**3GPP TSG-RAN3 Meeting #108-e R3-204119**

**1 June – 12 June 2020, Online**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **25.413** | **CR** | **1326** | **rev** | **3** | **Current version:** | **16.0.0** |  |
|  | | | | | | | | |
| *For* [***HELP***](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:*** | CR TS 25.413 on QoE measurement collection support for RANAP | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | RAN3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI16 | | | | |  | ***Date:*** | | | 2020-06-04 |
|  |  | | | |  | |  | | |  |
| ***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-12 (Release 12) Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Support attributes for QoE measurements and align to TS 28.405 as per SA5 LS S5-202305 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Introduction of attributes for QoE measurement purpose: “QMC ID” to identify the QoE measurement collection job, “Recording Session Indication” to identify the QoE recording session, “WithinArea” to propagate QoE measurement collection at handover. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Lack of support for QoE measurements and misalignment between Stage 3 specification and Stage 2 specification. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 3.3, 9.2.1.30, 9.2.1.129, 9.3.4, 9.3.6 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **x** |  | Other core specifications | | | |  | | |
| ***affected:*** | |  | **x** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev. 1 – Submitted at TSG W3 Meeting #106  Rev. 2 – Submitted at TSG W3 Meeting #108-e in response to LS S5-202305 and LS S5-202304. Title changed from “On QoE measurement collection” to “CR TS 25.413 on QoE measurement collection support for RANAP”. Rebased on 25.413 v16.0.0  Rev. 3 – based on RAN3#108-e discussions | | | | | | | | |

*Start of the first change*

# 2 References

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 23.930 (version.4.0.0, 2001-04): "Iu Principles".

[2] 3GPP TS 25.410: "UTRAN Iu Interface: General Aspects and Principles".

[3] 3GPP TS 25.401: "UTRAN Overall Description".

[4] 3GPP TR 25.931: "UTRAN Functions, Examples on Signalling Procedures".

[5] 3GPP TS 25.412: "UTRAN Iu interface signalling transport".

[6] 3GPP TS 25.415: "UTRAN Iu interface user plane protocols".

[7] 3GPP TS 23.107: "Quality of Service (QoS) concept and architecture".

[8] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core network protocols; Stage 3".

[9] 3GPP TS 25.414: "UTRAN Iu interface data transport and transport signalling".

[10] 3GPP TS 25.331: "Radio Resource Control (RRC) protocol specification".

[11] 3GPP TS 48.008: "Mobile Switching Centre – Base Station System (MSC - BSS) interface; Layer 3 specification".

[12] Void

[13] ITU-T Recommendation X.691 (07/2002): "Information technology - ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)".

[14] ITU-T Recommendation X.680 (07/2002): "Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation".

[15] ITU-T Recommendation X.681 (07/2002): "Information technology - Abstract Syntax Notation One (ASN.1): Information object specification".

[16] 3GPP TS 23.110: "UMTS Access Stratum, Services and Functions".

[17] 3GPP TS 25.323: "Packet Data Convergence Protocol (PDCP) specification".

[18] 3GPP TR 25.921 (version.7.0.0): "Guidelines and principles for protocol description and error handling".

[19] 3GPP TS 23.003: "Numbering, addressing and identification".

[20] 3GPP TS 23.032: "Universal Geographical Area Description (GAD)".

[21] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".

[22] 3GPP TS 24.080: "Mobile radio Layer 3 supplementary services specification; Formats and coding".

[23] 3GPP TS 29.108: "Application of the Radio Access Network Application Part (RANAP) on the E‑interface".

[24] 3GPP TS 29.002: "Mobile Application Part (MAP) specification".

[25] GSM TS 12.20: "Base Station System (BSS) management information".

[26] 3GPP TS 23.236: "Intra-domain connection of Radio Access Network (RAN) nodes to multiple Core Network (CN) nodes".

[27] 3GPP TS 43.051: "3rd Generation Partnership Project; Technical Specification Group GSM/EDGE Radio Access Network; Overall description - Stage 2".

[28] Void.

[29] 3GPP TS 43.059: "Functional stage 2 description of Location Services (LCS) in GERAN".

[30] 3GPP TS 22.071: "Location Services (LCS); Service description - Stage 1".

[31] 3GPP TR 25.994 (version.5.0.0): "Measures employed by the UMTS Radio Access Network (UTRAN) to overcome early User Equipment (UE) implementation faults".

[32] 3GPP TR 25.995 (version.5.0.0): "Measures employed by the UMTS Radio Access Network (UTRAN) to cater for legacy User Equipment (UE) which conforms to superseded versions of the RAN interface specification".

[33] 3GPP TS 23.195 (version.5.4.0): "Provision of UE Specific Behaviour Information to Network Entities".

[34] 3GPP TS 49.031: "Location Services (LCS) – Base Station System Application Part LCS Extension – (BSSAP-LE)".

[35] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[36] 3GPP TS 48.018: "General Packet Radio Service (GPRS); BSS GPRS Protocol (BSSGP)".

[37] 3GPP TS 32.421: "Subscriber and equipment trace: Trace concepts and requirements".

[38] 3GPP TS 32.422: "Subscriber and equipment trace: Trace control and Configuration Management".

[39] 3GPP TS 23.251: "Network sharing - Architecture and functional description".

[40] 3GPP TS 22.146: "Multimedia Broadcast/Multicast Service; Stage 1".

[41] 3GPP TS 23.246: "Multimedia Broadcast Multicast Service; Architecture and Functional Description".

[42] 3GPP TS 25.346: "Introduction of the Multimedia Broadcast Multicast Service (MBMS) in the Radio Access Network (RAN); Stage 2".

[43] 3GPP TS 23.172: "Technical realization of Circuit Switched (CS) multimedia service UDI/RDI fallback and service modification; Stage 2".

[44] 3GPP TS 29.061 "Interworking between the Public Land Mobile Network (PLMN) supporting packet based services and Packet Data Networks (PDN)".

[45] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control Protocol".

[46] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".

[47] 3GPP TS 43.055: "3rd Generation Partnership Project; Technical Specification Group GSM/EDGE Radio Access Network; Dual Transfer Mode (DTM) - Stage 2".

[48] 3GPP TS 23.401: "General Packet Radio Service (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access".

[49] 3GPP TS 36.413: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 Application Protocol (S1AP)".

[50] 3GPP TS 25.104: "Base Station (BS) radio transmission and reception(FDD)".

[51] 3GPP TS 25.446: "MBMS Synchronisation Protocol(SYNC)".

[52] 3GPP TS 36.300: "Evolved Universal Terrestrial Radio Access (E-UTRA), Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Overall description; stage 2".

[53] 3GPP TS 23.007: "Restoration procedures"

[54] 3GPP TS 23.216: "Single Radio Voice Call Continuity (SRVCC); Stage 2"

[55] 3GPP TS 25.467: "UTRAN architecture for 3G Home Node B (HNB) - Stage 2"

[56] 3GPP TS 22.220: "Service requirements for Home Node Bs and Home eNode Bs".

[57] 3GPP TS 29.060: "General Packet Radio Service (GPRS); GPRS Tunnelling Protocol (GTP) across the Gn and Gp Interface".

[58] 3GPP TS 36.101: "Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) radio transmission and reception".

[59] 3GPP TS 29.281: "General Packet Radio Service (GPRS); Tunnelling Protocol User Plane (GTPv1-U)".

[60] 3GPP TS 33.102: "3G Security; Security architecture".

[61] 3GPP TS 32.240: "Charging management; Charging architecture and principles".

[62] 3GPP TS 52.008: "Telecommunication management; GSM subscriber and equipment trace".

[63] 3GPP TS 33.401: "3GPP System Architecture Evolution (SAE); Security architecture".

[64] 3GPP TS 37.320: "Universal Terrestrial Radio Access (UTRA) and Evolved Universal Terrestrial Radio Access (E-UTRA); Radio measurement collection for Minimization of Drive Tests (MDT); Overall description; Stage 2".

[65] 3GPP TS 23.139: "3GPP system – fixed broadband access network interworking".

[66] BDS-SIS-ICD-2.0: "BeiDou Navigation Satellite System Signal In Space Interface Control Document Open Service Signal (Version 2.0)", December 2013.

[67] 3GPP TS 23.272: "Circuit Switched (CS) fallback in Evolved Packet System (EPS); Stage 2".

[68] 3GPP TS 23.682: "Architecture enhancements to facilitate communications with packet data networks and applications".

[69] IETF RFC 4119: "A Presence-based GEOPRIV Location Object Format".

[70] IETF RFC 5139: "Revised Civic Location Format for Presence Information Data Format Location Object".

[71] IETF RFC 6848: "Specifying Civic Address Extensions in the Presence Information Data Format Location Object (PIDF-LO)".

[72] 3GPP TS 25.300: "Universal Terrestrial Radio Access Network (UTRAN); General description; Stage 2".

[xx] 3GPP TS 28.405: " Quality of Experience (QoE) measurement collection; Control and configuration".

*Next change*

## 3.3 Abbreviations

Applicable abbreviations can be found in TR 21.905 [35]. For the purposes of the present document, the following abbreviations apply:

AAL2 ATM Adaptation Layer type 2

ALCAP Access Link Control Application Part

APN Access Point Name

AS Access Stratum

ASN.1 Abstract Syntax Notation One

ATM Asynchronous Transfer Mode

BDS BeiDou Navigation Satellite System

BBF Broadband Forum

BSC Base Station Controller

CC Call Control

CN Core Network

CRNC Controlling RNC

CS Circuit Switched

CSG Closed Subscriber Group

DCH Dedicated Channel

DCN Dedicated Core Network

DL Downlink

DRNC Drift RNC

DRNS Drift RNS

DSCH Downlink Shared Channel

eNB E-UTRA NodeB

EP Elementary Procedure

E-UTRA Evolved UTRA

E-UTRAN Evolved UTRAN

GANSS Galileo and Additional Navigation Satellite Systems

GERAN GSM/EDGE Radio Access Network

GPRS General Packet Radio System

GSM Global System for Mobile communications

GTP GPRS Tunnelling Protocol

GWCN GateWay Core Network

HNB Home Node B

IE Information Element

IMEI International Mobile Equipment Identity

IMSI International Mobile Subscriber Identity

IPv4 Internet Protocol (version 4)

IPv6 Internet Protocol (version 6)

IRAT Inter-RAT

L-GW Local GateWay

LIPA Local IP Access

LHN Local Home Network

LHN ID Local Home Network ID

MBMS Multimedia Broadcast Multicast Service

MBS Metropolitan Beacon System

MDT Minimization of Drive Tests

MM Mobility Management

MOCN Multi Operator Core Network

MSC Mobile services Switching Center

MSISDN MS International PSTN/ISDN Number

MTSI Multimedia Telephony Service for IMS

NACC Network Assisted Cell Change

NAS Non Access Stratum

NNSF NAS Node Selection Function

NRT Non-Real Time

N-PDU Network – Protocol Data Unit

OSP:IHOSS Octet Stream Protocol: Internet-Hosted Octet Stream Service

P-TMSI Packet TMSI

PDCP Packet Data Convergence Protocol

PDP Packet Data Protocol

PDU Protocol Data Unit

PLMN Public Land Mobile Network

PPP Point-to-Point Protocol

PS Packet Switched

PSI Packet System Information

PTP Point To Point

PUESBINE Provision of UE Specific Behaviour Information to Network Entities

QMC QoE Measurement Collection

QoE Quality of Experience

QoS Quality of Service

RAB Radio Access Bearer

RANAP Radio Access Network Application Part

RAT Radio Access Technology

RIM RAN Information Management

RNC Radio Network Controller

RNS Radio Network Subsystem

RRC Radio Resource Control

rSRVCC reverse Single Radio Voice Call Continuity

RT Real Time

SAI Service Area Identifier

SAP Service Access Point

SDU Service Data Unit

SGSN Serving GPRS Support Node

S-GW Serving GateWay

SI System Information in GERAN

SIPTO Selected IP Traffic Offload

SIPTO@LN Selected IP Traffic Offload at the Local Network

SNA Shared Network Area

SNAC Shared Network Area Code

SRNC Serving RNC

SRNS Serving RNS

SRVCC Single Radio Voice Call Continuity

TEID Tunnel Endpoint Identifier

TMGI Temporary Mobile Group Identity

TMSI Temporary Mobile Subscriber Identity

UE User Equipment

UEA UMTS Encryption Algorithm

UESBI-Iu UE Specific Behaviour Information - Iu

UIA UMTS Integrity Algorithm

UL Uplink

UMTS Universal Mobile Telecommunications System

USCH Uplink Shared Channel

UTRA UMTS Terrestrial Radio Access

UTRAN UMTS Terrestrial Radio Access Network

*Next change*

#### 9.2.1.30 Target RNC to Source RNC Transparent Container

The *Target RNC to Source RNC Transparent Container* IE is an information element that is produced by the target RNC and is transmitted to the source RNC. In inter-system handovers to UTRAN, the IE is transmitted from the target RNC to the external relocation source.

This IE is transparent to CN.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| RRC Container | M |  | OCTET STRING |  |  |  |
| d-RNTI | O |  | INTEGER (0..1048575) | May be included to allow the triggering of the Relocation Detect procedure from the Iur Interface. |  |  |
| UE Application Layer Measurement Support Indication | O |  | BITSTRING  (SIZE(8)) | Each bit in the bitmap indicates an UE Application layer measurement.  Bit 0 = QoE for streaming service  Bit 1 = QoE for MTSI  Value ‘1’ indicates “Supported” and value ‘0’ indicates “not Supported”.  Unused bits are reserved for future use. | YES | Ignore |
| WithinArea | O |  | ENUMERATED (true, false) | This IE indicates if the target is within the QoE measurement scope. | YES | Ignore |

*Next change*

#### 9.2.1.129 UE Application layer measurement configuration for relocation

The purpose of the *UE Application layer measurement configuration for relocation* IE is to provide configuration information for the QoE function during relocation procedure.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Area scope for UE application layer measurement configuration | M |  | Area scope for UE application layer measurement configuration 9.2.1.128 |  | YES | ignore |
| Trace Reference | M |  | 9.2.1.8 |  | YES | ignore |
| Trace Propagation Parameters | O |  | 9.2.1.68 | Optional for UTRAN. Not applicable to GERAN Iu Mode. | YES | ignore |
|  |  |  |  |  |  |  |
| Service Type | M |  | ENUMERATED  (QMC for streaming service, QMC for MSTI service, ...) | This IE indicates the service type of UE application layer measurements. | Yes | Ignore |
| QMC ID | M |  | OCTET STRING (SIZE(3)) | This IE is used to specify the QoE reference defined as: MCC+MNC+QMC ID  (ref. TS 28.405 [x]) | YES | ignore |
| Recording Session Indication | M |  | ENUMERATED (on, off, ...) | This IE indicates if the recording session for the purpose of QoE measurement is ongoing. | YES | ignore |
| **QoE Collection Entity Address List** |  | *1* |  |  | EACH | ignore |
| **>QoE Collection Entity Address List Item IEs** |  | *1 .. <maxnoofPLMNforQMC>* |  |  | YES | ignore |
| >>PLMN Identity | M |  | 9.2.3.8 |  | - |  |
| >>QoE Collection Entity IP Adsdress | M |  | BIT STRING (1..160, ...) | Indicates the IP address to which the QMC records shall be transferred. For details on the Transport Layer Address, see TS 36.424 [8], TS 36.414 [19] | - |  |

*Start of ASN.1 changes*

### 9.3.4 Information Element Definitions

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

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-- Information Element Definitions

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

RANAP-IEs {

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

umts-Access (20) modules (3) ranap (0) version1 (1) ranap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

maxNrOfCSGs,

maxNrOfErrors,

maxNrOfPDPDirections,

maxNrOfPoints,

maxNrOfRABs,

maxNrOfSRBs,

maxNrOfSeparateTrafficDirections,

maxRAB-Subflows,

maxRAB-SubflowCombination,

maxNrOfLevels,

maxNrOfAltValues,

maxNrOfSNAs,

maxNrOfLAs,

maxNrOfPLMNsSN,

maxSet,

maxNrOfHSDSCHMACdFlows-1,

maxNrOfUEsToBeTraced,

maxNrOfInterfaces,

maxnoofMulticastServicesPerRNC,

maxMBMSSA,

maxMBMSRA,

maxnoofMulticastServicesPerUE,

maxNrOfEDCHMACdFlows-1,

maxGANSSSet,

maxNrOfEUTRAFreqs,

maxNrOfCellIds,

maxNrOfRAIs,

maxNrOfLAIs,

maxNrOfVol,

maxSizeOfIMSInfo,

maxnoofMDTPLMNs,

maxAddPosSet,

maxnoofPLMNs,

id-CN-DomainIndicator,

id-MessageStructure,

id-SRB-TrCH-Mapping,

id-TypeOfError,

id-hS-DSCH-MAC-d-Flow-ID,

id-SignallingIndication,

id-CellLoadInformationGroup,

id-TraceRecordingSessionInformation,

id-MBMSLinkingInformation,

id-AlternativeRABConfiguration,

id-AlternativeRABConfigurationRequest,

id-E-DCH-MAC-d-Flow-ID,

id-RAC,

id-Alt-RAB-Parameter-ExtendedGuaranteedBitrateInf,

id-Alt-RAB-Parameter-ExtendedMaxBitrateInf,

id-Ass-RAB-Parameter-ExtendedGuaranteedBitrateList,

id-Ass-RAB-Parameter-ExtendedMaxBitrateList,

id-RAB-Parameter-ExtendedGuaranteedBitrateList,

id-RAB-Parameter-ExtendedMaxBitrateList,

id-Requested-RAB-Parameter-ExtendedMaxBitrateList,

id-Requested-RAB-Parameter-ExtendedGuaranteedBitrateList,

id-LAofIdleModeUEs,

id-newLAListofIdleModeUEs,

id-LAListwithNoIdleModeUEsAnyMore,

id-ExtendedRNC-ID,

id-GANSS-PositioningDataSet,

id-d-RNTI-for-NoIuCSUP,

id-UE-History-Information,

id-UeApplicationLayerMeasurementSupportIndication,

id-SubscriberProfileIDforRFP,

id-Alt-RAB-Parameter-SupportedGuaranteedBitrateInf,

id-Alt-RAB-Parameter-SupportedMaxBitrateInf,

id-Ass-RAB-Parameter-SupportedGuaranteedBitrateList,

id-Ass-RAB-Parameter-SupportedMaxBitrateList,

id-RAB-Parameter-SupportedGuaranteedBitrateList,

id-RAB-Parameter-SupportedMaxBitrateList,

id-Requested-RAB-Parameter-SupportedMaxBitrateList,

id-Requested-RAB-Parameter-SupportedGuaranteedBitrateList,

id-PSRABtobeReplaced,

id-SRVCC-Information,

id-CSG-Id,

id-CSFB-Information,

id-IRAT-Measurement-Configuration,

id-Management-Based-MDT-Allowed,

id-Time-UE-StayedInCell-EnhancedGranularity,

id-HO-Cause,

id-TraceRecordingSessionReference,

id-IMSI,

id-Management-Based-MDT-PLMN-List,

id-SignallingBasedMDTPLMNList,

id-M4Report,

id-M5Report,

id-M6Report,

id-M7Report,

id-TimingDifferenceULDL,

id-Trace-Collection-Entity-IP-Addess,

id-Serving-Cell-Identifier,

id-EARFCN-Extended,

id-LastE-UTRANPLMNIdentity,

id-RSRQ-Type,

id-RSRQ-Extension,

id-Additional-PositioningDataSet,

id-SRVCCSource,

id-WithinArea,

id-QMCID,

id-RecordingSessionIndication,

id-QoE-Collection-Entity-Address-List,

id-QoE-Collection-Entity-Address-List-Item,

id-QoECollectionEntityIPAddress

FROM RANAP-Constants

*Next change*

-- Q

QMC-ID ::= OCTET STRING (SIZE (3))

QoE-Collection-Entity-Address-List ::= SEQUENCE (SIZE(1..maxnoofPLMNforQMC)) OF QoE-Collection-Entity-Address-List-Item

QoE-Collection-Entity-Address-List-Item ::= SEQUENCE{

pLMN-Identity PLMN-Identity,

qoECollectionEntityIPAddress QoECollectionEntityIPAddress,

iE-Extensions ProtocolExtensionContainer { { QoE-Collection-Entity-Address-List-Item-ExtIEs} } OPTIONAL

}

QoE-Collection-Entity-Address-List-Item-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

...

}

QoECollectionEntityIPAddress ::= BIT STRING (SIZE(1..160, ...))

*Next change*

-- R

RecordingSessionIndication ::= ENUMERATED {

on,

off,

...

}

*Next change*

-- T

TargetRNC-ToSourceRNC-TransparentContainer ::= SEQUENCE {

rRC-Container RRC-Container,

d-RNTI D-RNTI OPTIONAL

-- May be included to allow the triggering of the Relocation Detect procedure from the Iur Interface --,

iE-Extensions ProtocolExtensionContainer { {TargetRNC-ToSourceRNC-TransparentContainer-ExtIEs} } OPTIONAL,

...

}

TargetRNC-ToSourceRNC-TransparentContainer-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {

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

{ ID id-WithinArea CRITICALITY ignore EXTENSION WithinArea PRESENCE mandatory},

...

}

*Next change*

-- U

UE-Application-Layer-Measurement-Configuration ::= SEQUENCE {

applicationLayerContainerForMeasurementConfiguration OCTET STRING ( SIZE (1..1000)),

areaScopeForUEApplicationLayerMeasurementConfiguration AreaScopeForUEApplicationLayerMeasurementConfiguration,

...,

serviceType ServiceType

}

UE-Application-Layer-Measurement-Configuration-For-Relocation ::= SEQUENCE {

areaScopeForUEApplicationLayerMeasurementConfiguration AreaScopeForUEApplicationLayerMeasurementConfiguration,

traceReference TraceReference,

tracePropagationParameters TracePropagationParameters OPTIONAL,

traceCollectionEntityIPAddress TransportLayerAddress OPTIONAL,

...,

serviceType ServiceType,

iE-Extensions ProtocolExtensionContainer { {UE-Application-Layer-Measurement-Configuration-For-Relocation-ExtIEs} } OPTIONAL

}

ServiceType ::= ENUMERATED{

qMC-for-streaming-service,

qMC-for-MSTI-service,

...

}

UE-Application-Layer-Measurement-Configuration-For-Relocation-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {

{ID id-QMCID CRITICALITY ignore EXTENSION QMC-ID PRESENCE mandatory}|

{ID id-RecordingSessionIndication CRITICALITY ignore EXTENSION RecordingSessionIndication PRESENCE mandatory}|

{ID id-QoE-Collection-Entity-Address-List CRITICALITY ignore EXTENSION QoE-Collection-Entity-Address-List PRESENCE mandatory},

...

}

*Next change*

-- W

WithinArea ::= ENUMERATED {

true,

false

}

*Next change*

### 9.3.6 Constant Definitions

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

--

-- Constant definitions

--

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

id-Additional-PositioningDataSet INTEGER ::= 284

id-CivicAddress INTEGER ::= 285

id-SGSN-Group-Identity INTEGER ::= 286

id-P-TMSI INTEGER ::= 287

id-RANAP-Message INTEGER ::= 288

id-PowerSavingIndicator INTEGER ::= 289

id-UE-Usage-Type INTEGER ::= 290

id-DCN-ID INTEGER ::= 291

id-UE-Application-Layer-Measurement-Configuration INTEGER ::= 292

id-UE-Application-Layer-Measurement-Configuration-For-Relocation INTEGER ::= 293

id-UE-Application-Layer-Measurement-Capability INTEGER ::= 294

id-UeApplicationLayerMeasurementSupportIndication INTEGER ::= 295

id-SRVCCSource INTEGER ::= 296

id-WithinArea INTEGER ::= xx1

id-QMCID INTEGER ::= xx2

id-RecordingSessionIndication INTEGER ::= xx3

id-QoE-Collection-Entity-Address-List ProtocolIE-ID ::= xx4

id-QoE-Collection-Entity-Address-List-Item ProtocolIE-ID ::= xx5

id-QoECollectionEntityIPAddress ProtocolIE-ID ::= xx6

END

*End of ASN.1 changes*