0..100),

 uncertaintyAltitude INTEGER (0..255),

 verticalConfidence INTEGER (0..100),

 iE-Extensions ProtocolExtensionContainer { { NGRANHighAccuracyAccessPointPosition-ExtIEs} } OPTIONAL,

 ...

}

NGRANHighAccuracyAccessPointPosition-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

NG-RAN-CGI ::= SEQUENCE {

 pLMN-Identity PLMN-Identity,

 nG-RANcell NG-RANCell,

 iE-Extensions ProtocolExtensionContainer { {NG-RAN-CGI-ExtIEs} } OPTIONAL,

 ...

}

NG-RAN-CGI-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

NG-RANCell ::= CHOICE {

 eUTRA-CellID EUTRACellIdentifier,

 nR-CellID NRCellIdentifier,

 nG-RANCell-Extension ProtocolIE-Single-Container {{ NG-RANCell-ExtensionIE }}

}

NG-RANCell-ExtensionIE NRPPA-PROTOCOL-IES ::= {

 ...

}

NR-ARFCN ::= INTEGER (0..3279165)

NRCellIdentifier ::= BIT STRING (SIZE (36))

NR-PCI ::= INTEGER (0..1007)

NR-PRS-Beam-Information ::= SEQUENCE {

 nR-PRS-Beam-InformationList SEQUENCE (SIZE(1.. maxPRS-ResourceSets)) OF NR-PRS-Beam-InformationItem,

 lCG-to-GCS-TranslationList SEQUENCE (SIZE(1..maxnolcs-gcs-translation)) OF LCG-to-GCS-TranslationItem,

 iE-Extensions ProtocolExtensionContainer { { NR-PRS-Beam-Information-IEs} } OPTIONAL,

 ...

}

NR-PRS-Beam-Information-IEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

NR-PRS-Beam-InformationItem ::= SEQUENCE {

 pRSresourceSetID INTEGER (0..7),

 pRSAngleItem SEQUENCE (SIZE(1..maxPRS-ResourcesPerSet)) OF PRSAngleItem,

 ...

}

NumberOfAntennaPorts-EUTRA ::= ENUMERATED {

 n1-or-n2,

 n4,

 ...

}

NumberOfDlFrames-EUTRA ::= ENUMERATED {

 sf1,

 sf2,

 sf4,

 sf6,

 ...

}

NumberOfDlFrames-Extended-EUTRA ::= INTEGER (1..160,...)

NumberOfFrequencyHoppingBands ::= ENUMERATED {

 twobands,

 fourbands,

 ...

}

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

-- O

OTDOACells ::= SEQUENCE (SIZE (1.. maxCellinRANnode)) OF SEQUENCE {

 oTDOACellInfo OTDOACell-Information,

 iE-Extensions ProtocolExtensionContainer { {OTDOACells-ExtIEs} } OPTIONAL,

 ...

}

OTDOACells-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

OTDOACell-Information ::= SEQUENCE (SIZE (1..maxnoOTDOAtypes)) OF OTDOACell-Information-Item

OTDOACell-Information-Item ::= CHOICE {

 pCI-EUTRA PCI-EUTRA,

 cGI-EUTRA CGI-EUTRA,

 tAC TAC,

 eARFCN EARFCN,

 pRS-Bandwidth-EUTRA PRS-Bandwidth-EUTRA,

 pRS-ConfigurationIndex-EUTRA PRS-ConfigurationIndex-EUTRA,

 cPLength-EUTRA CPLength-EUTRA,

 numberOfDlFrames-EUTRA NumberOfDlFrames-EUTRA,

 numberOfAntennaPorts-EUTRA NumberOfAntennaPorts-EUTRA,

 sFNInitialisationTime-EUTRA SFNInitialisationTime-EUTRA,

 nG-RANAccessPointPosition NG-RANAccessPointPosition,

 pRSMutingConfiguration-EUTRA PRSMutingConfiguration-EUTRA,

 prsid-EUTRA PRS-ID-EUTRA,

 tpid-EUTRA TP-ID-EUTRA,

 tpType-EUTRA TP-Type-EUTRA,

 numberOfDlFrames-Extended-EUTRA NumberOfDlFrames-Extended-EUTRA,

 crsCPlength-EUTRA CPLength-EUTRA,

 dL-Bandwidth-EUTRA DL-Bandwidth-EUTRA,

 pRSOccasionGroup-EUTRA PRSOccasionGroup-EUTRA,

 pRSFrequencyHoppingConfiguration-EUTRA PRSFrequencyHoppingConfiguration-EUTRA,

 oTDOACell-Information-Item-Extension ProtocolIE-Single-Container {{ OTDOACell-Information-Item-ExtensionIE }}

}

OTDOACell-Information-Item-ExtensionIE NRPPA-PROTOCOL-IES ::= {

 { ID id-TDD-Config-EUTRA-Item CRITICALITY ignore TYPE TDD-Config-EUTRA-Item PRESENCE optional },

 ...

}

OTDOA-Information-Item ::= ENUMERATED {

 pci,

 cGI,

 tac,

 earfcn,

 prsBandwidth,

 prsConfigIndex,

 cpLength,

 noDlFrames,

 noAntennaPorts,

 sFNInitTime,

 nG-RANAccessPointPosition,

 prsmutingconfiguration,

 prsid,

 tpid,

 tpType,

 crsCPlength,

 dlBandwidth,

 multipleprsConfigurationsperCell,

 prsOccasionGroup,

 prsFrequencyHoppingConfiguration,

 ...,

 tddConfig

}

OtherRATMeasurementQuantities ::= SEQUENCE (SIZE (0.. maxNoMeas)) OF ProtocolIE-Single-Container { {OtherRATMeasurementQuantities-ItemIEs} }

OtherRATMeasurementQuantities-ItemIEs NRPPA-PROTOCOL-IES ::= {

 { ID id-OtherRATMeasurementQuantities-Item CRITICALITY reject TYPE OtherRATMeasurementQuantities-Item PRESENCE mandatory}}

OtherRATMeasurementQuantities-Item ::= SEQUENCE {

 otherRATMeasurementQuantitiesValue OtherRATMeasurementQuantitiesValue,

 iE-Extensions ProtocolExtensionContainer { { OtherRATMeasurementQuantitiesValue-ExtIEs} } OPTIONAL,

 ...

}

OtherRATMeasurementQuantitiesValue-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

OtherRATMeasurementQuantitiesValue ::= ENUMERATED {

 geran,

 utran,

 ... ,

 nR,

 eUTRA

}

OtherRATMeasurementResult ::= SEQUENCE (SIZE (1.. maxNoMeas)) OF OtherRATMeasuredResultsValue

OtherRATMeasuredResultsValue ::= CHOICE {

 resultGERAN ResultGERAN,

 resultUTRAN ResultUTRAN,

 otherRATMeasuredResultsValue-Extension ProtocolIE-Single-Container {{ OtherRATMeasuredResultsValue-ExtensionIE }}

}

OtherRATMeasuredResultsValue-ExtensionIE NRPPA-PROTOCOL-IES ::= {

 { ID id-ResultNR CRITICALITY ignore TYPE ResultNR PRESENCE mandatory }|

 { ID id-ResultEUTRA CRITICALITY ignore TYPE ResultEUTRA PRESENCE mandatory },

 ...

}

Outcome ::= ENUMERATED {

 failed,

 ...

}

-- P

PathlossReferenceInformation ::= SEQUENCE {

 pathlossReferenceSignal PathlossReferenceSignal,

 iE-Extensions ProtocolExtensionContainer { { PathlossReferenceInformation-ExtIEs } } OPTIONAL,

 ...

}

PathlossReferenceInformation-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PathlossReferenceSignal ::= CHOICE {

 sSB-Reference SSB,

 dL-PRS-Reference DL-PRS,

 choice-Extension ProtocolIE-Single-Container {{ PathlossReferenceSignal-ExtensionIE }}

}

PathlossReferenceSignal-ExtensionIE NRPPA-PROTOCOL-IES ::= {

 ...

}

PCI-EUTRA ::= INTEGER (0..503, ...)

PhysCellIDGERAN ::= INTEGER (0..63, ...)

PhysCellIDUTRA-FDD ::= INTEGER (0..511, ...)

PhysCellIDUTRA-TDD ::= INTEGER (0..127, ...)

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

PeriodicityList ::= SEQUENCE (SIZE (1.. maxnoSRS-ResourcePerSet)) OF PeriodicityItem

PeriodicityItem ::= ENUMERATED {ms0dot125, ms0dot25, ms0dot5, ms0dot625, ms1, ms1dot25, ms2, ms2dot5, ms4dot, ms5, ms8, ms10, ms16, ms20, ms32, ms40, ms64, ms80m, ms160, ms320, ms640m, ms1280, ms2560, ms5120, ms10240, ...}

PosSIBs ::= SEQUENCE (SIZE (1.. maxNrOfPosSIBs)) OF SEQUENCE {

 posSIB-Type PosSIB-Type,

 posSIB-Segments PosSIB-Segments,

 assistanceInformationMetaData AssistanceInformationMetaData OPTIONAL,

 broadcastPriority INTEGER (1..16,...) OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { PosSIBs-ExtIEs} } OPTIONAL,

 ...

}

PosSIBs-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PosSIB-Segments ::= SEQUENCE (SIZE (1.. maxNrOfSegments)) OF SEQUENCE {

 assistanceDataSIBelement OCTET STRING,

 iE-Extensions ProtocolExtensionContainer { { PosSIB-Segments-ExtIEs} } OPTIONAL,

 ...

}

PosSIB-Segments-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PosSIB-Type ::= ENUMERATED {

 posSibType1-1,

 posSibType1-2,

 posSibType1-3,

 posSibType1-4,

 posSibType1-5,

 posSibType1-6,

 posSibType1-7,

 posSibType1-8,

 posSibType2-1,

 posSibType2-2,

 posSibType2-3,

 posSibType2-4,

 posSibType2-5,

 posSibType2-6,

 posSibType2-7,

 posSibType2-8,

 posSibType2-9,

 posSibType2-10,

 posSibType2-11,

 posSibType2-12,

 posSibType2-13,

 posSibType2-14,

 posSibType2-15,

 posSibType2-16,

 posSibType2-17,

 posSibType2-18,

 posSibType2-19,

 posSibType2-20,

 posSibType2-21,

 posSibType2-22,

 posSibType2-23,

 posSibType2-24,

 posSibType2-25,

 posSibType3-1,

 posSibType4-1,

 posSibType5-1,

 posSibType6-1,

 posSibType6-2,

 posSibType6-3,

 ...

}

PosSRSResource-List ::= SEQUENCE (SIZE (1..maxnoSRS-PosResources)) OF PosSRSResource-Item

PosSRSResource-Item ::= SEQUENCE {

 srs-PosResourceId SRSPosResourceID,

 transmissionCombPos TransmissionCombPos,

 startPosition INTEGER (0..13),

 nrofSymbols ENUMERATED {n1, n2, n4, n8, n12},

 freqDomainShift INTEGER (0..268),

 c-SRS INTEGER (0..63),

 groupOrSequenceHopping ENUMERATED { neither, groupHopping, sequenceHopping },

 resourceTypePos ResourceTypePos,

 sequenceId INTEGER (0.. 65535),

 spatialRelationPos SpatialRelationPos OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { PosSRSResource-Item-ExtIEs} } OPTIONAL,

 ...

}

PosSRSResource-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PosSRSResourceSet-List ::= SEQUENCE (SIZE (1..maxnoSRS-PosResourceSets)) OF PosSRSResourceSet-Item

PosSRSResourceID-List ::= SEQUENCE (SIZE (1..maxnoSRS-PosResourcePerSet)) OF SRSPosResourceID

PosSRSResourceSet-Item ::= SEQUENCE {

 possrsResourceSetID INTEGER(0..15),

 possRSResourceID-List PosSRSResourceID-List,

 posresourceSetType PosResourceSetType,

 iE-Extensions ProtocolExtensionContainer { { PosSRSResourceSet-Item-ExtIEs} } OPTIONAL,

 ...

}

PosSRSResourceSet-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PosResourceSetType ::= CHOICE {

 periodic PosResourceSetTypePeriodic,

 semi-persistent PosResourceSetTypeSemi-persistent,

 aperiodic PosResourceSetTypeAperiodic,

 choice-extension ProtocolIE-Single-Container {{ PosResourceSetType-ExtIEs }}

}

PosResourceSetType-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

PosResourceSetTypePeriodic ::= SEQUENCE {

 posperiodicSet ENUMERATED{true, ...},

 iE-Extensions ProtocolExtensionContainer { { PosResourceSetTypePeriodic-ExtIEs} } OPTIONAL,

 ...

}

PosResourceSetTypePeriodic-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PosResourceSetTypeSemi-persistent ::= SEQUENCE {

possemi-persistentSet ENUMERATED{true, ...},

 iE-Extensions ProtocolExtensionContainer { { PosResourceSetTypeSemi-persistent-ExtIEs} } OPTIONAL,

 ...

}

PosResourceSetTypeSemi-persistent-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PosResourceSetTypeAperiodic ::= SEQUENCE {

 sRSResourceTrigger INTEGER(1..3),

 iE-Extensions ProtocolExtensionContainer { { PosResourceSetTypeAperiodic-ExtIEs} } OPTIONAL,

 ...

}

PosResourceSetTypeAperiodic-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PRS-Bandwidth-EUTRA ::= ENUMERATED {

 bw6,

 bw15,

 bw25,

 bw50,

 bw75,

 bw100,

 ...

}

PRSAngleItem ::= SEQUENCE {

 pRSresourceAngleID INTEGER (0..63),

 nRPRSAzimuth INTEGER (0..359),

 nRPRSAzimuthFine INTEGER (0..9) OPTIONAL,

 nRPRSElevation INTEGER (0..180) OPTIONAL,

 nRPRSElevationFine INTEGER (0..9) OPTIONAL,

 ...

}

PRSInformationPos ::= SEQUENCE {

 pRS-IDPos INTEGER(0..255) OPTIONAL,

 pRS-Resource-Set-IDPos INTEGER(0..7),

 pRS-Resource-IDPos INTEGER(0..63),

 iE-Extensions ProtocolExtensionContainer { { PRSInformationPos-ExtIEs} } OPTIONAL,

 ...

}

PRSInformationPos-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PRSConfiguration ::= SEQUENCE {

 pRSResourceSet-List PRSResourceSet-List,

 iE-Extensions ProtocolExtensionContainer { { PRSConfiguration-ExtIEs} } OPTIONAL,

 ...

}

PRSConfiguration-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PRS-ConfigurationIndex-EUTRA ::= INTEGER (0..4095, ...)

PRS-ID-EUTRA ::= INTEGER (0..4095, ...)

PRSMutingConfiguration-EUTRA ::= CHOICE {

 two BIT STRING (SIZE (2)),

 four BIT STRING (SIZE (4)),

 eight BIT STRING (SIZE (8)),

 sixteen BIT STRING (SIZE (16)),

 thirty-two BIT STRING (SIZE (32)),

 sixty-four BIT STRING (SIZE (64)),

 one-hundred-and-twenty-eight BIT STRING (SIZE (128)),

 two-hundred-and-fifty-six BIT STRING (SIZE (256)),

 five-hundred-and-twelve BIT STRING (SIZE (512)),

 one-thousand-and-twenty-four BIT STRING (SIZE (1024)),

 pRSMutingConfiguration-EUTRA-Extension ProtocolIE-Single-Container {{ PRSMutingConfiguration-EUTRA-ExtensionIE }}

}

PRSMutingConfiguration-EUTRA-ExtensionIE NRPPA-PROTOCOL-IES ::= {

 ...

}

PRSOccasionGroup-EUTRA ::= ENUMERATED {

 og2,

 og4,

 og8,

 og16,

 og32,

 og64,

 og128,

 ...

}

PRSFrequencyHoppingConfiguration-EUTRA ::= SEQUENCE {

 noOfFreqHoppingBands NumberOfFrequencyHoppingBands,

 bandPositions SEQUENCE(SIZE (1..maxnoFreqHoppingBandsMinusOne)) OF NarrowBandIndex,

 iE-Extensions ProtocolExtensionContainer { { PRSFrequencyHoppingConfiguration-EUTRA-Item-IEs} } OPTIONAL,

 ...

}

PRSFrequencyHoppingConfiguration-EUTRA-Item-IEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PRSMuting::= SEQUENCE {

 pRSMutingOption1 PRSMutingOption1,

 pRSMutingOption2 PRSMutingOption2,

 iE-Extensions ProtocolExtensionContainer { { PRSMuting-ExtIEs} } OPTIONAL,

 ...

}

PRSMuting-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PRSMutingOption1 ::= SEQUENCE {

 mutingPattern DL-PRSMutingPattern,

 mutingBitRepetitionFactor ENUMERATED{n1,n2,n4,n8,...},

 iE-Extensions ProtocolExtensionContainer { { PRSMutingOption1-ExtIEs} } OPTIONAL,

 ...

}

PRSMutingOption1-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PRSMutingOption2 ::= SEQUENCE {

 mutingPattern DL-PRSMutingPattern,

 iE-Extensions ProtocolExtensionContainer { { PRSMutingOption2-ExtIEs} } OPTIONAL,

 ...

}

PRSMutingOption2-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PRSResource-List::= SEQUENCE (SIZE (1..maxnoofPRSresource)) OF PRSResource-Item

PRSResource-Item ::= SEQUENCE {

 pRSResourceID INTEGER(0..63),

 sequenceID INTEGER(0..4095,...),

 rEOffset INTEGER(0..11),

 resourceSlotOffset INTEGER(0..511,...),

 resourceSymbolOffset INTEGER(0..12,...),

 qCLInfo PRSResource-QCLInfo OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { PRSResource-Item-ExtIEs} } OPTIONAL,

 ...

}

PRSResource-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PRSResource-QCLInfo ::= SEQUENCE {

 qCLSourceSSBIndex INTEGER(0..63) OPTIONAL,

 qCLSourcePRSInfo PRSResource-QCLSourcePRSInfo OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { PRSResource-QCLInfo-ExtIEs} } OPTIONAL,

 ...

}

PRSResource-QCLInfo-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PRSResource-QCLSourcePRSInfo ::= SEQUENCE {

 qCLSourcePRSResourceSetID INTEGER(0..7),

 qCLSourcePRSResourceID INTEGER(0..63) OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { PRSResource-QCLSourcePRSInfo-ExtIEs} } OPTIONAL,

 ...

}

PRSResource-QCLSourcePRSInfo-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PRSResourceSet-List ::= SEQUENCE (SIZE (1..maxnoofPRSresourceSet)) OF PRSResourceSet-Item

PRSResourceSet-Item ::= SEQUENCE {

 pRSResourceSetID INTEGER(0..7),

 subcarrierSpacing ENUMERATED{kHz15, kHz30, kHz60, kHz120, ...},

 pRSbandwidth INTEGER(1..63),

 startPRB INTEGER(0..2176),

 pointA INTEGER (0..3279165),

 combSize ENUMERATED{n2, n4, n6, n12, ...},

 cPType ENUMERATED{normal, extended, ...},

 resourceSetPeriodicity ENUMERATED{n4,n5,n8,n10,n16,n20,n32,n40,n64,n80,n160,n320,n640,n1280,n2560,n5120,n10240,n20480,n40960, n81920,...},

 resourceSetSlotOffset INTEGER(0..81919,...),

 resourceRepetitionFactor ENUMERATED{rf1,rf2,rf4,rf6,rf8,rf16,rf32,...},

 resourceTimeGap ENUMERATED{tg1,tg2,tg4,tg8,tg16,tg32,...},

 resourceNumberofSymbols ENUMERATED{n2,n4,n6,n12,...},

 pRSMuting PRSMuting OPTIONAL,

 pRSResourceTransmitPower INTEGER(-60..50),

 pRSResource-List PRSResource-List,

 iE-Extensions ProtocolExtensionContainer { { PRSResourceSet-Item-ExtIEs} } OPTIONAL,

 ...

}

PRSResourceSet-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

PRS-Resource-ID ::= INTEGER (0..63)

PRS-Resource-Set-ID ::= INTEGER(0..7)

PRS-ID ::= INTEGER(0..255)

-- Q

-- R

ReferenceSignal ::= CHOICE {

 nZP-CSI-RS NZP-CSI-RS-ResourceID,

 sSB SSB,

 sRS SRSResourceID,

 positioningSRS SRSPosResourceID,

 dL-PRS DL-PRS,

 choice-Extension ProtocolIE-Single-Container {{ReferenceSignal-ExtensionIE }}

}

ReferenceSignal-ExtensionIE NRPPA-PROTOCOL-IES ::= {

 ...

}

ReferencePoint ::= CHOICE {

 relativeCoordinateID CoordinateID,

 referencePointCoordinate NG-RANAccessPointPosition,

 referencePointCoordinateHA NGRANHighAccuracyAccessPointPosition,

 choice-Extension ProtocolIE-Single-Container { { ReferencePoint-ExtIEs} }

}

ReferencePoint-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

CoordinateID ::= INTEGER (0..511, ...)

RelativeGeodeticLocation ::= SEQUENCE {

 milli-Arc-SecondUnits ENUMERATED {zerodot03, zerodot3, three, ...}, heightUnits ENUMERATED {mm, cm, m, ...},

 deltaLatitude INTEGER (-1024.. 1023),

 deltaLongitude INTEGER (-1024.. 1023),

 deltaHeight INTEGER (-1024.. 1023),

 locationUncertainty LocationUncertainty,

 iE-extensions ProtocolExtensionContainer {{RelativeGeodeticLocation-ExtIEs }} OPTIONAL,

 ...

}

RelativeGeodeticLocation-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

RelativeCartesianLocation ::= SEQUENCE {

 xYZunit ENUMERATED {mm, cm, dm, ...},

 xvalue INTEGER (-65536..65535),

 yvalue INTEGER (-65536..65535),

 zvalue INTEGER (-32768..32767),

 locationUncertainty LocationUncertainty,

 iE-Extensions ProtocolExtensionContainer { { RelativeCartesianLocation-ExtIEs} } OPTIONAL,

 ...

}

RelativeCartesianLocation-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

RelativePathDelay ::= CHOICE {

 k0 INTEGER(0..16351,...),

 k1 INTEGER(0..8176,...),

 k2 INTEGER(0..4088,...),

 k3 INTEGER(0..2044,...),

 k4 INTEGER(0..1022,...),

 k5 INTEGER(0..511,...),

 ...

}

ReportCharacteristics ::= ENUMERATED {

 onDemand,

 periodic,

 ...

}

RequestedSRSTransmissionCharacteristics ::= SEQUENCE {

 numberOfTransmissions INTEGER (0..500,...) OPTIONAL,

 resourceType ENUMERATED {periodic, semi-persistent, aperiodic, ...},

 bandwidth BandwidthSRS,

 listOfSRSResourceSet SEQUENCE (SIZE (1.. maxnoSRS-ResourceSets)) OF SRSResourceSet-Item OPTIONAL,

 sSBInformation SSBInfo OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { RequestedSRSTransmissionCharacteristics-ExtIEs} } OPTIONAL,

 ...

}

RequestedSRSTransmissionCharacteristics-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SRSResourceSet-Item ::= SEQUENCE {

 numberOfSRSResourcePerSet INTEGER (1..16, ...) OPTIONAL,

 periodicityList PeriodicityList OPTIONAL,

 spatialRelationInformation SpatialRelationInfo OPTIONAL,

 pathlossReferenceInformation PathlossReferenceInformation OPTIONAL,

 ...

}

ResourceSetType ::= CHOICE {

 periodic ResourceSetTypePeriodic,

 semi-persistent ResourceSetTypeSemi-persistent,

 aperiodic ResourceSetTypeAperiodic,

 choice-extension ProtocolIE-Single-Container {{ ResourceSetType-ExtIEs }}

}

ResourceSetType-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

ResourceSetTypePeriodic ::= SEQUENCE {

periodicSet ENUMERATED{true, ...},

 iE-Extensions ProtocolExtensionContainer { { ResourceSetTypePeriodic-ExtIEs} } OPTIONAL,

 ...

}

ResourceSetTypePeriodic-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResourceSetTypeSemi-persistent ::= SEQUENCE {

semi-persistentSet ENUMERATED{true, ...},

 iE-Extensions ProtocolExtensionContainer { { ResourceSetTypeSemi-persistent-ExtIEs} } OPTIONAL,

 ...

}

ResourceSetTypeSemi-persistent-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResourceSetTypeAperiodic ::= SEQUENCE {

 sRSResourceTrigger INTEGER(1..3),

 slotoffset INTEGER(1..32),

 iE-Extensions ProtocolExtensionContainer { { ResourceSetTypeAperiodic-ExtIEs} } OPTIONAL,

 ...

}

ResourceSetTypeAperiodic-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResourceType ::= CHOICE {

 periodic ResourceTypePeriodic,

 semi-persistent ResourceTypeSemi-persistent,

 aperiodic ResourceTypeAperiodic,

 choice-extension ProtocolIE-Single-Container {{ ResourceType-ExtIEs }}

}

ResourceType-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

ResourceTypePeriodic ::= SEQUENCE {

 periodicity ENUMERATED{slot1, slot2, slot4, slot5, slot8, slot10, slot16, slot20, slot32, slot40, slot64, slot80, slot160, slot320, slot640, slot1280, slot2560, ...},

 offset INTEGER(0..2559, ...),

 iE-Extensions ProtocolExtensionContainer { { ResourceTypePeriodic-ExtIEs} } OPTIONAL,

 ...

}

ResourceTypePeriodic-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResourceTypeSemi-persistent ::= SEQUENCE {

 periodicity ENUMERATED{slot1, slot2, slot4, slot5, slot8, slot10, slot16, slot20, slot32, slot40, slot64, slot80, slot160, slot320, slot640, slot1280, slot2560, ...},

 offset INTEGER(0..2559, ...),

 iE-Extensions ProtocolExtensionContainer { { ResourceTypeSemi-persistent-ExtIEs} } OPTIONAL,

 ...

}

ResourceTypeSemi-persistent-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResourceTypeAperiodic ::= SEQUENCE {

aperiodicResourceType ENUMERATED{true, ...},

 iE-Extensions ProtocolExtensionContainer { { ResourceTypeAperiodic-ExtIEs} } OPTIONAL,

 ...

}

ResourceTypeAperiodic-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResourceTypePos ::= CHOICE {

 periodic ResourceTypePeriodicPos,

 semi-persistent ResourceTypeSemi-persistentPos,

 aperiodic ResourceTypeAperiodicPos,

 choice-extension ProtocolIE-Single-Container {{ ResourceTypePos-ExtIEs }}

}

ResourceTypePos-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

ResourceTypePeriodicPos ::= SEQUENCE {

periodicity ENUMERATED{slot1, slot2, slot4, slot5, slot8, slot10, slot16, slot20, slot32, slot40, slot64, slot80, slot160, slot320, slot640, slot1280, slot2560, slot5120, slot10240, slot20480, slot40960, slot81920, ...},

offset INTEGER(0..81919, ...),

 iE-Extensions ProtocolExtensionContainer { { ResourceTypePeriodicPos-ExtIEs} } OPTIONAL,

 ...

}

ResourceTypePeriodicPos-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResourceTypeSemi-persistentPos ::= SEQUENCE {

periodicity ENUMERATED{slot1, slot2, slot4, slot5, slot8, slot10, slot16, slot20, slot32, slot40, slot64, slot80, slot160, slot320, slot640, slot1280, slot2560, slot5120, slot10240, slot20480, slot40960, slot81920, ...},

offset INTEGER(0..81919, ...),

 iE-Extensions ProtocolExtensionContainer { { ResourceTypeSemi-persistentPos-ExtIEs} } OPTIONAL,

 ...

}

ResourceTypeSemi-persistentPos-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResourceTypeAperiodicPos ::= SEQUENCE {

slotOffset INTEGER (1..32),

 iE-Extensions ProtocolExtensionContainer { { ResourceTypeAperiodicPos-ExtIEs} } OPTIONAL,

 ...

}

ResourceTypeAperiodicPos-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultCSI-RSRP ::= SEQUENCE (SIZE (1.. maxCellReportNR)) OF ResultCSI-RSRP-Item

ResultCSI-RSRP-Item ::= SEQUENCE {

 nR-PCI NR-PCI,

 nR-ARFCN NR-ARFCN,

 nG-RAN-CGI NG-RAN-CGI OPTIONAL,

 valueCSI-RSRP-Cell ValueRSRP-NR OPTIONAL,

 cSI-RSRP-PerCSI-RS ResultCSI-RSRP-PerCSI-RS OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { ResultCSI-RSRP-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultCSI-RSRP-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultCSI-RSRP-PerCSI-RS ::= SEQUENCE (SIZE (1.. maxIndexesReport)) OF ResultCSI-RSRP-PerCSI-RS-Item

ResultCSI-RSRP-PerCSI-RS-Item ::= SEQUENCE {

 cSI-RS-Index INTEGER (0..95),

 valueCSI-RSRP ValueRSRP-NR,

 iE-Extensions ProtocolExtensionContainer { { ResultCSI-RSRP-PerCSI-RS-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultCSI-RSRP-PerCSI-RS-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultCSI-RSRQ ::= SEQUENCE (SIZE (1.. maxCellReportNR)) OF ResultCSI-RSRQ-Item

ResultCSI-RSRQ-Item ::= SEQUENCE {

 nR-PCI NR-PCI,

 nR-ARFCN NR-ARFCN,

 nG-RAN-CGI NG-RAN-CGI OPTIONAL,

 valueCSI-RSRQ-Cell ValueRSRQ-NR OPTIONAL,

 cSI-RSRQ-PerCSI-RS ResultCSI-RSRQ-PerCSI-RS OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { ResultCSI-RSRQ-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultCSI-RSRQ-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultCSI-RSRQ-PerCSI-RS ::= SEQUENCE (SIZE (1.. maxIndexesReport)) OF ResultCSI-RSRQ-PerCSI-RS-Item

ResultCSI-RSRQ-PerCSI-RS-Item ::= SEQUENCE {

 cSI-RS-Index INTEGER (0..95),

 valueCSI-RSRQ ValueRSRQ-NR,

 iE-Extensions ProtocolExtensionContainer { { ResultCSI-RSRQ-PerCSI-RS-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultCSI-RSRQ-PerCSI-RS-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultEUTRA ::= SEQUENCE (SIZE (1.. maxEUTRAMeas)) OF ResultEUTRA-Item

ResultEUTRA-Item ::= SEQUENCE {

 pCI-EUTRA PCI-EUTRA,

 eARFCN EARFCN,

 valueRSRP-EUTRA ValueRSRP-EUTRA OPTIONAL,

 valueRSRQ-EUTRA ValueRSRQ-EUTRA OPTIONAL,

 cGI-EUTRA CGI-EUTRA OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { ResultEUTRA-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultEUTRA-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultRSRP-EUTRA ::= SEQUENCE (SIZE (1.. maxCellReport)) OF ResultRSRP-EUTRA-Item

ResultRSRP-EUTRA-Item ::= SEQUENCE {

 pCI-EUTRA PCI-EUTRA,

 eARFCN EARFCN,

 cGI-EUTRA CGI-EUTRA OPTIONAL,

 valueRSRP-EUTRA ValueRSRP-EUTRA,

 iE-Extensions ProtocolExtensionContainer { { ResultRSRP-EUTRA-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultRSRP-EUTRA-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultRSRQ-EUTRA ::= SEQUENCE (SIZE (1.. maxCellReport)) OF ResultRSRQ-EUTRA-Item

ResultRSRQ-EUTRA-Item ::= SEQUENCE {

 pCI-EUTRA PCI-EUTRA,

 eARFCN EARFCN,

 cGI-UTRA CGI-EUTRA OPTIONAL,

 valueRSRQ-EUTRA ValueRSRQ-EUTRA,

 iE-Extensions ProtocolExtensionContainer { { ResultRSRQ-EUTRA-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultRSRQ-EUTRA-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultSS-RSRP ::= SEQUENCE (SIZE (1.. maxCellReportNR)) OF ResultSS-RSRP-Item

ResultSS-RSRP-Item ::= SEQUENCE {

 nR-PCI NR-PCI,

 nR-ARFCN NR-ARFCN,

 nG-RAN-CGI NG-RAN-CGI OPTIONAL,

 valueSS-RSRP-Cell ValueRSRP-NR OPTIONAL,

 sS-RSRP-PerSSB ResultSS-RSRP-PerSSB OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { ResultSS-RSRP-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultSS-RSRP-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultSS-RSRP-PerSSB ::= SEQUENCE (SIZE (1.. maxIndexesReport)) OF ResultSS-RSRP-PerSSB-Item

ResultSS-RSRP-PerSSB-Item ::= SEQUENCE {

 sSB-Index INTEGER (0..63),

 valueSS-RSRP ValueRSRP-NR,

 iE-Extensions ProtocolExtensionContainer { { ResultSS-RSRP-PerSSB-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultSS-RSRP-PerSSB-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultSS-RSRQ ::= SEQUENCE (SIZE (1.. maxCellReportNR)) OF ResultSS-RSRQ-Item

ResultSS-RSRQ-Item ::= SEQUENCE {

 nR-PCI NR-PCI,

 nR-ARFCN NR-ARFCN,

 nG-RAN-CGI NG-RAN-CGI OPTIONAL,

 valueSS-RSRQ-Cell ValueRSRQ-NR OPTIONAL,

 sS-RSRQ-PerSSB ResultSS-RSRQ-PerSSB OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { ResultSS-RSRQ-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultSS-RSRQ-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultSS-RSRQ-PerSSB ::= SEQUENCE (SIZE (1.. maxIndexesReport)) OF ResultSS-RSRQ-PerSSB-Item

ResultSS-RSRQ-PerSSB-Item ::= SEQUENCE {

 sSB-Index INTEGER (0..63),

 valueSS-RSRQ ValueRSRQ-NR,

 iE-Extensions ProtocolExtensionContainer { { ResultSS-RSRQ-PerSSB-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultSS-RSRQ-PerSSB-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultGERAN ::= SEQUENCE (SIZE (1.. maxGERANMeas)) OF ResultGERAN-Item

ResultGERAN-Item ::= SEQUENCE {

 bCCH BCCH,

 physCellIDGERAN PhysCellIDGERAN,

 rSSI RSSI,

 iE-Extensions ProtocolExtensionContainer { { ResultGERAN-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultGERAN-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultNR ::= SEQUENCE (SIZE (1.. maxNRMeas)) OF ResultNR-Item

ResultNR-Item ::= SEQUENCE {

 nR-PCI NR-PCI,

 nR-ARFCN NR-ARFCN,

 valueSS-RSRP-Cell ValueRSRP-NR OPTIONAL,

 valueSS-RSRQ-Cell ValueRSRQ-NR OPTIONAL,

 sS-RSRP-PerSSB ResultSS-RSRP-PerSSB OPTIONAL,

 sS-RSRQ-PerSSB ResultSS-RSRQ-PerSSB OPTIONAL,

 cGI-NR CGI-NR OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { ResultNR-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultNR-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

ResultUTRAN ::= SEQUENCE (SIZE (1.. maxUTRANMeas)) OF ResultUTRAN-Item

ResultUTRAN-Item ::= SEQUENCE {

 uARFCN UARFCN,

 physCellIDUTRAN CHOICE {

 physCellIDUTRA-FDD PhysCellIDUTRA-FDD,

 physCellIDUTRA-TDD PhysCellIDUTRA-TDD

 },

 uTRA-RSCP UTRA-RSCP OPTIONAL,

 uTRA-EcN0 UTRA-EcN0 OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { ResultUTRAN-Item-ExtIEs} } OPTIONAL,

 ...

}

ResultUTRAN-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

RSSI ::= INTEGER (0..63, ...)

-- S

SCS-SpecificCarrier ::= SEQUENCE {

 offsetToCarrier INTEGER (0..2199,...),

 subcarrierSpacing ENUMERATED {kHz15, kHz30, kHz60, kHz120,...},

 carrierBandwidth INTEGER (0..275,...),

iE-Extensions ProtocolExtensionContainer { { SCS-SpecificCarrier-ExtIEs } } OPTIONAL,

 ...

}

SCS-SpecificCarrier-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

Search-window-information ::= SEQUENCE {

 expectedPropagationDelay INTEGER (-3841..3841,...),

 delayUncertainty INTEGER (1..246,...),

 iE-Extensions ProtocolExtensionContainer { { Search-window-information-ExtIEs } } OPTIONAL,

 ...

}

Search-window-information-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SFNInitialisationTime ::= BIT STRING (SIZE (64))

SFNInitialisationTime-EUTRA ::= BIT STRING (SIZE (64))

SlotNumber ::= INTEGER (0..79)

SpatialDirectionInformation ::= SEQUENCE {

 nR-PRS-Beam-Information NR-PRS-Beam-Information,

 iE-Extensions ProtocolExtensionContainer { { SpatialDirectionInformation-ExtIEs } } OPTIONAL,

 ...

}

SpatialDirectionInformation-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SpatialRelationInfo ::= SEQUENCE {

 spatialRelationforResourceID SpatialRelationforResourceID,

 iE-Extensions ProtocolExtensionContainer { {SpatialRelationInfo-ExtIEs} } OPTIONAL,

 ...

}

SpatialRelationInfo-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SpatialRelationforResourceID ::= SEQUENCE (SIZE(1..maxnoSpatialRelations)) OF SpatialRelationforResourceIDItem

SpatialRelationforResourceIDItem ::= SEQUENCE {

 referenceSignal ReferenceSignal,

 iE-Extensions ProtocolExtensionContainer { {SpatialRelationforResourceIDItem-ExtIEs} } OPTIONAL,

 ...

}

SpatialRelationforResourceIDItem-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SpatialRelationPos ::= CHOICE {

 sSBPos SSBPos,

 pRSInformationPos PRSInformationPos,

 choice-extension ProtocolIE-Single-Container {{ SpatialInformationPos-ExtIEs }}

}

SpatialInformationPos-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

SRSConfig ::= SEQUENCE {

 sRSResource-List SRSResource-List OPTIONAL,

 posSRSResource-List PosSRSResource-List OPTIONAL,

 sRSResourceSet-List SRSResourceSet-List OPTIONAL,

 posSRSResourceSet-List PosSRSResourceSet-List OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { SRSConfig-ExtIEs } } OPTIONAL,

 ...

}

SRSConfig-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SRSCarrier-List ::= SEQUENCE (SIZE(1.. maxnoSRS-Carriers)) OF SRSCarrier-List-Item

SRSCarrier-List-Item ::= SEQUENCE {

 pointA INTEGER (0..3279165,...),

 uplinkChannelBW-PerSCS-List UplinkChannelBW-PerSCS-List,

 activeULBWP ActiveULBWP,

 pCI INTEGER (0..1007) OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { SRSCarrier-List-Item-ExtIEs } } OPTIONAL,

 ...

}

SRSCarrier-List-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SRSConfiguration ::= SEQUENCE {

 sRSCarrier-List SRSCarrier-List, iE-Extensions ProtocolExtensionContainer { { SRSConfiguration-ExtIEs } } OPTIONAL,

 ...

}

SRSConfiguration-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SRSPosResourceID ::= INTEGER (0..63, ...)

SRSResource::= SEQUENCE {

 sRSResourceID SRSResourceID,

 nrofSRS-Ports ENUMERATED {port1, ports2, ports4},

 transmissionComb TransmissionComb,

 startPosition INTEGER (0..13),

 nrofSymbols ENUMERATED {n1, n2, n4},

 repetitionFactor ENUMERATED {n1, n2, n4},

 freqDomainPosition INTEGER (0..67),

 freqDomainShift INTEGER (0..268),

 c-SRS INTEGER (0..63),

 b-SRS INTEGER (0..3),

 b-hop INTEGER (0..3),

 groupOrSequenceHopping ENUMERATED { neither, groupHopping, sequenceHopping },

 resourceType ResourceType,

 slotOffset INTEGER (0..2559),

 sequenceId INTEGER (0..1023),

 iE-Extensions ProtocolExtensionContainer { { SRSResource-ExtIEs } } OPTIONAL,

 ...

}

SRSResource-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SRSResourceID ::= INTEGER (0..63, ...)

SRSResource-List ::= SEQUENCE (SIZE (1..maxnoSRS-Resources)) OF SRSResource

SRSResourceSet-List ::= SEQUENCE (SIZE (1..maxnoSRS-ResourceSets)) OF SRSResourceSet

SRSResourceID-List::= SEQUENCE (SIZE (1..maxnoSRS-ResourcePerSet)) OF SRSResourceID

SRSResourceSet::= SEQUENCE {

 sRSResourceSetID INTEGER(0..15),

 sRSResourceID-List SRSResourceID-List,

 resourceSetType ResourceSetType,

 iE-Extensions ProtocolExtensionContainer { { SRSResourceSet-ExtIEs } } OPTIONAL,

 ...

}

SRSResourceSet-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SRSResourceSetID ::= INTEGER (0..15, ...)

SRSResourceTrigger ::= SEQUENCE {

 aperiodicSRSResourceTriggerList AperiodicSRSResourceTriggerList,

 iE-Extensions ProtocolExtensionContainer { {SRSResourceTrigger-ExtIEs} } OPTIONAL,

 ...

}

SRSResourceTrigger-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SRSSpatialRelation ::= SEQUENCE {

 spatialRelationforResourceID SpatialRelationforResourceID,

 iE-Extensions ProtocolExtensionContainer { {SRSSpatialRelation-ExtIEs} } OPTIONAL,

 ...

}

SRSSpatialRelation-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SSBInfo ::= SEQUENCE {

 listOfSSBInfo SEQUENCE (SIZE (1..maxNoSSBs)) OF SSBInfoList,

 iE-Extensions ProtocolExtensionContainer { {SSBInfo-ExtIEs} } OPTIONAL,

 ...

}

SSBInfo-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SSBInfoList ::= SEQUENCE {

 pCI-NR INTEGER (0..1007),

 sSB-Configuration TF-Configuration,

 iE-Extensions ProtocolExtensionContainer { { SSBInfoList-ExtIEs} } OPTIONAL,

 ...

}

SSBInfoList-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SSB ::= SEQUENCE {

 pCI-NR INTEGER (0..1007),

 ssb-index INTEGER (0..63) OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {SSB-ExtIEs} } OPTIONAL,

 ...

}

SSB-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SSBPos ::= SEQUENCE {

 pCI-NR INTEGER (0..1007) OPTIONAL,

 ssb-index INTEGER (0..63),

 iE-Extensions ProtocolExtensionContainer { {SSBPos-ExtIEs} } OPTIONAL,

 ...

}

SSBPos-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

SSBBurstPosition ::= CHOICE {

 shortBitmap BIT STRING (SIZE(4)),

 mediumBitmap BIT STRING (SIZE(8)),

 longBitmap BIT STRING (SIZE(64)),

 ...

}

SSB-Index ::= INTEGER(0..63)

SSID ::= OCTET STRING (SIZE(1..32))

SystemFrameNumber ::= INTEGER (0..1023)

SystemInformation ::= SEQUENCE (SIZE (1.. maxNrOfPosSImessage)) OF SEQUENCE {

 broadcastPeriodicity BroadcastPeriodicity,

 posSIBs PosSIBs,

 iE-Extensions ProtocolExtensionContainer { { SystemInformation-ExtIEs} } OPTIONAL,

 ...

}

SystemInformation-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

-- T

TAC ::= OCTET STRING (SIZE(3))

TDD-Config-EUTRA-Item ::= SEQUENCE {

 subframeAssignment ENUMERATED { sa0, sa1, sa2, sa3, sa4, sa5, sa6, ... },

 iE-Extensions ProtocolExtensionContainer { { TDD-Config-EUTRA-Item-Item-ExtIEs } } OPTIONAL,

 ...

}

TDD-Config-EUTRA-Item-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

TF-Configuration ::= SEQUENCE {

 sSB-frequency INTEGER (0..3279165),

 sSB-subcarrier-spacing ENUMERATED {kHz15, kHz30, kHz120, kHz240, ...},

 sSB-Transmit-power INTEGER (-60..50),

 sSB-periodicity ENUMERATED {ms5, ms10, ms20, ms40, ms80, ms160, ...},

 sSB-half-frame-offset INTEGER(0..1),

 sSB-SFN-offset INTEGER(0..15),

 sSB-BurstPosition SSBBurstPosition OPTIONAL,

 sFN-initialisation-time SFNInitialisationTime OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { TF-Configuration-ExtIEs} } OPTIONAL,

 ...

}

TF-Configuration-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

TimeStamp ::= SEQUENCE {

 systemFrameNumber SystemFrameNumber,

 slotIndex TimeStampSlotIndex,

 measurementTime SFNInitialisationTime OPTIONAL,

 iE-Extension ProtocolExtensionContainer { { TimeStamp-ExtIEs} } OPTIONAL,

 ...

}

TimeStamp-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

TimeStampSlotIndex ::= CHOICE {

 sCS-15 INTEGER(0..9),

 sCS-30 INTEGER(0..19),

 sCS-60 INTEGER(0..39),

 sCS-120 INTEGER(0..79),

 choice-extension ProtocolIE-Single-Container { { TimeStampSlotIndex-ExtIEs} }

}

TimeStampSlotIndex-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

TP-ID-EUTRA ::= INTEGER (0..4095, ...)

TP-Type-EUTRA ::= ENUMERATED { prs-only-tp, ... }

TransmissionComb ::= CHOICE {

 n2 SEQUENCE {

 combOffset-n2 INTEGER (0..1),

 cyclicShift-n2 INTEGER (0..7)

 },

 n4 SEQUENCE {

 combOffset-n4 INTEGER (0..3),

 cyclicShift-n4 INTEGER (0..11)

 },

 choice-extension ProtocolIE-Single-Container { { TransmissionComb-ExtIEs} }

}

TransmissionComb-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

TransmissionCombPos ::= CHOICE {

 n2 SEQUENCE {

 combOffset-n2 INTEGER (0..1),

 cyclicShift-n2 INTEGER (0..7)

 },

 n4 SEQUENCE {

 combOffset-n4 INTEGER (0..3),

 cyclicShift-n4 INTEGER (0..11)

 },

 n8 SEQUENCE {

 combOffset-n8 INTEGER (0..7),

 cyclicShift-n8 INTEGER (0..5)

 },

 choice-extension ProtocolIE-Single-Container { { TransmissionCombPos-ExtIEs} }

}

TransmissionCombPos-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

TRPMeasurementQuantities ::= SEQUENCE (SIZE (1..maxnoPosMeas)) OF TRPMeasurementQuantitiesList-Item

TRPMeasurementQuantitiesList-Item ::= SEQUENCE {

 tRPMeasurementQuantities-Item TRPMeasurementQuantities-Item,

 timingReportingGranularityFactor INTEGER (0..5) OPTIONAL,

 iE-Extensions ProtocolExtensionContainer {{ TRPMeasurementQuantitiesList-Item-ExtIEs}} OPTIONAL,

 ...

}

TRPMeasurementQuantitiesList-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

TRPMeasurementQuantities-Item ::= ENUMERATED {

 gNB-RxTxTimeDiff,

 uL-SRS-RSRP,

 uL-AoA,

 uL-RTOA,

 ...

}

TrpMeasurementResult ::= SEQUENCE (SIZE (1.. maxnoPosMeas)) OF TrpMeasurementResultItem

TrpMeasurementResultItem ::= SEQUENCE {

 measuredResultsValue TrpMeasuredResultsValue,

 timeStamp TimeStamp,

 measurementQuality TrpMeasurementQuality OPTIONAL,

 measurementBeamInfo MeasurementBeamInfo OPTIONAL,

 iE-Extensions ProtocolExtensionContainer {{TrpMeasurementResultItem-ExtIEs}} OPTIONAL,

 ...

}

TrpMeasurementResultItem-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

TrpMeasuredResultsValue ::= CHOICE {

 uL-AngleOfArrival UL-AoA,

 uL-SRS-RSRP UL-SRS-RSRP,

 uL-RTOA UL-RTOAMeasurement,

 gNB-RxTxTimeDiff GNB-RxTxTimeDiff,

 choice-extension ProtocolIE-Single-Container { { TrpMeasuredResultsValue-ExtIEs } }

}

TrpMeasuredResultsValue-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

TrpMeasurementQuality ::= CHOICE {

 timingMeasQuality TrpMeasurementTimingQuality,

 angleMeasQuality TrpMeasurementAngleQuality,

 choice-Extension ProtocolIE-Single-Container {{ TrpMeasurementQuality-ExtIEs}}

}

TrpMeasurementQuality-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

TrpMeasurementTimingQuality ::= SEQUENCE {

 measurementQuality INTEGER (0..31),

 resolution ENUMERATED {m0dot1, m1, m10, m30, ...},

 ...

}

TrpMeasurementAngleQuality ::= SEQUENCE {

 azimuthQuality INTEGER (0..255),

 zenithQuality INTEGER (0..255) OPTIONAL,

 resolution ENUMERATED {deg0dot1, ...},

 ...

}

TRP-MeasurementRequestList ::= SEQUENCE (SIZE (1..maxNoOfMeasTRPs)) OF TRP-MeasurementRequestItem

TRP-MeasurementRequestItem ::= SEQUENCE {

 tRP-ID TRP-ID,

 search-window-information Search-window-information OPTIONAL,

 iE-extensions ProtocolExtensionContainer { { TRP-MeasurementRequestItem-ExtIEs } } OPTIONAL,

 ...

}

TRP-MeasurementRequestItem-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

TRP-MeasurementResponseList ::= SEQUENCE (SIZE (1..maxNoOfMeasTRPs)) OF TRP-MeasurementResponseItem

TRP-MeasurementResponseItem ::= SEQUENCE {

 tRP-ID TRP-ID,

 measurementResult TrpMeasurementResult,

 iE-extensions ProtocolExtensionContainer { { TRP-MeasurementResponseItem-ExtIEs } } OPTIONAL,

 ...

}

TRP-MeasurementResponseItem-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

TRPInformationList ::= SEQUENCE (SIZE (1.. maxnoTRPs)) OF SEQUENCE {

 tRP-ID TRP-ID,

 tRPInformation TRPInformation,

 iE-Extensions ProtocolExtensionContainer { {TRPInformation-ExtIEs} } OPTIONAL,

 ...

}

TRPInformation-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

TRPInformation ::= SEQUENCE (SIZE (1..maxnoTRPInfoTypes)) OF TRPInformationItem

TRPInformationItem ::= CHOICE {

 pCI-NR INTEGER (0..1007),

 nG-RAN-CGI NG-RAN-CGI,

 aRFCN INTEGER (0..3279165),

 pRSConfiguration PRSConfiguration,

 sSBinformation SSBInfo,

 sFNInitialisationTime SFNInitialisationTime,

 spatialDirectionInformation SpatialDirectionInformation,

 geographicalCoordinates GeographicalCoordinates,

 choice-extension ProtocolIE-Single-Container { { TRPInformationItem-ExtIEs } }

}

TRPInformationItem-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

TRPInformationTypeList ::= SEQUENCE (SIZE(1.. maxnoTRPInfoTypes)) OF TRPInformationTypeItem

TRPInformationTypeItem ::= ENUMERATED {

 nrPCI,

 nG-RAN-CGI,

 arfcn,

 pRSConfig,

 sSBInfo,

 sFNInitTime,

 spatialDirectInfo,

 geoCoord,

 ...

}

TRPList ::= SEQUENCE (SIZE(1.. maxnoTRPs)) OF TRPItem

TRPItem ::= SEQUENCE {

 tRP-ID TRP-ID,

 ...

}

TRP-ID ::= INTEGER (1.. maxnoTRPs, ...)

TRPPositionDefinitionType ::= CHOICE {

 direct TRPPositionDirect,

 referenced TRPPositionReferenced,

 choice-extension ProtocolIE-Single-Container { { TRPPositionDefinitionType-ExtIEs } }

}

TRPPositionDefinitionType-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

TRPPositionDirect ::= SEQUENCE {

 accuracy TRPPositionDirectAccuracy,

 iE-extensions ProtocolExtensionContainer { { TRPPositionDirect-ExtIEs } } OPTIONAL,

 ...

}

TRPPositionDirect-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

TRPPositionDirectAccuracy ::= CHOICE {

 tRPPosition NG-RANAccessPointPosition ,

 tRPHAposition NGRANHighAccuracyAccessPointPosition ,

 choice-extension ProtocolIE-Single-Container { { TRPPositionDirectAccuracy-ExtIEs } }

}

TRPPositionDirectAccuracy-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

TRPPositionReferenced ::= SEQUENCE {

 referencePoint ReferencePoint,

 referencePointType TRPReferencePointType,

 iE-extensions ProtocolExtensionContainer { { TRPPositionReferenced-ExtIEs } } OPTIONAL,

 ...

}

TRPPositionReferenced-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

TRPReferencePointType ::= CHOICE {

 tRPPositionRelativeGeodetic RelativeGeodeticLocation,

 tRPPositionRelativeCartesian RelativeCartesianLocation,

 choice-extension ProtocolIE-Single-Container { { TRPReferencePointType-ExtIEs } }

}

TRPReferencePointType-ExtIEs NRPPA-PROTOCOL-IES ::= {

 ...

}

TypeOfError ::= ENUMERATED {

 not-understood,

 missing,

 ...

}

-- U

UARFCN ::= INTEGER (0..16383, ...)

UE-Measurement-ID ::= INTEGER (1..15, ..., 256)

UTRA-EcN0 ::= INTEGER (0..49, ...)

UTRA-RSCP ::= INTEGER (-5..91, ...)

UL-AoA ::= SEQUENCE {

 azimuthAoA INTEGER (0..3599),

 zenithAoA INTEGER (0..1799) OPTIONAL,

 angleCoordinateSystem ENUMERATED {lCS, gCS} OPTIONAL,

 iE-extensions ProtocolExtensionContainer { { UL-AoA-ExtIEs } } OPTIONAL,

 ...

}

UL-AoA-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

UL-RTOAMeasurement ::= SEQUENCE {

 uLRTOAmeas ULRTOAMeas,

 additionalPathList AdditionalPathList OPTIONAL,

 ...

}

ULRTOAMeas::= CHOICE {

 k0 INTEGER (0.. 1970049),

 k1 INTEGER (0.. 985025),

 k2 INTEGER (0.. 492513),

 k3 INTEGER (0.. 246257),

 k4 INTEGER (0.. 123129),

 k5 INTEGER (0.. 61565),

 ...

}

UL-SRS-RSRP ::= INTEGER (0..127)

UplinkChannelBW-PerSCS-List ::= SEQUENCE (SIZE (1..maxnoSCSs)) OF SCS-SpecificCarrier

-- V

ValueRSRP-EUTRA ::= INTEGER (0..97, ...)

ValueRSRQ-EUTRA ::= INTEGER (0..34, ...)

ValueRSRP-NR ::= INTEGER (0..127)

ValueRSRQ-NR ::= INTEGER (0..127)

-- W

WLANMeasurementQuantities ::= SEQUENCE (SIZE (0.. maxNoMeas)) OF ProtocolIE-Single-Container { {WLANMeasurementQuantities-ItemIEs} }

WLANMeasurementQuantities-ItemIEs NRPPA-PROTOCOL-IES ::= {

 { ID id-WLANMeasurementQuantities-Item CRITICALITY reject TYPE WLANMeasurementQuantities-Item PRESENCE mandatory}}

WLANMeasurementQuantities-Item ::= SEQUENCE {

 wLANMeasurementQuantitiesValue WLANMeasurementQuantitiesValue,

 iE-Extensions ProtocolExtensionContainer { { WLANMeasurementQuantitiesValue-ExtIEs} } OPTIONAL,

 ...

}

WLANMeasurementQuantitiesValue-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

WLANMeasurementQuantitiesValue ::= ENUMERATED {

 wlan,

 ...

}

WLANMeasurementResult ::= SEQUENCE (SIZE (1..maxNoMeas)) OF WLANMeasurementResult-Item

WLANMeasurementResult-Item ::= SEQUENCE {

 wLAN-RSSI WLAN-RSSI,

 sSID SSID OPTIONAL,

 bSSID BSSID OPTIONAL,

 hESSID HESSID OPTIONAL,

 operatingClass WLANOperatingClass OPTIONAL,

 countryCode WLANCountryCode OPTIONAL,

 wLANChannelList WLANChannelList OPTIONAL,

 wLANBand WLANBand OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { WLANMeasurementResult-Item-ExtIEs } } OPTIONAL,

 ...

}

WLANMeasurementResult-Item-ExtIEs NRPPA-PROTOCOL-EXTENSION ::= {

 ...

}

WLAN-RSSI ::= INTEGER (0..141, ...)

WLANBand ::= ENUMERATED {band2dot4, band5, ...}

WLANChannelList ::= SEQUENCE (SIZE (1..maxWLANchannels)) OF WLANChannel

WLANChannel ::= INTEGER (0..255)

WLANCountryCode ::= ENUMERATED {

 unitedStates,

 europe,

 japan,

 global,

 ...

}

WLANOperatingClass ::= INTEGER (0..255)

-- X

-- Y

-- Z

END

-- ASN1STOP

### 9.3.6 Common definitions

-- ASN1START

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

--

-- Common definitions

--

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

NRPPA-CommonDataTypes {

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

ngran-access (22) modules (3) nrppa (4) version1 (1) nrppa-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 }

NRPPATransactionID ::= INTEGER (0..32767)

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

PrivateIE-ID ::= CHOICE {

 local INTEGER (0.. maxPrivateIEs),

 global OBJECT IDENTIFIER

}

ProcedureCode ::= INTEGER (0..255)

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

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

END

-- ASN1STOP

### 9.3.7 Constant definitions

-- ASN1START

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

--

-- Constant definitions

--

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

NRPPA-Constants {

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

ngran-access (22) modules (3) nrppa (4) version1 (1) nrppa-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

 ProcedureCode,

 ProtocolIE-ID

FROM NRPPA-CommonDataTypes;

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

--

-- Elementary Procedures

--

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

id-errorIndication ProcedureCode ::= 0

id-privateMessage ProcedureCode ::= 1

id-e-CIDMeasurementInitiation ProcedureCode ::= 2

id-e-CIDMeasurementFailureIndication ProcedureCode ::= 3

id-e-CIDMeasurementReport ProcedureCode ::= 4

id-e-CIDMeasurementTermination ProcedureCode ::= 5

id-oTDOAInformationExchange ProcedureCode ::= 6

id-assistanceInformationControl ProcedureCode ::= 7

id-assistanceInformationFeedback ProcedureCode ::= 8

id-positioningInformationExchange ProcedureCode ::= 9

id-positioningInformationUpdate ProcedureCode ::= 10

id-Measurement ProcedureCode ::= 11

id-MeasurementReport ProcedureCode ::= 12

id-MeasurementUpdate ProcedureCode ::= 13

id-MeasurementAbort ProcedureCode ::= 14

id-MeasurementFailureIndication ProcedureCode ::= 15

id-tRPInformationExchange ProcedureCode ::= 16

id-positioningActivation ProcedureCode ::= 17

id-positioningDeactivation ProcedureCode ::= 18

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

--

-- Lists

--

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

maxNrOfErrors INTEGER ::= 256

maxCellinRANnode INTEGER ::= 3840

maxIndexesReport INTEGER ::= 64

maxNoMeas INTEGER ::= 64

maxCellReport INTEGER ::= 9

maxCellReportNR INTEGER ::= 9

maxnoOTDOAtypes INTEGER ::= 63

maxServCell INTEGER ::= 5

maxEUTRAMeas INTEGER ::= 8

maxGERANMeas INTEGER ::= 8

maxNRMeas INTEGER ::= 8

maxUTRANMeas INTEGER ::= 8

maxWLANchannels INTEGER ::= 16

maxnoFreqHoppingBandsMinusOne INTEGER ::= 7

maxNoPath INTEGER ::= 2

maxNrOfPosSImessage INTEGER ::= 32

maxnoAssistInfoFailureListItems INTEGER ::= 32

maxNrOfSegments INTEGER ::= 64

maxNrOfPosSIBs INTEGER ::= 32

maxNoOfMeasTRPs INTEGER ::= 64

maxnoTRPs INTEGER ::= 65535

maxnoTRPInfoTypes INTEGER ::= 64

maxnoofAngleInfo INTEGER ::= 65535

maxnolcs-gcs-translation INTEGER ::= 3

maxnoBcastCell INTEGER ::= 16384

maxnoSRSTriggerStates INTEGER ::= 3

maxnoSpatialRelations INTEGER ::= 64

maxnoPosMeas INTEGER ::= 16384

maxnoSRS-Carriers INTEGER ::= 32

maxnoSCSs INTEGER ::= 5

maxnoSRS-Resources INTEGER ::= 64

maxnoSRS-PosResources INTEGER ::= 64

maxnoSRS-ResourceSets INTEGER ::= 16

maxnoSRS-ResourcePerSet INTEGER ::= 16

maxnoSRS-PosResourceSets INTEGER ::= 16

maxnoSRS-PosResourcePerSet INTEGER ::= 16

maxPRS-ResourceSets INTEGER ::= 2

maxPRS-ResourcesPerSet INTEGER ::= 64

maxNoSSBs INTEGER ::= 255

maxnoofPRSresourceSet INTEGER ::= 8

maxnoofPRSresource INTEGER ::= 64

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

--

-- IEs

--

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

id-Cause ProtocolIE-ID ::= 0

id-CriticalityDiagnostics ProtocolIE-ID ::= 1

id-LMF-UE-Measurement-ID ProtocolIE-ID ::= 2

id-ReportCharacteristics ProtocolIE-ID ::= 3

id-MeasurementPeriodicity ProtocolIE-ID ::= 4

id-MeasurementQuantities ProtocolIE-ID ::= 5

id-RAN-UE-Measurement-ID ProtocolIE-ID ::= 6

id-E-CID-MeasurementResult ProtocolIE-ID ::= 7

id-OTDOACells ProtocolIE-ID ::= 8

id-OTDOA-Information-Type-Group ProtocolIE-ID ::= 9

id-OTDOA-Information-Type-Item ProtocolIE-ID ::= 10

id-MeasurementQuantities-Item ProtocolIE-ID ::= 11

id-RequestedSRSTransmissionCharacteristics ProtocolIE-ID ::= 12

id-Cell-Portion-ID ProtocolIE-ID ::= 14

id-OtherRATMeasurementQuantities ProtocolIE-ID ::= 15

id-OtherRATMeasurementQuantities-Item ProtocolIE-ID ::= 16

id-OtherRATMeasurementResult ProtocolIE-ID ::= 17

id-WLANMeasurementQuantities ProtocolIE-ID ::= 19

id-WLANMeasurementQuantities-Item ProtocolIE-ID ::= 20

id-WLANMeasurementResult ProtocolIE-ID ::= 21

id-TDD-Config-EUTRA-Item ProtocolIE-ID ::= 22

id-Assistance-Information ProtocolIE-ID ::= 23

id-Broadcast ProtocolIE-ID ::= 24

id-AssistanceInformationFailureList ProtocolIE-ID ::= 25

id-SRSConfiguration ProtocolIE-ID ::= 26

id-MeasurementResult ProtocolIE-ID ::= 27

id-TRP-ID ProtocolIE-ID ::= 28

id-TRPInformationTypeList ProtocolIE-ID ::= 29

id-TRPInformationList ProtocolIE-ID ::= 30

id-MeasurementBeamInfoRequest ProtocolIE-ID ::= 31

id-ResultSS-RSRP ProtocolIE-ID ::= 32

id-ResultSS-RSRQ ProtocolIE-ID ::= 33

id-ResultCSI-RSRP ProtocolIE-ID ::= 34

id-ResultCSI-RSRQ ProtocolIE-ID ::= 35

id-AngleOfArrivalNR ProtocolIE-ID ::= 36

id-GeographicalCoordinates ProtocolIE-ID ::= 37

id-PositioningBroadcastCells ProtocolIE-ID ::= 38

id-LMF-Measurement-ID ProtocolIE-ID ::= 39

id-RAN-Measurement-ID ProtocolIE-ID ::= 40

id-TRP-MeasurementRequestList ProtocolIE-ID ::= 41

id-TRP-MeasurementResponseList ProtocolIE-ID ::= 42

id-TRP-MeasurementReportList ProtocolIE-ID ::= 43

id-SRSType ProtocolIE-ID ::= 44

id-ActivationTime ProtocolIE-ID ::= 45

id-SRSResourceSetID ProtocolIE-ID ::= 46

id-TRPList ProtocolIE-ID ::= 47

id-SRSSpatialRelation ProtocolIE-ID ::= 48

id-SystemFrameNumber ProtocolIE-ID ::= 49

id-SlotNumber ProtocolIE-ID ::= 50

id-SRSResourceTrigger ProtocolIE-ID ::= 51

id-TRPMeasurementQuantities ProtocolIE-ID ::= 52

id-AbortTransmission ProtocolIE-ID ::= 53

id-SFNInitialisationTime ProtocolIE-ID ::= 54

id-ResultNR ProtocolIE-ID ::= 55

id-ResultEUTRA ProtocolIE-ID ::= 56

END

-- ASN1STOP

### 9.3.8 Container definitions

-- ASN1START

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

--

-- Container definitions

--

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

NRPPA-Containers {

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

ngran-access (22) modules (3) nrppa (4) version1 (1) nrppa-Containers (5)}

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules.

--

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

IMPORTS

 maxPrivateIEs,

 maxProtocolExtensions,

 maxProtocolIEs,

 Criticality,

 Presence,

 PrivateIE-ID,

 ProtocolIE-ID

FROM NRPPA-CommonDataTypes;

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

--

-- Class Definition for Protocol IEs

--

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

NRPPA-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 Extensions

--

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

NRPPA-PROTOCOL-EXTENSION ::= CLASS {

 &id ProtocolIE-ID UNIQUE,

 &criticality Criticality,

 &Extension,

 &presence Presence

}

WITH SYNTAX {

 ID &id

 CRITICALITY &criticality

 EXTENSION &Extension

 PRESENCE &presence

}

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

--

-- Class Definition for Private IEs

--

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

NRPPA-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 { NRPPA-PROTOCOL-IES : IEsSetParam} ::=

 SEQUENCE (SIZE (0..maxProtocolIEs)) OF

 ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Single-Container { NRPPA-PROTOCOL-IES : IEsSetParam} ::=

 ProtocolIE-Field {{IEsSetParam}}

ProtocolIE-Field { NRPPA-PROTOCOL-IES : IEsSetParam} ::= SEQUENCE {

 id NRPPA-PROTOCOL-IES.&id ({IEsSetParam}),

 criticality NRPPA-PROTOCOL-IES.&criticality ({IEsSetParam}{@id}),

 value NRPPA-PROTOCOL-IES.&Value ({IEsSetParam}{@id})

}

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

--

-- Container Lists for Protocol IE Containers

--

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

ProtocolIE-ContainerList {INTEGER : lowerBound, INTEGER : upperBound, NRPPA-PROTOCOL-IES : IEsSetParam} ::=

 SEQUENCE (SIZE (lowerBound..upperBound)) OF

 ProtocolIE-Container {{IEsSetParam}}

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

--

-- Container for Protocol Extensions

--

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

ProtocolExtensionContainer { NRPPA-PROTOCOL-EXTENSION : ExtensionSetParam} ::=

 SEQUENCE (SIZE (1..maxProtocolExtensions)) OF

 ProtocolExtensionField {{ExtensionSetParam}}

ProtocolExtensionField { NRPPA-PROTOCOL-EXTENSION : ExtensionSetParam} ::= SEQUENCE {

 id NRPPA-PROTOCOL-EXTENSION.&id ({ExtensionSetParam}),

 criticality NRPPA-PROTOCOL-EXTENSION.&criticality ({ExtensionSetParam}{@id}),

 extensionValue NRPPA-PROTOCOL-EXTENSION.&Extension ({ExtensionSetParam}{@id})

}

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

--

-- Container for Private IEs

--

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

PrivateIE-Container { NRPPA-PRIVATE-IES : IEsSetParam} ::=

 SEQUENCE (SIZE (1..maxPrivateIEs)) OF

 PrivateIE-Field {{IEsSetParam}}

PrivateIE-Field { NRPPA-PRIVATE-IES : IEsSetParam} ::= SEQUENCE {

 id NRPPA-PRIVATE-IES.&id ({IEsSetParam}),

 criticality NRPPA-PRIVATE-IES.&criticality ({IEsSetParam}{@id}),

 value NRPPA-PRIVATE-IES.&Value ({IEsSetParam}{@id})

}

END

-- ASN1STOP