**3GPP TSG-SA5 Meeting #135e *S5-211180***

**electronic meeting, online, 25 January - 3 February 2021** Revision of S5-20xxxx

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| *CR-Form-v11.4* |
| **CHANGE REQUEST** |
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|  | **32.255** | **CR** | **0275** | **rev** | **-** | **Current version:** | **17.0.0** |  |
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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 |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:***  | Add PDU Modification and Release Message flow for URLLC Charging  |
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| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** |  5G\_URLLC |  | ***Date:*** | 2021-01-15 |
|  |  |  |  |  |
| ***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 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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
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| ***Reason for change:*** | As per TS 23.501 and TS 23.502, the 5GS to support Ultra Reliable Low Latency Communication (URLLC) is specified. The corresponding URLLC charging of PDU session modification and release should be added.  |
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| ***Summary of change:*** | Add the message flow description of PDU session modification and release for URLLC services charging. |
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| ***Consequences if not approved:*** | The message flow of PDU session modification and release for highly reliable URLLC services charging is absent. |
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| ***Clauses affected:*** | 5.2.2.17.2.X(New), 5.2.2.17.2.Y(New) |
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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 32.255 CR 0274 |
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| ***Other comments:*** | The CR 0274 provides the refered figure 5.2.2.2.2.x and figure 5.2.2.2.2.y. |

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| **First change** |

###### 5.2.2.17.2.X PDU Session Modification

The charging message flow of PDU session modification for supporting Dual Connectivity based end to end Redundant User Plane Paths, is based on Figure 5.2.2.2.2.x description with the differences identified in clause 4.3.3.2 TS 23.502 [202].

2ch-a. If redundant transmission has not been activated to the PDU session and the SMF performs redundant transmission for the QoS Flow in step 2a, the SMF sends Charging Data Request [Update] to the CHF for the PDU session, with the trigger "Redundant transmission change".

 If redundant transmission has been activated on the PDU Session, and the SMF stops redundant transmission in step 2a, the SMF sends Charging Data Request [Update] to the CHF for the PDU session, with the trigger "Redundant transmission change".

2ch-b. The CHF update the CDR for the URLLC.

2ch-c. The CHF acknowledges by sending Charging Data Response [Update] to the SMF.

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| **Next change** |

###### 5.2.2.17.2.Y PDU Session Release

The charging message flow of PDU session release for supporting Dual Connectivity based end to end Redundant User Plane Paths, is based on Figure 5.2.2.2.2.y description with the differences identified in clause 4.3.4.2 TS 23.502 [202].

If there are multiple UPFs associated with the PDU Session (e.g. due to the insertion of UL CL or Branching Point, or redundant I-UPFs if the redundant I-UPFs are used for URLLC), the Session Release Request procedure (steps 2a and 2b) is done for each UPF.

2ch-a. The SMF sends Charging Data Request [Termination] to the CHF for terminating the charging associated with PDU session in each UPF, with the trigger "End of PDU session".

2ch-b. The CHF closes the CDR for the URLLC.

2ch-c. The CHF acknowledges by sending Charging Data Response [Termination] to the SMF.

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| **End of change** |