**3GPP TSG-RAN WG3 #114bis-e R3-221091**

**17-26 Jan 2022**

**Online**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.413** | **CR** | **0746** | **rev** |  | **Current version:** | **16.8.0** |  |
|  | | | | | | | | |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_blank)*** *on using this form: comprehensive instructions can be found at  <http://www.3gpp.org/Change-Requests>.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **x** |

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| ***Title:*** | Value range misalignment for Report Interval IE of MDT M1, M8 and M9 configuration | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE, CATT, China Telecom, China Unicom, Huawei, Lenovo, Motorola Mobility, Nokia, Nokia Shanghai Bell, Samsung | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_SON\_MDT-Core | | | | |  | ***Date:*** | | | 2022-1-7 |
|  |  | | | |  | |  | | |  |
| ***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 can be 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:*** | | For MDT M1:  *M1 Configuration* IE is designed for MDT M1 measurement collection and was introduced in Rel-16. The IE contains a Report Interval sub IE for M1 Periodic Reporting. The value range of the IE includes ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, min1, min6, min12, min30, min60. And in semantics description,it states that the IE refer to TS38.331.  However, in TS 38.331,the value range of ReportInterval can be found below:  ReportInterval ::= ENUMERATED {ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, ms20480, ms40960, min1,min6, min12, min30 }  There would be misalignment existing for value range in Uu and NGAP/XnAP.  For MDT M8, M9:  The current specifications of Bluetooth/WLAN measurement configuration in NGAP/XnAP and RRC might result in the situation that no namelist is configured to UE, and UE would not report any Bluetooth/WLAN measurement results. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | For M1:  Introduce a new IE named “Extended Report Interval” in the M1 configuration to add the two values (i.e. ms20480, ms40960,...) as the extension of *Report Interval* IE in *M1 Configuration* IE.  Add a note in semantics description that value min60 is not used in the specification.  Add a note in semantics description to clarify that if Extended Report Interval IE is present, the Report Interval IE is ignored.  For M8/M9:  Introduce additional description.  For WLAN Measurement Configuration IE, adding a semantics description that WLAN Measurement Configuration Name List shall be present if Bluetooth Measurement Configuration IE is set to be Setup.  For Bluetooth Measurement Configuration IE, adding a semantics description that Bluetooth Measurement Configuration Name List shall be present if WLAN measurement Configuration IE is set to be setup.  Impact Analysis:  Impact assessment towards the previous version of the specification (same release):  This CR has limited impact with the previous version of the specification.  The ASN.1 impact is backward compatible. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | MDT function can not work in the case that misalignment exists for M1 report interval value (e.g. min60 ) configured for a UE.  MDT M8 M9 cannot be enforced in the UE when NG-RAN node receiving configuration without any Bluetooth/WLAN Measurement Configuration Name.. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.3.1.171, 9.3.1.177, 9.3.1.178, 9.4.5, 9.4.7 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 38.423 CR 0742 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

*Changes Start*

#### 9.3.1.171 M1 Configuration

This IE defines the parameters for M1 measurement collection.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| M1 Reporting Trigger | M |  | ENUMERATED (periodic, A2event-triggered, A2event-triggered periodic, …) |  | – | – |
| M1 Threshold Event A2 | C-ifM1A2trigger |  |  |  | – | – |
| >CHOICE *Threshold Type* | M |  |  |  | – | – |
| >>*RSRP* |  |  |  |  |  |  |
| >>>Threshold RSRP | M |  | INTEGER (0..127) | This IE is defined in TS 38.331 [18]. | – | – |
| >>*RSRQ* |  |  |  |  |  |  |
| >>>Threshold RSRQ | M |  | INTEGER (0..127) | This IE is defined in TS 38.331 [18]. | – | – |
| *>>SINR* |  |  |  |  |  |  |
| >>>Threshold SINR | M |  | INTEGER (0..127) | This IE is defined in TS 38.331 [18]. | – | – |
| M1 Periodic Reporting | C-ifperiodicMDT |  |  |  | – | – |
| >Report Interval | M |  | ENUMERATED (ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, min1, min6, min12, min30, min60) | This IE is defined in TS 38.331 [18]. The value min60 is not available in the specification. | – | – |
| >Report Amount | M |  | ENUMERATED (1, 2, 4, 8, 16, 32, 64, infinity) | Number of reports. | – | – |
| >Extended Report Interval | O |  | ENUMERATED (ms20480, ms40960,...) | This IE is the extension of Report Interval IE. If this IE is present, the Report Interval IE is ignored. | YES | Ignore |

*Next Change*

#### 9.3.1.177 Bluetooth Measurement Configuration

This IE defines the parameters for Bluetooth measurement collection.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| Bluetooth Measurement Configuration | M |  | ENUMERATED (Setup, …) |  |
| **Bluetooth Measurement Configuration Name List** |  | *0..1* |  | This IE shall be present if the Bluetooth Measurement Configuration IE is set to Setup. |
| >**Bluetooth Measurement Configuration Name Item** |  | *1..<maxnoofBluetoothName>* |  |  |
| >>Bluetooth Measurement Configuration Name | M |  | OCTET STRING (SIZE (1..248)) |  |
| BT RSSI | O |  | ENUMERATED (true, …) | In case of Immediate MDT, it corresponds to M8 measurement as defined in TS 37.320 [41]. |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofBluetoothName | Maximum no. of Bluetooth local name used for Bluetooth measurement collection. Value is 4. |

*Next Change*

#### 9.3.1.178 WLAN Measurement Configuration

This IE defines the parameters for WLAN measurement collection.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| WLAN Measurement Configuration | M |  | ENUMERATED (Setup, …) |  |
| **WLAN Measurement Configuration Name List** |  | *0..1* |  | This IE shall be present if the Bluetooth Measurement Configuration IE is set to Setup. |
| **>WLAN Measurement Configuration Name Item** |  | *1..<maxnoofWLANName>* |  |  |
| >>WLAN Measurement Configuration Name | M |  | OCTET STRING (SIZE (1..32)) |  |
| WLAN RSSI | O |  | ENUMERATED (true, …) | In case of Immediate MDT, it corresponds to M8 as defined in TS 37.320 [41]. |
| WLAN RTT | O |  | ENUMERATED (true, …) | In case of Immediate MDT, it corresponds to M9 as defined in TS 37.320 [41]. |

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| Range bound | Explanation |
| maxnoofWLANName | Maximum no. of WLAN SSID used for WLAN measurement collection. Value is 4. |

*Next Change*

### 9.4.5 Information Element Definitions

-- ASN1START

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

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-- Information Element Definitions

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

NGAP-IEs {

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

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

id-AdditionalDLForwardingUPTNLInformation,

id-AdditionalULForwardingUPTNLInformation,

------unchanged part omitted--------

id-DirectForwardingPathAvailability,

id-DL-NGU-UP-TNLInformation,

id-EndpointIPAddressAndPort,

id-ExtendedPacketDelayBudget,

id-ExtendedRATRestrictionInformation,

id-ExtendedReportIntervalMDT,

id-ExtendedSliceSupportList,

id-ExtendedTAISliceSupportList,

id-ExtendedUEIdentityIndexValue,

id-GlobalCable-ID,

id-GlobalRANNodeID,

id-GlobalTNGF-ID,

id-GlobalTWIF-ID,

id-GlobalW-AGF-ID,

------unchanged part omitted--------

M1PeriodicReporting ::= SEQUENCE {

reportInterval ReportIntervalMDT,

reportAmount ReportAmountMDT,

iE-Extensions ProtocolExtensionContainer { { M1PeriodicReporting-ExtIEs} } OPTIONAL,

...

}

M1PeriodicReporting-ExtIEs NGAP-PROTOCOL-EXTENSION ::= {

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

...

}

------unchanged part omitted--------

ReportIntervalMDT ::= ENUMERATED {

ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, min1, min6, min12, min30, min60

}

ExtendedReportIntervalMDT ::= ENUMERATED {

ms20480, ms40960,...

}

------unchanged part omitted--------

*Next Change*

### 9.4.7 Constant Definitions

-- ASN1START

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

--

-- Constant definitions

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

NGAP-Constants {

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

ngran-Access (22) modules (3) ngap (1) version1 (1) ngap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules.

--

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

IMPORTS

ProcedureCode,

ProtocolIE-ID

FROM NGAP-CommonDataTypes;

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

--

-- Elementary Procedures

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

------unchanged part omitted-------

id-Extended-AMFName ProtocolIE-ID ::= 274

id-GlobalCable-ID ProtocolIE-ID ::= 275

id-QosMonitoringReportingFrequency ProtocolIE-ID ::= 276

id-QosFlowParametersList ProtocolIE-ID ::= 277

id-QosFlowFeedbackList ProtocolIE-ID ::= 278

id-BurstArrivalTimeDownlink ProtocolIE-ID ::= 279

id-ExtendedUEIdentityIndexValue ProtocolIE-ID ::= 280

id-PduSessionExpectedUEActivityBehaviour ProtocolIE-ID ::= 281

id-MicoAllPLMN ProtocolIE-ID ::= 282

id-QosFlowFailedToSetupList ProtocolIE-ID ::= 283

id-ExtendedReportIntervalMDT ProtocolIE-ID ::= xxx

END

-- ASN1STOP

*End of Change*