**3GPP TSG-RAN WG3 Meeting #114-e R3-216005**

**E-meeting, 1-11 Nov 2021**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.415** | **CR** | **0030** | **rev** | **2** | **Current version:** | 16.5.0 |  |
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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 | **X** | Core Network |  |

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| ***Title:*** | Correction for UL PDU Session Information | | | | | | | | | |
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| ***Source to WG:*** | Huawei, China Telecom | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
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| ***Work item code:*** | NR\_newRAT-Core | | | | |  | ***Date:*** | | | 2021-11-01 |
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| ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | Last RAN3 meeting agreed the CRs on PDU Type Frame to clarify that the DL PDU Session Inforamtion frame can be used for data forwarding, with the following change (the initial intention is used to clarify the NG-RAN to UPF data forwarding).   * *In the case of uplink and downlink data forwarding the DL PDU Session Information procedure shall be used to send control information elements related to the PDU Session from UPF/NG-RAN to NG-RAN/UPF.*   As specified in TS 38.300, for intra-system handover especially with direct data forwarding, the UL PDU session tunnel may be setup to transfer SDAP SDUs corresponding to QoS flows for which flow-remapping happened before the handover. Also the DL PDU session tunnel may be setup.  Even with the above change, it still remains unclear whether the DL PDU SESSION INFORMATION (PDU Type 0) or UL PDU SESSION INFORMATION (PDU Type 1) used for the UL/DL PDU session tunnel data forwarding. There are two options.   * **Option 1**: The DL PDU session informaton (PDU type 0) for UL/DL PDU session tunnel.   In this case, it should be clearly described that the UL/DL PDU session data forwarding happens from one NG-RAN node to another NG-RAN node. But with the agreed CR, the “UPF/NG-RAN to NG-RAN/UPF” is understood the data forwarding happens from the UPF to the NG-RAN, or the NG-RAN to UPF.   * **Option 2**: The UL PDU session informaton (PDU type 1) for UL/DL PDU session tunnel.   Then both the procedure and Figure 5.4.2.1-1 should be corrected.  Option 1 is proposed in this CR. | | | | | | | | |
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| ***Summary of change:*** | | Clairied that the DL PDU session informaton (PDU type 0) is used for UL/DL PDU session tunnel direct data forwarding in case of intra-system handover.    Impact Analysis:  Impact assessment towards the previous version of the specification (same release):  This CR has isolated impact with the previous version of the specification (same release).  The impact can be considered isolated because the change only affects the data forwarding function. | | | | | | | | |
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| ***Consequences if not approved:*** | | It remains unclear whether the PDU type 0 or type 1 used for the UL/DL PDU session tunnel between NG-RAN nodes. | | | | | | | | |
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| ***Clauses affected:*** | | 5.4.1.1 | | | | | | | | |
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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:*** | |  | | | | | | | | |
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| ***This CR's revision history:*** | | Rev0: R3-214025  Rev1: R3-215165  Resubmit to RAN3-114-e meeting against latest specification.  Rev2: R3-216005  Unchange the figure 5.4.1.1-1  Update the procedure texts.  Update the cover page,e.g. the category, the reason for change. | | | | | | | | |

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| **Change Begins** |

**<Unchanged Text Omitted>**

#### 5.4.1.1 Successful operation

The purpose of the Transfer of DL PDU Session Information procedure is to send control information elements related to the PDU Session from UPF to NG-RAN.

In the case of uplink and downlink data forwarding the DL PDU Session Information procedure shall be used to send control information elements related to the PDU Session from NG-RAN to UPF, or from UPF to NG-RAN, or between NG-RAN nodes.

A PDU Session user plane instance making use of the Transfer of DL PDU Session Information procedure is associated to a single PDU Session. The Transfer of DL PDU Session Information procedure may be invoked whenever packets for that particular PDU Session need to be transferred across the related interface instance.

The DL PDU SESSION INFORMATION frame includes a QoS Flow Identifier (QFI) field associated with the transferred packet. The NG-RAN shall use the received QFI to determine the QoS flow and QoS profile which are associated with the received packet.

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The DL PDU SESSION INFORMATION frame shall include the Reflective QoS Indicator (RQI) field to indicate that user plane Reflective QoS shall be activated or not. The NG-RAN shall, if RQA has been configured for the involved QoS flow, take the RQI into account as specified in TS 37.324 [4].

The DL PDU SESSION INFORMATION frame may also include a Paging Policy Indicator (PPI) field associated with the transferred packet. The NG-RAN shall use the received PPI to determine the paging policy differentiation which is associated with the received packet as described in [5].

The DL PDU SESSION INFORMATION frame may also include a QoS Monitoring Packet (QMP) field and a DL sending time stamp field. The NG-RAN shall, if QoS monitoring has been configured for the included QFI field, perform delay measurement and QoS monitoring, as specified in TS 23.501 [5].

The DL PDU SESSION INFORMATION frame may also include a DL QFI Sequence Number field associated with the transferred packet. The NG-RAN shall, if the QoS flow has been configured eligible for redundant transport bearer in TS 38.413 [6], use the received DL QFI Sequence Number field to determine and eliminate duplicated packets for a given QoS flow as specified in TS 23.501 [5].

When needed, the NG-RAN shall propagate the DL PDU Session Information to a peer NG-RAN.



Figure 5.4.1.1-1: Successful Transfer of DL PDU Session Information

**<Unchanged Text Omitted>**

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| **Change Ends** |