**3GPP TSG- Meeting #**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
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|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
|  |
| *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 |  |

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| ***Title:***  |  |
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| ***Source to WG:*** |  |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | NR\_IioT-UEConTest |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** |  |  | ***Release:*** |  |
|  | *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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
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| ***Reason for change:*** | EHC testcase needs test loop mode A, which doesn’t have description of the EHC funtionality with test loop described. |
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| ***Summary of change:*** | Adding EHC description and updating figure of TLM A for NR. |
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| ***Consequences if not approved:*** | TLM A funtionality with EHC is unclear. |
|  |  |
| ***Clauses affected:*** | 5.3.4.1 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **x** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** | **x** |  |  Test specifications | TS/TR 38.523-1 CR 2854  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

------------------------------------------------- Start of changes -------------------------------------------------

------------------------------------------------- Skipped chapters -------------------------------------------------

#### 5.3.4.1 UE test loop mode A operation

Editor’s note: Functional block diagrams for UE test loop mode A for NE-DC need to be added.

UE test loop mode A provides loopback of PDCP SDUs for bi-directional data radio bearers while UE is operating in NR. The downlink PDCP SDUs received by the UE on each bi-directional data radio bearer are returned on the same radio bearer regardless of the PDCP SDU contents and of the QoS flow descriptions of the associated QoS Flow as specified in TS 24.501 [21].

Figures 5.3.4.1-1 and 5.3.4.1-2 show functional block diagrams of UE test loop function for the TMC entity and UE test loop mode A for the case when EN-DC or NGEN-DC with a MCG bearer and a SCG bearer is configured and for the case EN-DC or NGEN-DC with a MCG and a split bearer is configured.

Figures 5.3.4.1-3 shows functional block diagrams of UE test loop function for the TMC entity and UE test loop mode A for the case when standalone NR is configured. Header compression / decompression block in NR PDCP covers ROCH and EHC protocols as described in TS 38.323 [19] clause 4.2.2.

NOTE 1: The number and the order of RB LB Entities in the functional block diagrams are provided for illustration only. No specific order or numbering is precluded.



Figure 5.3.4.1-1: Model for Test Mode Control and UE Test Loop Mode A on UE side when EN-DC or NGEN-DC with MCG bearer and SCG bearer is configured



Figure 5.3.4.1-2: Model for Test Mode Control and UE Test Loop Mode A on UE side when EN-DC or NGEN-DC with MCG and split bearer configured



Figure 5.3.4.1-3: Model for Test Mode Control and UE Test Loop Mode A on UE side when standalone NR is configured

UE test loop mode A is mandatory to all 5GS UEs.

Prior to closing the UE test loop mode A, thereby requesting the UE to start looping back the received data packets, at least one 5GS test mode bi-directional data radio bearer shall have been established between SS and UE. This implies that before the procedure for establishing the bi-directional data radio bearer takes place the SS needs to activate the UE test mode as specified in subclause 5.2.2.

The 5GS UE test loop mode A operation is the same as the one described in TS 36.509 [6], subclause 5.4.3 with the exception where E-UTRA is mentioned the same applies for NR, and, the understanding that the NB-IoT mode is out of the scope of the present specification.

------------------------------------------------- Skipped chapters -------------------------------------------------

-------------------------------------------------- End of changes --------------------------------------------------