**3GPP TSG-SA5 Meeting #133e *S5-205083r3***

**e-meeting 12th Oct-21st Oct 2020** Revision of S5-205083

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| *CR-Form-v11.4* | | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | | |
|  | | | | | | | | | |
|  | **32.255** | **CR** | **0253** | **rev** | **1** | **Current version:** | **16.6.1** |  |
|  | | | | | | | | | |
| *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 URLLC Charging Architecture | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_URLLC | | | | |  | ***Date:*** | | | 2020-10-14 |
|  |  | | | |  | |  | | |  |
| ***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-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:*** | | The redundant transmission for high reliability communication to support Ultra Reliable Low Latency Communication (URLLC) is specified in TS 23.501. The charging support for the highly reliable URLLC services is required. | | | | | | | | |
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| ***Summary of change:*** | | Add the URLLC charging architecture description. | | | | | | | | |
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| ***Consequences if not approved:*** | | The URLLC charging architecture | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.1.X(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:*** | | Implement the 4.1.x after 4.1.5 | | | | | | | | |

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| **First change** |

### 5.1.X Ultra Reliable Low Latency Communication

The 5G System Architecture references for the support of Ultra Reliable Low Latency Communication (URLLC) in 5G data connectivity charging are specified in TS 23.501 [200]:

- Dual Connectivity based End to end redundant User Plane paths: example in Figure 5.33.2.1-1 in TS 23.501 [200]:.

- Redundant transmission with two N3 tunnels between the PSA UPF and a single NG-RAN node: Figure 5.33.2.2-1 in TS 23.501 [200]:.

- Two N3 and N9 tunnels between NG-RAN and PSA UPF for redundant transmission: Figure 5.33.2.2-2 in TS 23.501 [200]:.

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| **End change** |