**3GPP TSG-CT3 Meeting #122-e *C3-223199r1***

**E-meeting, , 12th - 20th May 2022**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.513** | **CR** | **0362** | **rev** | **1** | **Current version:** | **17.6.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | QoS mapping in MBS PCC deployments | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | C3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5MBS | | | | |  | ***Date:*** | | | 2022-04-26 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | TS 23.247 has introduced an enhanced 5G System architecture for Multicast and Broadcast Services. Specific QoS mapping is required when using MBS PCC for multicast-broadcast services. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | QoS mapping clause is updated to consider the MBS PCC specific impacts. A new clause is introduced to define the specific QoS mapping in this case. This is let FFS. | | | | | | | | |
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| ***Consequences if not approved:*** | | Non-support of QoS mapping in PCC deployments for multicast-broadcast services. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.1; 7.5 (new). | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* \* First change \* \* \* \*

## 7.1 Overview

Several QoS parameters mapping functions are needed during PCC interaction.

The main purpose of these mapping functions is the conversion of QoS parameters from one format to another. QoS information may be:

- parts of a session description language (SDI), e.g. SDP, MPD;

- QoS parameters; and

- access specific QoS parameters.

For PCC deployments not supporting MBS, QoS parameters mapping functions are located at the AF, PCF, SMF and UE and are described in this subclause and the rest of subclauses under clause 7.

When PCC is deployed in an MBS architecture as defined in 3GPP TS 23.247 [xx], QoS parameter mapping functions are defined as described in subclause 7.5.

One QoS mapping function is located at the AF, which maps the application specific information into the appropriate information that are carried over the Rx as specified in 3GPP TS 29.214 [18] or N5 interface as specified in 3GPP TS 29.514 [10].

For IMS, the AF may pass service information to the PCF over the Rx interface or over the N5 interface if the PCF and the P-CSCF support the "IMS\_SBI" feature. The AF derives information about the service from the SDI or from other sources. The mapping is application specific. If SDP (IETF RFC 4566 [16]) is used as SDI, the AF should apply the mapping described in subclause 7.2. If MPD (3GPP TS 26.247 [17]) is used, the AF may apply the mapping described in Annex I in 3GPP TS 26.247 [17]. Subclause 7.2 specifies the QoS parameter mapping functions at the AF. For IMS, the mapping rules in subclause 7.2 shall be used at the P-CSCF.

One QoS mapping function is located at the PCF, which maps the service information received over the Rx or N5 interface into QoS parameters (e.g. 5QI, GBR, MBR, and ARP). This mapping is access independent. Subclause 7.3 specifies the QoS mapping functions at the PCF applicable for all accesses.

The mapping functions located at SMF is specified in subclause 7.4. The mapping function in UE is implementation dependent and not specified within this specification.

The PCF notes and authorizes the service data flows described within this service information by mapping from service information to Authorized QoS parameters for transfer to the SMF via the N7 interface. The SMF will map from the Authorized QoS parameters to the access specific QoS parameters.

For 3GPP 5GS, the network sets up QoS flow(s) with a suitable QoS and indicates to the UE the QoS characteristics of those QoS flow(s). Therefore the flow of QoS related information will be unidirectional as indicated in the figure 7.1-1.



NOTE: Access Specific QoS parameters with Authorized Access-Specific QoS parameters comparison.

Figure 7.1-1: QoS mapping framework

1. The AF shall perform mapping from an SDI received within the AF session signalling to service information passed to the PCF over the Rx or N5 interface (see subclause 7.2 if SDP is used as SDI).

2. The PCF shall perform mapping from the service information received over the Rx or N5 interface to the Authorized QoS parameters that shall be passed to the SMF via the N7 interface. The mapping is performed for each service data flow. The PCF combines per direction the individual Authorized QoS parameters per flow (see subclause 7.3).

3. The SMF shall perform mapping from the Authorized QoS parameters received from PCF to the access specific QoS parameters.

\* \* \* \* Next change \* \* \* \*

## 7.5 QoS Parameters Mapping in MBS deployments

QoS parameters mapping functions are located at the NEF, MBSF, PCF and MB-SMF.

Editor’s Note: The exact list of entities with QoS parameter mapping functions and the specification of QoS parameter mapping functionality requires further stage 2 work.

\* \* \* \* End of changes \* \* \* \*