**3GPP TSG-CT WG1 Meeting #137-eC1-224695**

**E-Meeting, 18th – 26th August 2022**

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

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|  | | | | | | | | | | |
| ***Title:*** | NSAG for random access | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | | 2022-08-23 |
|  |  | | | |  | |  | | |  |
| ***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 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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Stage-2 CR3676(S2-2205763) clarifies the NSAG handling for Network Slice based cell reselection and random access.  In addition, the stage-2 CR3676 makes it clear that the NSAG priority information for the NSAGs shall be provided by AMF in the NSAG Information.  These requirements shall be reflected in stage 3. | | | | | | | | |
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| ***Summary of change:*** | | 1) Clarify the NSAG support for random access;  2) Remove the note about value 0 indicates no NSAG priority and add text about value 0 is reserved. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | NSAG feature remains ambiguous for random access. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 4.6.2.6, 9.11.3.87 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 23.501 CR 3676 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* First Change \* \* \* \*

#### 4.6.2.6 Provision of NSAG information to lower layers

NSAG information includes a list of NSAG IDs each of which is associated with:

a) a list of S-NSSAIs, which shall be the ones included in the configured NSSAI;

b) an NSAG area containing a list of TAIs which identify an area where the mapping between the S-NSSAI(s) in bullet a) and the NSAG ID is valid; and

c) a priority value that is associated with each NSAG ID in the NSAG information.

If NSAG information is available, the UE NAS layer shall provide the lower layers with the most recent NSAG information.

NOTE 1: Along with the NSAG information, the UE NAS layer provides to the lower layers with allowed NSSAI and requested NSSAI for 3GPP access for the purpose of NSAG-aware cell reselection.

NOTE 2: Along with the NSAG information, and the UE is in 5GMM-IDLE mode or 5GMM-CONNECTED mode with RRC inactive indication, the UE NAS layer provides the lower layers with one or more S-NSSAIs associated with the access attempt for the purpose of NSAG-aware random access.

\* \* \* Next Change \* \* \* \*

#### 9.11.3.87 NSAG information

The purpose of the NSAG information information element is to provide NSAG information to the UE.

The NSAG information information element is coded as shown in figures 9.11.3.87.1, 9.11.3.87.2, 9.11.3.87.3 and table 9.11.3.87.1.

The NSAG information information element can contain a maximum of 32 NSAG entries.

The NSAG information is a type 6 information element, with a minimum length of 10 octets.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| NSAG information IEI | | | | | | | | octet 1 |
| Length of NSAG information contents | | | | | | | | octet 2  octet 3 |
| NSAG 1 | | | | | | | | octet 4  octet m |
| NSAG 2 | | | | | | | | octet m+1\*  octet n\* |
| … | | | | | | | | octet n+1\*  octet u\* |
| NSAG x | | | | | | | | octet u+1\*  octet v\* |

Figure 9.11.3.87.1: NSAG information information element

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| Length of NSAG | | | | | | | | octet 4 |
| octet 5 |
| NSAG identifier | | | | | | | | octet 6 |
| S-NSSAI list of NSAG | | | | | | | | octet 7  octet j |
| NSAG priority | | | | | | | | octet j+1 |
| TAI list | | | | | | | | octet j+2\*  octet m\* |

Figure 9.11.3.87.2: NSAG

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| Length of S-NSSAI list of NSAG | | | | | | | | octet 7 |
| S-NSSAI value 1 | | | | | | | | octet 8  octet k |
| S-NSSAI value 2 | | | | | | | | octet k+1\*  octet s\* |
| … | | | | | | | | octet s+1\*  octet i-1\* |
| S-NSSAI value x | | | | | | | | octet i\*  octet j\* |

Figure 9.11.3.87.3: S-NSSAI list of NSAG

Table 9.11.3.87.1: NSAG information information element

|  |
| --- |
| NSAG part of the NSAG information information element (octet 4 to m)  Each entry of the NSAG information information element consists of one NSAG in the NSAG information IE. |
| NSAG identifier(octet 6)  NSAG identifier field contains an 8 bits NSAG ID value. |
| S-NSSAI list of NSAG (octet 7 to j)  S-NSSAI list of NSAG field consists of one or more S-NSSAIs in the configured NSSAI. Each NSSAI in S-NSSAI list of NSAG field is coded as the length and value part of S-NSSAI information element as specified in subclause 9.11.2.8 starting with the second octet, without the mapped HPLMN SST field and without the mapped HPLMN SD field. |
| NSAG priority (octet j+1) (see NOTE)  The NSAG priority field indicates the priority of NSAG for cell reselection, random access, or both. |
| TAI list (octet j+2 to m)  The TAI list field is coded as the length and value part of the 5GS tracking area identity list IE defined in subclause 9.11.3.9 starting with the second octet. |
| NOTE: The same priority for two or more NSAGs in the same TAI is not allowed. |

\* \* \* End of Changes \* \* \* \*