**3GPP TSG-RAN WG3 Meeting #113-e *R3-214412***

**E-meeting, 16-26 Aug 2021**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.413** | **CR** | **0632** | **rev** | **1** | **Current version:** | 15.12.0 |  |
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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 | **X** |

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| ***Title:*** | Deactivation of the MICO mode indication | | | | | | | | | |
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| ***Source to WG:*** | Huawei, Nokia, Nokia Shanghai-Bell, China Telecom | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_newRAT-Core | | | | |  | ***Date:*** | | | 2021-08-16 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-15 |
|  | *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:*** | | The *MICO Mode Indication* IE included in the *Core Network Assistance Information for RRC INACTIVE* IE could be signaled in many interface messages.  When checking into section 5.4.1.3 in TS 23.501, the AMF may deactivate the MICO mode and signal to the UE as follows.   * *When the UE is in CM-CONNECTED, the AMF may deactivate MICO mode by triggering Mobility Registration Update procedure through UE Configuration Update procedure as described in clause 4.2.4 of TS 23.502 [3].*   This means that the MICO Mode Indication included in the *Core Network Assistance Information for RRC INACTIVE* IE may be updated. However, as specified in the UE context modification request message, the NG-RAN just stores the received new information.   * If the *Core Network Assistance Information for RRC INACTIVE* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, store this information in the UE context and use it for the RRC\_INACTIVE state decision and RNA configuration for the UE and RAN paging if any for a UE in RRC\_INACTIVE state, as specified in TS 38.300 [8]   Then if the *MICO Mode Indication* is received initially by the NG-RAN node, but later it is not included in the UE Context modification request message, the NG-RAN may misunderstand that this MICO Mode Indication is not changed.  There are two potential options as follows.   * **Option 1**: add a new codepoint for MICO Mode Indication * **Option 2**: specify the “overwrite” operation for the Core Network Assistance Information for RRC INACTIVE in the UE context modification request procedure.   Both options could work. Option 2 is proposed in the CR. | | | | | | | | |
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| ***Summary of change:*** | | * Specify the “overwrite” operation for the Core Network Assistance Information for RRC INACTIVE in the UE context modification request procedure.     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 MICO mode function. | | | | | | | | |
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| ***Consequences if not approved:*** | | The MICO mode indication can not be deactivated towards the NG-RAN.  Not aligned with stage 2 CN specification. | | | | | | | | |
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| ***Clauses affected:*** | | 8.3.4.2 | | | | | | | | |
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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:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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| **Change Begins** |

### 8.3.4 UE Context Modification

#### 8.3.4.1 General

The purpose of the UE Context Modification procedure is to partly modify the established UE context. The procedure uses UE-associated signalling.

#### 8.3.4.2 Successful Operation



Figure 8.3.4.2-1: UE context modification: successful operation

If the *Security Key* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall store it and perform AS key re-keying according to TS 33.501 [13].

If the *UE Security Capabilities* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall store them and take them into use together with the received keys according to TS 33.501 [13].

If the *Index to RAT/Frequency Selection Priority* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, use it as defined in TS 23.501 [9].

If the *RAN Paging Priority* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node may use it to determine a priority for paging the UE in RRC\_INACTIVE state.

If the *UE Aggregate Maximum Bit Rate* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall

- replace the previously provided UE Aggregate Maximum Bit Rate by the received UE Aggregate Maximum Bit Rate in the UE context;

- use the received UE Aggregate Maximum Bit Rate for all Non-GBR QoS flows for the concerned UE as specified in TS 23.501 [9].

If the *Core Network Assistance Information for RRC INACTIVE* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node shall, if supported, replace the previously provided Core Network Assistance Information for RRC INACTIVE in the UE context and use it for e.g. the RRC\_INACTIVE state decision and RNA configuration for the UE and RAN paging if any for a UE in RRC\_INACTIVE state, as specified in TS 38.300 [8].

If the *CN Assisted RAN Parameters Tuning* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node may use it as described in TS 23.501 [9].

**<Unchanged Text Omitted>**

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| **Change Ends** |