**3GPP TSG- WG3 Meeting #** ***R3-230882***

**Athens, Greece,**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
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|  |  | **CR** | **1127** | **rev** | **1** | **Current version:** |  |  |
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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 to CellGroupConfig handling for SDT |
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| ***Source to WG:*** | Google, Nokia, Nokia Shanghai Bell, CATT, NEC, Ericsson… |
| ***Source to TSG:*** | RAN3 |
|  |  |
| ***Work item code:*** | NR\_SmallData\_INACTIVE-Core |  | ***Date:*** | 2023-02-17 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
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| ***Reason for change:*** | * If the DU to CU RRC Information is received at the gNB-CU, the CellGroupConfig is mandatorily included. The CellGroupConfig is used by the gNB-CU for the RRC reconfiguration or RRC connection resume when the UE is moved to RRC\_CONNECTED. However, while the DU to CU RRC Information is either mandatory or required for the UE context procedures for SDT, the CellGroupConfig is not to be used by the UE as the UE stays in RRC\_INACTIVE. (In the RACH based SDT the UE Context Setup procedure is for exchanging packet transmission required configuration/information while in the CG based SDT the UE Context Modification procedure is for CG-SDT resource configuration query.)
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| ***Summary of change:*** | * Add descriptions in the UE context setup procedure that, for the RACH based SDT, the CellGroupConfig is ignored by the gNB-CU and the gNB-CU does not perform RRC reconfiguration or connection resume to send the UE to RRC\_CONNECTED.
* Add descriptions in the UE context modification procedure that, for the CG based SDT, the CellGroupConfig is ignored by the gNB-CU and the gNB-CU does not perform RRC reconfiguration.

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 handling of the CellGroupConfig in the DU to CU RRC Information and the related procedure text. |
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| ***Consequences if not approved:*** | It remains unclear how the CellGroupConfig is handled if it is received at the gNB-CU during SDT procedures. This could misalign with stage 2 description |
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| ***Clauses affected:*** | 8.3.1, 8.3.4 |
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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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | R0: R3-230492R1: Add co-sourcing companies;  |

-------------------------------------------First Change -------------------------------------------

8.3 UE Context Management procedures

8.3.1 UE Context Setup

8.3.1.1 General

The purpose of the UE Context Setup procedure is to establish the UE Context including, among others, SRB,DRB, BH RLC channel, Uu Relay RLC channel, PC5 Relay RLC channel, and SL DRB configuration. The procedure uses UE-associated signalling.

8.3.1.2 Successful Operation

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**Figure 8.3.1.2-1: UE Context Setup Request procedure: Successful Operation**

The gNB-CU initiates the procedure by sending UE CONTEXT SETUP REQUEST message to the gNB-DU. If the gNB-DU succeeds to establish the UE context, it replies to the gNB-CU with UE CONTEXT SETUP RESPONSE. If no UE-associated logical F1-connection exists, the UE-associated logical F1-connection shall be established as part of the procedure. The gNB-CU shall perform RRC Reconfiguration or RRC connection resume to send UE to the RRC\_CONNECTED state as described in TS 38.331 [8], The *CellGroupConfig* IE shall transparently be signaled to the UE as specified in TS 38.331 [8]. Or the gNB-CU shall perform the RACH based SDT procedure as described in TS 38.401 [4]. In the case of RACH based SDT procedure, the *CellGroupConfig* IE shall be ignored by the gNB-CU.

If the *UE-CapabilityRAT-ContainerList* IE is included in the UE CONTEXT SETUP REQUEST, the gNB-DU shall take this information into account for UE specific configurations.

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8.3.4 UE Context Modification (gNB-CU initiated)

8.3.4.1 General

The purpose of the UE Context Modification procedure is to modify the established UE Context, e.g., establishing, modifying and releasing radio resources or sidelink resources. This procedure is also used to command the gNB-DU to stop data transmission for the UE for mobility (see TS 38.401 [4]). The procedure uses UE-associated signalling.

8.3.4.2 Successful Operation

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**Figure 8.3.4.2-1: UE Context Modification procedure. Successful operation**

The UE CONTEXT MODIFICATION REQUEST message is initiated by the gNB-CU.

Upon reception of the UE CONTEXT MODIFICATION REQUEST message, the gNB-DU shall perform the modifications, and if successful reports the update in the UE CONTEXT MODIFICATION RESPONSE message.

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When the gNB-DU reports the unsuccessful establishment of a DRB or SRB or SL DRB or a BH RLC channel or a Uu Relay RLC channel or a PC5 Relay RLC channel, the cause value should be precise enough to enable the gNB-CU to know the reason for the unsuccessful establishment.

If the *Resource Coordination Transfer Container* IE is included in the UE CONTEXT MODIFICATION RESPONSE, the gNB-CU shall transparently transfer this information for the purpose of resource coordination as described in TS 36.423 [9], TS 38.423 [28].

If the *DU to CU RRC Information* IE is included in the UE CONTEXT MODIFICATION RESPONSE message , except for the CG based SDT procedure, the gNB-CU shall perform RRC Reconfiguration as described in TS 38.331 [8]. The *CellGroupConfig* IE shall transparently be signaled to the UE as specified in TS 38.331 [8]. In the case of CG based SDT procedure, the *CellGroupConfig* IE shall be ignored by the gNB-CU.

If the *UE-CapabilityRAT-ContainerList* IE is included in the UE CONTEXT SETUP MODIFICATION REQUEST, the gNB-DU shall take this information into account for UE specific configurations.

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