**3GPP TSG SA WG 1 Meeting #104 S1-233250**

**Chicago, US, 13 - 18 November 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **61** | **CR** | 0733 | **rev** | 1 | **Current version:** | 18.11.0 |  |
|  | | | | | | | | |
| *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 | **X** | Core Network | **X** |

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| ***Title:*** | Clarification of usage of default slice in roaming | | | | | | | | | |
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| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | S1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | EASNS | | | | |  | ***Date:*** | | | 2023-11-05 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | F |  | | | | | ***Release:*** | | |  |
|  | *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)* | |
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| ***Reason for change:*** | | Requirement regarding network selection considering slice should be clarified, CT1 has sent a LS to SA1 asking for clarification. | | | | | | | | |
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| ***Summary of change:*** | | Clarification to the requirement to:  Make it clear this requirement is valid in no other active services is running.  Additional info about the configuration information  Make it clear what should happen when this prioritized application is concluded.  This to avoid different interpretations and misalignments between Stage1 and Stage 2/3. | | | | | | | | |
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| ***Consequences if not approved:*** | | Ambiguity will remain and causes different interpretations. | | | | | | | | |
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| ***Clauses affected:*** | | 6.1.2.1 | | | | | | | | |
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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

#### 6.1.2.1 General

The serving 5G network shall support providing connectivity to home and roaming users in the same network slice.

In shared 5G network configuration, each operator shall be able to apply all the requirements from this clause to their allocated network resources.

The 5G system shall be able to support IMS as part of a network slice.

The 5G system shall be able to support IMS independent of network slices.

For a UE authorized to access multiple network slices of one operator which cannot be simultaneously used by the UE (e.g. due to radio frequency restrictions), the 5G system shall be able to support the UE to access the most suitable network slice in minimum time (e.g. based on the location of the UE, ongoing applications, UE capability, frequency configured for the network slice).

5G system shall minimize signalling exchange and service interruption time for a network slice, e.g. when restrictions related to radio resources change (e.g., frequencies, RATs).

The HPLMN shall be able to configure the UE with prioritization information of the VPLMNs so that:

-When the UE’s service/application require a network slice not offered by the serving network and when the UE is in Idle mode or RRC Inactive mode i.e., when no other services/applications are active, the UE shall attempt to register on a different network for this particular network slice which is not available on the serving network and

-When the service that require the specific network slice concludes, and when **the UE is in Idle mode or RRC Inactive mode i.e., no other services/applications are active, the UE shall** perform network selection as defined in TS 22.011 clause 3.2.

The 5G system shall be able to minimize power consumption of a UE (e.g. reduce unnecessary cell measurements), in an area where no authorized network slice is available.

When a UE moves out of the service area of a network slice for an active application, the 5G system shall be able to minimize impact on the active applications (e.g., providing early notification).

NOTE 1: Various methods can be used to detect whether the UE moves toward the border area and to notify the UE.

The 5G system shall support a mechanism for a UE to select and access network slice(s) based on UE capability, ongoing application, radio resources assigned to the slice, and policy (e.g., application preference).

The 5G system shall support a mechanism to optimize resources of network slices (e.g., due to operator deploying different frequency to offer different network slices) based on network slice usage patterns and policy (e.g., application preference) of a UE or group of UEs

For UEs that have the ability to obtain service from more than one VPLMN simultaneously, the following requirements apply:

- When a roaming UE with a single PLMN subscription requires simultaneous access to multiple network slices and the network slices are not available in a single VPLMN, the 5G system shall enable the UE to:

- be registered to more than one VPLMN simultaneously; and

- use network slices from more than one VPLMN simultaneously

- The HPLMN shall be able to authorise a roaming UE with a single PLMN subscription to be registered to more than one VPLMN simultaneously in order to access network slices of those VPLMNs.

- The HPLMN shall be able to provide a UE with permission and prioritisation information of the VPLMNs the UE is authorised to register to in order to use specific network slices.

NOTE 2: The above requirements assume certain UE capabilities, e.g. the ability to be connected to more than one PLMN simultaneously.

End Change