**3GPP TSG-CT WG1 Meeting #134-eC1-221744**

**E-meeting, 17th – 25th February 2022 (was C1-221073)**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **24.501** | **CR** | **3975** | **rev** | **1** | **Current version:** | **17.5.0** |  |
|  |
| *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)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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| ***Title:***  | Applicability condition of the list of "PLMNs not allowed to operate at the present UE location"  |
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| ***Source to WG:*** | Apple |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | 5GSAT\_ARCH-CT |  | ***Date:*** | 2022-02-17 |
|  |  |  |  |  |
| ***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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
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| ***Reason for change:*** | The current conditions when the list of "PLMNs not allowed to operate at the present UE location" is applicable are wrong, as the timer is always running. We need to distinguish the cases:1) UE position when receiving #78 and current UE position is unknown2) UE position when receiving #78 is unknown3) current UE position is unknown |
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| ***Summary of change:*** | The conditions for the applicability of the list of "PLMNs not allowed to operate at the present UE location" are corrected accordingly. |
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| ***Consequences if not approved:*** | The UE would by error assume that access to cell is not allowed even in case the current position and the postion when receiving #78 is known and the UE is the distance to the current UE location is LARGER than a UE implementation specific value. |
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| ***Clauses affected:*** | 4.23.2 |
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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:*** |  |

*\*\*\* first change \*\*\**

### 4.23.2 List of "PLMNs not allowed to operate at the present UE location"

For 3GPP satellite NG-RAN the UE shall store a list of "PLMNs not allowed to operate at the present UE location". Each entry consists of:

a) the PLMN identity of the PLMN which sent a message including 5GMM cause value #78 "PLMN not allowed to operate at the present UE location" via satellite NG-RAN access technology; and

b) the geographical location, if known by the UE, where 5GMM cause value #78 was received on satellite NG-RAN access technology.

Editor's note: A minimum value can be optionally provided by the network in the same message as cause value #78, but IE naming and definition is FFS.

Before storing a new entry in the list, the UE shall delete any existing entry with the same PLMN identity. Upon storing a new entry, the UE starts a timer instance associated with the entry with an implementation specific value that shall not be set to a value smaller than the timer value indicated by the network, if any.

Except for emergency services, the UE shall not attempt to access a PLMN via satellite NG-RAN access technology which is part of the list of "PLMNs not allowed to operate at the present UE location" if:

a) the current UE location is known, a geographical location is stored for the entry of this PLMN, and the distance to the current UE location is smaller than a UE implementation specific value. This UE implementation specific value shall not be set to a value smaller than the value indicated by the network, if any; or

Editor's note: A minimum value can be optionally provided by the network in the same message as cause value #78, but IE naming and definition is FFS.

b) the timer associated with the entry of this PLMN is running and:

a) a geographical location is not stored for the entry of this PLMN; or

b) the current UE location is not known.

The list shall accommodate three or more entries. When the list is full and a new entry has to be inserted, the oldest entry shall be deleted.

Each entry shall be removed if for the entry:

a) the UE successfully registers to the PLMN stored in the entry; or

b) the timer instance associated with the entry expires.

The UE may delete the entry in the list, if the current UE location is known, a geographical location is stored for the entry of this PLMN, and the distance to the current UE location is greater than a UE implementation specific value.

When the UE is switched off, the UE shall keep the list of "PLMNs not allowed to operate at the present UE location" in its non-volatile memory. The UE shall delete the list of "PLMNs not allowed to operate at the present UE location" if the USIM is removed.

*\*\*\* last change \*\*\**