**3GPP TSG-RAN2#120 R2-22xxxxx**

**Toulouse, France, 14th – 18th, November 2022**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
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|  | **31** | **CR** | **3736** | **rev** | **2** | **Current version:** | **17.2.0** |  |
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| *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 | **x** | Radio Access Network | **x** | Core Network |  |

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| ***Title:***  | Clarification on the detemination of NSAG with the NSAG priority |
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| ***Source to WG:*** | LG Electronics, OPPO |
| ***Source to TSG:*** | R2 |
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| ***Work item code:*** | NR\_Slice-Core |  | ***Date:*** | 2022-12-01 |
|  |  |  |  |  |
| ***Category:*** |  |  | ***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:*** | In RAN slicing session of RAN2#120, it is agreed with the Option 1 of R2-2212211 for the combination of feature priority and NSAG priority.* Opt#1: The UE NAS provides the UE AS with the associated NSAG IDs and their priorities. Then the UE AS performs RA resources selection based on feature priority and the NSAG ID which has the highest NSAG priority.

The feature priority is already provided to the MAC layer from RRC layer by the *featurePriorities* configured in the SIB1. Therefore, the only thing needed to specify in RRC spec is the NSAG ID of the highest NSAG priority.In addition, in the MAC specification, the applicability of specific NSAG(s) is determined by upper layers when the Random Access procedure is initiated.In order to detetmine which is NSAG ID is for slice-specific RACH, it is agreed that the UE checks SIB1 to determine whether the NSAG is for slice-speicifc RACH* NSAG that are used for RACH are given by SIB1 and NSAG that are used for cell reselection are given by SIB16. Capture in the CR that UE checks SIB1 for NSAGs to use for slice-specific RACH (e.g. as in Ericsson CR).

Therefore, it should be clarified in RRC spec that the NSAG with highest NSAG priority is selected and relevant NSAG information is provided to the MAC layer during the RRC connection establishment and RRC connection resume procedure.   |
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| ***Summary of change:*** | In the RRC connection establishment and RRC connection resume procedure, clarifying text is added that the NSAG which has the highest NSAG priority associated to the S-NSSAIs triggering the access is selected if the upper layers provide NSAG information and the correponding S-NSSAI(s).**Impact analysis**Impacted functionality:RAN slicingInter-operability:If the network is implemented according to the CR while the UE is not, the UE may not be able to detemine the NSAG to perform the slice-specific RACH prioritization and the slice-specific RACH partitioning.If the UE is implemented according to the CR while the network is not, no interoperability problems are foreseen. |
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| ***Consequences if not approved:*** | It is ambiguous how the UE deteremines the feature combination and NSAG for slice-specific RACH, considering the combination of feature priority and NSAG priority. |
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| ***Clauses affected:*** | 5.3.3.2, 5.3.13.2 |
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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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

START OF CHANGE

### 5.3.3 RRC connection establishment

#### 5.3.3.2 Initiation

The UE initiates the procedure when upper layers request establishment of an RRC connection while the UE is in RRC\_IDLE and it has acquired essential system information, or for sidelink communication as specified in clause 5.3.3.1a.

The UE shall ensure having valid and up to date essential system information as specified in clause 5.2.2.2 before initiating this procedure.

Upon initiation of the procedure, the UE shall:

1> if the upper layers provide an Access Category and one or more Access Identities upon requesting establishment of an RRC connection:

2> perform the unified access control procedure as specified in 5.3.14 using the Access Category and Access Identities provided by upper layers;

3> if the access attempt is barred, the procedure ends;

1> if the upper layers provide NSAG information and one or more S-NSSAI(s) triggering the access attempt (TS 23.501 [32] and TS 24.501 [23]):

2> apply the NSAG with highest NSAG priority among the NSAGs that are included in *SIB1* (i.e., either in *FeatureCombination* or in *RA-PrioritizationSliceInfo*)*,* and that are associated with the S-NSSAI(s) triggering the access attempt, in the Random Access procedure (TS 38.321 [3], clause 5.1);

NEXT CHANGE

### 5.3.13 RRC connection resume

#### 5.3.13.2 Initiation

The UE initiates the procedure when upper layers or AS (when responding to RAN paging, upon triggering RNA updates while the UE is in RRC\_INACTIVE, for NR sidelink communication/discovery/V2X sidelink communication as specified in clause 5.3.13.1a) requests the resume of a suspended RRC connection or requests the resume for initiating SDT as specified in clause 5.3.13.1b.

The UE shall ensure having valid and up to date essential system information as specified in clause 5.2.2.2 before initiating this procedure.

Upon initiation of the procedure, the UE shall:

1> if the resumption of the RRC connection is triggered by response to NG-RAN paging:

2> select '0' as the Access Category;

2> perform the unified access control procedure as specified in 5.3.14 using the selected Access Category and one or more Access Identities provided by upper layers;

3> if the access attempt is barred, the procedure ends;

1> else if the resumption of the RRC connection is triggered by upper layers:

2> if the upper layers provide an Access Category and one or more Access Identities:

3> perform the unified access control procedure as specified in 5.3.14 using the Access Category and Access Identities provided by upper layers;

4> if the access attempt is barred, the procedure ends;

2> if the upper layers provide NSAG information and one or more S-NSSAI(s) triggering the access attempt (TS 23.501 [32] and TS 24.501 [23]):

3> apply the NSAG with highest NSAG priority among the NSAGs that are included in *SIB1* (i.e., either in *FeatureCombination* or in *RA-PrioritizationSliceInfo*), and that are associated with the S-NSSAI(s) triggering the access attempt, in the Random Access procedure (TS 38.321 [3], clause 5.1);

END OF CHANGE