**3GPP TSG-CT WG1 Meeting #128bis-eC1-210766**

**Elbonia, 25 February – 5 March 2021**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **24.526** | **CR** | **0104** | **rev** | **2** | **Current version:** | **17.1.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network |  | Core Network |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Correct N3AN node selection due to permitted absence of "any PLMN" entry | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | BlackBerry UK Ltd. | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GProtoc17-non3GPP | | | | |  | ***Date:*** | | | 2021-02-16 |
|  |  | | | |  | |  | | |  |
| ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The CR allows inclusion of the "any PLMN" entry in the non-3GPP access node selection information to be optional. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Permit the "any PLMN" entry in the non-3GPP access node selection information to be optional. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Misalignment between stage 2 and stage 3. Stage 3 depends on abnormal procedures for handling the absence of the "any PLMN" entry while stage 2 have permitted absence of the "any PLMN" entry going forward. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.3.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **x** |  | Other core specifications | | | | TS/TR 23.501 CR 2402 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | See also TS 24.502 CR#0171 | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Simplified change as proposed by Amer.  Kept the propsosed “shall” as proposed by Ivo.  Changed category and WID  Change contains into contain | | | | | | | | |

\*\*\* First change \*\*\*

#### 5.3.3.2 N3AN node selection information

The content of N3AN node selection information contains a sequence of the N3AN node selection information entries. Each N3AN node selection information entry contains a PLMN ID and information for the PLMN ID. The content of N3AN node selection information shall contain at least an N3AN node selection information entry with information for the HPLMN.

NOTE: If N3AN node selection information does not contain an N3AN node selection information entry with information for the HPLMN, the N3AN node selection information is handled as a syntactically incorrect IE according to 3GPP TS 24.501 [11].

The content is encoded according to figure 5.3.3.2.1, figure 5.3.3.2.2 and table 5.3.3.2.1.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| N3AN node selection information entry 1 | | | | | | | | octet x+5 |
| octet y |
| N3AN node selection information entry 2 | | | | | | | | octet y+1  octet t |
| … | | | | | | | |  |
| N3AN node selection information entry n | | | | | | | | octet u  octet v |

Figure 5.3.3.2.1: Content of N3AN node selection information

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | | 5 | | 4 | 3 | 2 | 1 |  |
| Length of N3AN node selection information entry | | | | | | | | | | octet x+5 |
| MCC digit 2 | | | | | | MCC digit 1 | | | | octet x+6 |
| MNC digit 3 | | | | | | MCC digit 3 | | | | octet x+7 |
| MNC digit 2 | | | | | | MNC digit 1 | | | | octet x+8 |
| FQDN format | | | Preference | | Priority | | | | | octet x+9 |

Figure 5.3.3.2.2: N3AN node selection information entry

Table 5.3.3.2.1: N3AN node selection information

|  |  |  |
| --- | --- | --- |
| Length of N3AN node selection information entry (octet x+5) contains length of subsequent fields in the N3AN node selection information entry. | | |
| PLMN ID (octet x+6 to x+8) field shall be set to zero if it indicates "any\_PLMN". Otherwise, | | |
|  | | |
| MCC, Mobile country code (octet x+6, and bits 4 to 1 of octet x+7) | | |
| The MCC field is encoded as in ITU-T Recommendation E.212 [10], annex A. | | |
|  | | |
| MNC, Mobile network code (bits 8 to 5 of octet x+7, and octet x+8) | | |
| The encoding of this field is the responsibility of each administration but BCD coding shall be used. The MNC shall consist of 2 or 3 digits. If a network operator decides to use only two digits in the MNC, MNC digit 3 shall be encoded as "1111". | | |
|  | | |
| Priority (bits 5 to 1 of octet x+9) indicates the preference order given to N3AN nodes of a PLMN. The lower value indicates higher priority. If the PLMN is the UE's HPLMN or the PLMN ID indicates "any\_PLMN", this priority filed shall be ignored. | | |
|  | | |
| Preference (bit 6 of octet x+9) indicates which N3AN node type is preferred in this PLMN and is encoded as follows. | | |
| **6** |  | |
| 0 | N3IWF is preferred | |
| 1 | ePDG is preferred | |
|  | | |
| FQDN format (bits 8 to 7 of octet x+9) indicates format to be used when the FQDN is constructed by the UE. This field is encoded as follows. | | |
| **8** | **7** |  |
| 0 | 0 | Operator identifier based ePDG FQDN format or operator identifier based N3IWF FQDN. |
|  |  |  |
| 0 | 1 | Tracking/location area identity based ePDG FQDN format or tracking area identity based N3IWF FQDN format. |
| All other values are reserved. | | |
|  | | |