**3GPP TSG-RAN WG3 Meeting #110-e**  ***R3-20xxx***

**E-meeting, 2 – 12 Nov 2020**

|  |
| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **38.473** | **CR** | **0689** | **rev** | **1** | **Current version:** | **16.3.1** |  |
|  |
| *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 |  |

|  |
| --- |
|  |
| ***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 misalignment between the ASN.1 and the tabular  |
|  |  |
| ***Summary of change:*** | Correct the tabular or the ASN.1 including the following misalignments:1. Criticality alignment in 9.2.12.10, 9.2.12.20 with ASN.12. Corrected criticality of gNB-CU UE F1AP ID & gNB-DU UE F1AP ID from ignore to reject in mutiple places including tabular and ASN.1.3. The current measurement report periodicity is aligned with LTE RRC 36.331. It should be revised to be aligned with NR RRC TS 38.3314. Removal of the hyperlink in ASN.1Impact 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.**The CR is non backward compatible** |
|  |  |
| ***Consequences if not approved:*** | Misalignment in ASN.1 which leads to wrong functionalities |
|  |  |
| ***Clauses affected:*** | 9.2.12.3, 9.2.12.20, 9.2.12.21, 9.2.12.22, 9.4.5 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS/TR 38.455 CR 0021  |
| ***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 R3-206206 |

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

#### 9.2.12.3 POSITIONING MEASUREMENT REQUEST

This message is sent by the gNB-CU to request the gNB-DU to configure a positioning measurement.

Direction: gNB-CU → gNB-DU.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| Transaction ID | M |  | 9.3.1.23 |  | YES | reject |
| LMF Measurement ID | M |  | INTEGER (1..65536, …) |  | YES | reject |
| RAN Measurement ID | M |  | INTEGER (1..65536, …) |  | YES | reject |
| **TRP Measurement Request List** |  | 1 |  |  | YES | reject |
| >TRP Measurement Request Item |  | 1..<maxnoofMeasTRPs> |  |  |  |  |
| >>TRP ID | M |  | 9.3.1.197 |  |  |  |
| >>Search Window Information | O |  | 9.3.1.204 |  |  |  |
| Positioning Report Characteristics | M |  | ENUMERATED (OnDemand, Periodic, …) |  | YES | reject |
| Positioning Measurement Periodicity | C-ifReportCharacteristicsPeriodic |  | ENUMERATED (120ms, 240ms, 480ms, 640ms, 1024ms, 2048ms, 5120ms, 10240ms, 1min, 6min, 12min, 30min, 60min, …, 20480ms, 40960ms) |  | YES | reject |
| **Positioning Measurement Quantities** |  | *1* |  |  | YES | reject |
| **> Positioning Measurement Quantities Item** |  | *1..<maxnoofPosMeas>* |  |  | EACH |  |
| >> Positioning Measurement Type | M |  | ENUMERATED (gNB RX-TX, UL-SRS-RSRP, UL AoA, UL RTOA, …)  |  |  | - |
| >>Timing Reporting Granularity Factor | O |  | INTEGER (0..5) | TS 38.133 [38] |  |  |
| SFN Initialisation Time | O |  | 9.3.1.183 | 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 |  | 9.3.1.192 |  | 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 |

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

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

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

#### 9.2.12.10 TRP INFORMATION REQUEST

This message is sent by a gNB-CU to request information for TRPs hosted by a gNB-DU.

Direction: gNB-CU → gNB-DU.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| Transaction ID | M |  | 9.3.1.23 |  | YES | reject |
| **TRP list** |  |  *0..1* |  |  | EACH | ignore |
| **>TRP list Item** |  | 1..<maxnoofTRPs> |  |  |  | - |
| >>TRP ID | M |  | 9.3.1.197 |  |  |  |
| **TRP Information Type List** |  | *1* |  |  | YES | reject |
| **>TRP Information Type Item** |  | *1 .. <maxnoofTRPInfoTypes>* |  |  | 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 |
| maxnoofTRPInfoTypes | Maximum no of TRP information types that can be requested and reported with one message. Value is 64. |
| maxnoofTRPs | Maximum no. of TRPs in a NG-RAN node. Value is 65535. |

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#### 9.2.12.20 E-CID MEASUREMENT INITIATION REQUEST

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

Direction: gNB-CU → gNB-DU.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| gNB-CU UE F1AP ID | M |  | 9.3.1.4 |  | YES | reject |
| gNB-DU UE F1AP ID | M |  | 9.3.1.5 |  | YES | reject |
| LMF UE Measurement ID | M |  | INTEGER (1.. 256, …) |  | YES | reject |
| RAN UE Measurement ID | M |  | INTEGER (1.. 256, …) |  | YES | reject |
| E-CID Report Characteristics | M |  | ENUMERATED (OnDemand, Periodic, …) |  | YES | reject |
| E-CID Measurement Periodicity | C-ifReportCharacteristicsPeriodic |  | ENUMERATED (120ms, 240ms, 480ms, 640ms, 1024ms, 2048ms, 5120ms, 10240ms, 1min, 6min, 12min, 30min, 60min, …, 20480ms, 40960ms) |  | YES | reject |
| **E-CID Measurement Quantities** |  | *1 .. <maxnoofMeasE-CID>* |  |  | EACH | reject |
| >E-CID Measurement Quantities Item | M |  | ENUMERATED (Cell Portion, NR Angle of Arrival, …) |  | YES | reject |

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

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

#### 9.2.12.21 E-CID MEASUREMENT INITIATION RESPONSE

This message is sent by gNB-DU to indicate that the requested E-CID measurement is successfully initiated.

Direction: gNB-DU → gNB-CU.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| gNB-CU UE F1AP ID | M |  | 9.3.1.4 |  | YES | reject |
| gNB-DU UE F1AP ID | M |  | 9.3.1.5 |  | YES | reject |
| LMF UE Measurement ID | M |  | INTEGER (1.. 256, …) |  | YES | reject |
| RAN UE Measurement ID | M |  | INTEGER (1.. 256, …) |  | YES | reject |
| E-CID Measurement Result | O |  | 9.3.1.199 |  | YES | ignore |
| Cell Portion ID | O |  | 9.3.1.200 |  | YES | ignore |
| Criticality Diagnostics | O |  | 9.3.1.3 |  | YES | ignore |

#### 9.2.12.22 E-CID MEASUREMENT INITIATION FAILURE

This message is sent by gNB-DU to indicate that the requested E-CID measurement cannot be initiated.

Direction: gNB-DU → gNB-CU.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| gNB-CU UE F1AP ID | M |  | 9.3.1.4 |  | YES | reject |
| gNB-DU UE F1AP ID | M |  | 9.3.1.5 |  | YES | reject |
| LMF UE Measurement ID | M |  | INTEGER (1.. 256, …) |  | YES | reject |
| RAN UE Measurement ID | M |  | INTEGER (1.. 256, …) |  | YES | reject |
| Cause | M |  | 9.3.1.2 |  | YES | ignore |
| Criticality Diagnostics | O |  | 9.3.1.3 |  | YES | ignore |

#### 9.2.12.23 E-CID MEASUREMENT FAILURE INDICATION

This message is sent by gNB-DU to indicate that the previously requested E-CID measurement can no longer be reported.

Direction: gNB-DU → gNB-CU.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | ignore |
| gNB-CU UE F1AP ID | M |  | 9.3.1.4 |  | YES | reject |
| gNB-DU UE F1AP ID | M |  | 9.3.1.5 |  | YES | reject |
| LMF UE Measurement ID | M |  | INTEGER (1.. 256, …) |  | YES | reject |
| RAN UE Measurement ID | M |  | INTEGER (1.. 256, …) |  | YES | reject |
| Cause | M |  | 9.3.1.2 |  | YES | ignore |

#### 9.2.12.24 E-CID MEASUREMENT REPORT

This message is sent by gNB-DU to report the results of the requested E-CID measurement.

Direction: gNB-DU → gNB-CU.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | ignore |
| gNB-CU UE F1AP ID | M |  | 9.3.1.4 |  | YES | reject |
| gNB-DU UE F1AP ID | M |  | 9.3.1.5 |  | YES | reject |
| LMF UE Measurement ID | M |  | INTEGER (1.. 256, …) |  | YES | reject |
| RAN UE Measurement ID | M |  | INTEGER (1.. 256, …) |  | YES | reject |
| E-CID Measurement Result | M |  | 9.3.1.199 |  | YES | ignore |
| Cell Portion ID | O |  | 9.3.1.200 |  | YES | ignore |

#### 9.2.12.25 E-CID MEASUREMENT TERMINATION COMMAND

This message is sent by the gNB-CU to terminate the requested E-CID measurement.

Direction: gNB-CU → gNB-DU.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | ignore |
| gNB-CU UE F1AP ID | M |  | 9.3.1.4 |  | YES | reject |
| gNB-DU UE F1AP ID | M |  | 9.3.1.5 |  | YES | reject |
| LMF UE Measurement ID | M |  | INTEGER (1.. 256, …) |  | YES | reject |
| RAN UE Measurement ID | M |  | INTEGER (1.. 256, …) |  | YES | reject |

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

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

--

-- Positioning Measurement Request

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

PositioningMeasurementRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { { PositioningMeasurementRequestIEs} },

 ...

}

PositioningMeasurementRequestIEs F1AP-PROTOCOL-IES ::= {

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

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

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

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

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

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

 -- The above IE shall be present if the PosReportCharacteristics IE is set to “periodic” --

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

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

 { ID id-SRSConfiguration CRITICALITY ignore TYPE SRSConfiguration 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},

 ...

}

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

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

--

-- TRP Information Request

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

TRPInformationRequest ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { { TRPInformationRequestIEs} },

 ...

}

TRPInformationRequestIEs F1AP-PROTOCOL-IES ::= {

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

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

 { ID id-TRPInformationTypeListTRPReq CRITICALITY reject TYPE TRPInformationTypeListTRPReq PRESENCE mandatory },

 ...

}

TRPInformationTypeListTRPReq ::= SEQUENCE (SIZE(1.. maxnoofTRPInfoTypes)) OF ProtocolIE-SingleContainer { { TRPInformationTypeItemTRPReq } }

TRPInformationTypeItemTRPReq F1AP-PROTOCOL-IES ::= {

 { ID id-TRPInformationTypeItem CRITICALITY reject TYPE TRPInformationTypeItem PRESENCE mandatory },

 ...

}

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

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

--

-- POSITIONING DEACTIVATION PROCEDURE

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

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

--

-- Positioning Deactivation

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

PositioningDeactivation ::= SEQUENCE {

 protocolIEs ProtocolIE-Container { { PositioningDeactivationIEs} },

 ...

}

PositioningDeactivationIEs F1AP-PROTOCOL-IES ::= {

 { ID id-gNB-CU-UE-F1AP-ID CRITICALITY reject TYPE GNB-CU-UE-F1AP-ID PRESENCE mandatory }|

 { ID id-gNB-DU-UE-F1AP-ID CRITICALITY reject TYPE GNB-DU-UE-F1AP-ID PRESENCE mandatory }|

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

 ...

}

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

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

--

-- E-CID Measurement Initiation Response

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

E-CIDMeasurementInitiationResponse ::= SEQUENCE {

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

 ...

}

E-CIDMeasurementInitiationResponse-IEs F1AP-PROTOCOL-IES ::= {

 { ID id-gNB-CU-UE-F1AP-ID CRITICALITY reject TYPE GNB-CU-UE-F1AP-ID PRESENCE mandatory }|

 { ID id-gNB-DU-UE-F1AP-ID CRITICALITY reject TYPE GNB-DU-UE-F1AP-ID PRESENCE mandatory }|

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

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

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

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

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

 ...

}

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

--

-- E-CID Measurement Initiation Failure

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

E-CIDMeasurementInitiationFailure ::= SEQUENCE {

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

 ...

}

E-CIDMeasurementInitiationFailure-IEs F1AP-PROTOCOL-IES ::= {

 { ID id-gNB-CU-UE-F1AP-ID CRITICALITY reject TYPE GNB-CU-UE-F1AP-ID PRESENCE mandatory }|

 { ID id-gNB-DU-UE-F1AP-ID CRITICALITY reject TYPE GNB-DU-UE-F1AP-ID PRESENCE mandatory }|

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

 { ID id-RAN-UE-MeasurementID CRITICALITY reject TYPE RAN-UE-MeasurementID 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 PROCEDURE

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

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

--

-- E-CID Measurement Failure Indication

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

E-CIDMeasurementFailureIndication ::= SEQUENCE {

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

 ...

}

E-CIDMeasurementFailureIndication-IEs F1AP-PROTOCOL-IES ::= {

 { ID id-gNB-CU-UE-F1AP-ID CRITICALITY reject TYPE GNB-CU-UE-F1AP-ID PRESENCE mandatory }|

 { ID id-gNB-DU-UE-F1AP-ID CRITICALITY reject TYPE GNB-DU-UE-F1AP-ID PRESENCE mandatory }|

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

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

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

 ...

}

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

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-- E-CID MEASUREMENT REPORT PROCEDURE

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

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

--

-- E-CID Measurement Report

--

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

E-CIDMeasurementReport ::= SEQUENCE {

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

 ...

}

E-CIDMeasurementReport-IEs F1AP-PROTOCOL-IES ::= {

 { ID id-gNB-CU-UE-F1AP-ID CRITICALITY reject TYPE GNB-CU-UE-F1AP-ID PRESENCE mandatory }|

 { ID id-gNB-DU-UE-F1AP-ID CRITICALITY reject TYPE GNB-DU-UE-F1AP-ID PRESENCE mandatory }|

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

 { ID id-RAN-UE-MeasurementID CRITICALITY reject TYPE RAN-UE-MeasurementID 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 PROCEDURE

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

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

--

-- E-CID Measurement Termination Command

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

E-CIDMeasurementTerminationCommand ::= SEQUENCE {

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

 ...

}

E-CIDMeasurementTerminationCommand-IEs F1AP-PROTOCOL-IES ::= {

 { ID id-gNB-CU-UE-F1AP-ID CRITICALITY reject TYPE GNB-CU-UE-F1AP-ID PRESENCE mandatory }|

 { ID id-gNB-DU-UE-F1AP-ID CRITICALITY reject TYPE GNB-DU-UE-F1AP-ID PRESENCE mandatory }|

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

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

 ...

}

 ...

}

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

-- E

E-CID-MeasurementPeriodicity ::= ENUMERATED {

 ms120,

 ms240,

 ms480,

 ms640,

 ms1024,

 ms2048,

 ms5120,

 ms10240,

 min1,

 min6,

 min12,

 min30,

 min60,

 ...,

 ms20480,

 ms40960

}

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

PosMeasurementPeriodicity ::= ENUMERATED

{ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, min1, min6, min12, min30, min60, ..., ms20480, ms40960}

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