**3GPP TSG-RAN3 Meeting #108-e *R3-204076***

**E-Meeting, 01 - 11 June 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.470** | **CR** | **0067** | **rev** | **1** | **Current version:** | **16.1.0** |  |
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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:*** | PDCP duplication with more than 2 entities for F1 stage 2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | RAN3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_IIOT-Core | | | | |  | ***Date:*** | | | 2020-5-22 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Currently up to four GTP-U tunnels can be supported for PDCP duplication with more than two RLC enitites. The stage 2 specification should be updated accordingly. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | For PDCP duplication with more than two entities, update one data radio bearer should be configured with at least two GTP-U tunnels between gNB-CU and a gNB-DU. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | PDCP duplication with more than two entities is not reflected in stage 2. | | | | | | | | |
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| ***Clauses affected:*** | | 5.2.3 | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev 1: R3-204076  update based on the email summary | | | | | | | | |

**---------------------------------------------------------- Change Begin of 38.470------------------------------------------------------**

### 5.2.3 F1 UE context management function

The F1 UE context management function supports the establishment and modification of the necessary overall UE context.

The establishment of the F1 UE context is initiated by the gNB-CU and accepted or rejected by the gNB-DU based on admission control criteria (e.g., resource not available).

The modification of the F1 UE context can be initiated by either gNB-CU or gNB-DU. The receiving node can accept or reject the modification. The F1 UE context management function also supports the release of the context previously established in the gNB-DU. The release of the context is triggered by the gNB-CU either directly or following a request received from the gNB-DU. The gNB-CU request the gNB-DU to release the UE Context when the UE enters RRC\_IDLE or RRC\_INACTIVE.

This function can be also used to manage DRBs and SRBs, i.e., establishing, modifying and releasing DRB and SRB resources. The establishment and modification of DRB resources are triggered by the gNB-CU and accepted/rejected by the gNB-DU based on resource reservation information and QoS information to be provided to the gNB-DU. For each DRB to be setup or modified, the S-NSSAI may be provided by gNB-CU to the gNB-DU in the UE Context Setup procedure and the UE Context Modification procedure.

The mapping between QoS flows and radio bearers is performed by gNB-CU and the granularity of bearer related management over F1 is radio bearer level. For NG-RAN, the gNB-CU decides an aggregated DRB QoS profile for each radio bearer based on received QoS flow profile, and provides both aggregated DRB QoS profile and QoS flow profile to the gNB-DU, and the gNB-DU either accepts the request or rejects it with appropriate cause value. With this function, gNB-DU could also notify gNB-CU whether the QoS for already established DRBs is not fulfilled any longer or it is fulfilled again. To support packet duplication for intra-gNB-DU CA as described in TS 38.300 [8], one data radio bearer should be configured with at least two GTP-U tunnels between gNB-CU and a gNB-DU.

<Unchanged Text Omitted>

**----------------------------------------------------------End Change of 38.470-----------------------------------------------****-----------**

**3GPP TSG-RAN3 Meeting #108-e *R3-20xxxx***

**E-Meeting, 01 - 11 June 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.460** | **CR** |  | **rev** |  | **Current version:** | **16.0.0** |  |
|  | | | | | | | | |
| *For* [***HELP***](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:*** | PDCP duplication with more than 2 entities for TS 38.460 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | RAN3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_IIOT | | | | |  | ***Date:*** | | | 2020-5-22 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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-12 (Release 12) Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Currently up to four GTP-U tunnels can be supported for PDCP duplication with more than two RLC enitites. The stage 2 specification should be updated accordingly. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | For PDCP duplication with more than two entities, update one data radio bearer should be configured with up to four GTP-U tunnels between gNB-CU-UP and a gNB-DU. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | PDCP duplication with more than two entities is not reflected in stage 2. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.1.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**----------------------------------------------------------Change Begin of 38.460------------------------------------------------------**

### 5.1.2 E1 bearer context management function

The establishment of the E1 bearer context is initiated by the gNB-CU-CP and accepted or rejected by the gNB-CU-UP based on admission control criteria (e.g., resource not available).

The modification of the E1 bearer context can be initiated by either gNB-CU-CP or gNB-CU-UP. The receiving node can accept or reject the modification. The E1 bearer context management function also supports the release of the bearer context previously established in the gNB-CU-UP. The release of the bearer context is triggered by the gNB-CU-CP either directly or following a request received from the gNB-CU-UP.

This function is used to setup and modify the QoS-flow to DRB mapping configuration. The gNB-CU-CP decides flow-to-DRB mapping and provides the generated SDAP and PDCP configuration to the gNB-CU-UP. The gNB-CU-CP also decides the Reflective QoS flow to DRB mapping. For each PDU Session Resource to be setup or modified, the S-NSSAI, shall be provided in the E1 bearer context setup procedure and may be provided in the E1 bearer context modification procedure by gNB-CU-CP to the gNB-CU-UP.

This function is used for the gNB-CU-CP to send the security information to the gNB-CU-UP.

This function is used for the gNB-CU-UP to notify the event of DL data arrival detection to the gNB-CU-CP. With this function, the gNB-CU-UP requests gNB-CU-CP to trigger paging procedure over F1 or Xn to support RRC Inactive state.

This function is used for the gNB-CU-UP to notify the gNB-CU-CP that an UL packet including a QFI value in the SDAP header not configured by the *Flow Mapping Information* IE is received for the first time at the default DRB. The gNB-CU-CP can take further action if needed.

This function is used for the gNB-CU-UP to notify the event of user inactivity to the gNB-CU-CP. With this function, the gNB-CU-UP indicates that the inactivity timer associated with a bearer, a PDU session or a UE expires, or that user data is received for the bearer, the PDU session or the UE whose inactivity timer has expired. The gNB-CU-CP consolidates all the serving gNB-CU-UPs for the UE and takes further action.

This function is used for the gNB-CU-UP to report data volume to the gNB-CU-CP.

This function is used for the gNB-CU-CP to notify the suspension and resumption of bearer contexts to the gNB-CU-UP.

This function also allows to support CA based packet duplication as described in TS 38.300 [6], i.e. one data radio bearer should be configured with at least two GTP-U tunnels between gNB-CU-UP and a gNB-DU. This function also allows to support DC or DC+CA packet duplication as described in TS 38.300 [6], i.e. one data radio bearer can be configured with up to three GTP-U tunnels between gNB-CU-UP and a gNB-DU.

**----------------------------------------------------------End of Change 38.460--------------------------------------------------------**