**3GPP TSG-SA WG2 Meeting #159S2-2310806**

**Xiamen, China, 11 – 15 Oct., 2023**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **23.501** | **CR** | **5014** | **rev** | **-** | **Current version:** | **18.3.0** |  |
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| *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 | **X** | Radio Access Network |  | Core Network | **X** |

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| ***Title:***  | Clarification on QoS flow mapping and service data flow |
|  |  |
| ***Source to WG:*** | Google |
| ***Source to TSG:*** | SA2 |
|  |  |
| ***Work item code:*** | XRM |  | ***Date:*** | 2023-09-29 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** | Rel-18 |
|  | *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)* |
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| ***Reason for change:*** | In Rel-18, it has been agreed that, for a service data flow, all the PDUs (at the application layer) for a PDU set are transmitted within the same QoS flow of a service data flow. The QoS flow mapping is for a specific media type within a service data flow. However the related description is absent from the specification. |
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| ***Summary of change:*** | Clarify that the AF provided PDU Set QoS Parameters and Protocol Description is for a specific media type within the service data flow.  |
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| ***Consequences if not approved:*** |  Unclear about AF’s support of the media type in a service data for QoS flow. |
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| ***Clauses affected:*** | 5.37.5 |
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|  | **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:*** |  |

**\*\*\*\*\*\*\*Start of changes\*\*\*\*\*\*\***

### 5.37.5 PDU Set based Handling

#### 5.37.5.1 General

A PDU Set is comprised of one or more PDUs carrying an application layer payload such as, e.g. a video frame or video slice. The PDU Set based QoS handling by the NG-RAN is determined by PDU Set QoS Parameters in the QoS profile of the QoS Flow (specified in clause 5.7.7) and PDU Set information provided by the PSA UPF via N3/N9 interface as described in clause 5.37.5.2. The PDU Set based QoS Handling can be applied for GBR and non-GBR QoS Flows.

In addition to the PDU related service information, the AF may provide PDU Set related assistance information for dynamic PCC control. One or more of the following PDU Set related assistance information may be provided to the NEF/PCF using the AF session with required QoS procedures in clauses 4.15.6.6 and 4.15.6.6a of TS 23.502 [3].

- PDU Set QoS Parameters as described in clause 5.7.7

- Protocol Description: Indicates transport protocol (e.g. RTP, SRTP), transport protocol header extensions (e.g. RTP Header Extension for PDU Set Marking as defined in TS 26.522 [179]), payload type and format (e.g. H.264, H.265), and format parameters (e.g. H.264 profile level and packetization mode) used by the service data flow.

AF provided PDU Set QoS Parameters and Protocol Description for a specific media type of the service data flow may be used in determining PCC Rules by the PCF as defined in clause 6.1.3.27.4 of TS 23.503 [45] and the Protocol Description may be used for identifying the PDU Set information by the PSA UPF.

When the SMF receives a PCC rule containing one or more PDU Set QoS Parameters (PSER, PSDB and PSIHI), the SMF adds these PDU Set QoS parameters to the QoS Profile of the QoS Flow as described in clause 6.2.2.4 of TS 23.503 [45]. Alternatively, the SMF may be configured to support PDU Set based QoS Handling without receiving PCC rules from a PCF.

For the downlink direction, the PSA UPF identifies PDUs that belong to PDU Sets and marks them accordingly as described in clause 5.37.5.2. If the UPF receives a PDU that does not belong to a PDU Set based on Protocol Description for PDU Set identification, then the UPF still maps it to a PDU Set and determines the PDU Set Information as described in clause 5.37.5.2.

NOTE: If the PSA UPF receives a PDU that does not belong to a PDU Set, then it is assumed that the UPF determines the PDU Set Importance value based on pre-configuration.

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