**3GPP TSG-RAN WG3 Meeting #115-e *R3-222901***

**21 February – 3 March 2022**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **36.410** | **CR** | **0028** | **rev** | **3** | **Current version:** | **16.0.0** |  |
|  | | | | | | | | |
| *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 |  | Radio Access Network | **X** | Core Network | **X** |

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| ***Title:*** | NNSF for IoT NTN providing access over multiple countries | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm Incorporated, Ericsson, Huawei, Nokia, Nokia Shanghai Bell, ZTE, CATT | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | LTE\_NBIOT\_eMTC\_NTN-Core | | | | |  | ***Date:*** | | | 2022-03-08 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **C** |  | | | | | ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | The RAN may, if configured, select an MME based on the UE location (i.e. country where the UE is located). It is important to ensure that a UE accessing the network via a cell in country A does not use the CN of country B, in any scenario (including when the UE provides a S-TMSI, or a GUMMEI). | | | | | | | | |
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| ***Summary of change:*** | | The RAN may take into account UE location information when determining the MME. | | | | | | | | |
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| ***Consequences if not approved:*** | | UE location information cannot be used to determine the serving MME. | | | | | | | | |
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| ***Clauses affected:*** | | 5.9.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 36.413 CR#1853  TS 36.423 CR#1665 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | r2: submitted for endorsement at RAN3#115-e  r3: includes TP in R3-222901 | | | | | | | | |

**START OF CHANGES**

## 5.9 Coordination functions

### 5.9.1 Network sharing function

The S1 interface supports the transfer of the UE's serving PLMN and of equivalent PLMNs to the serving PLMN.

### 5.9.2 NAS node selection function

The interconnection of eNBs to multiple MME / S-GWs is supported by the LTE/EPS architecture (see 3GPP TS 23.401 [9] and 3GPP TS 36.300 [11]). Therefore a NAS node selection function is located in the eNB to determine the MME association of the UE.

This functionality is located in the eNB to determine and establish an association between a given UE and one of the MME nodes that comprise the pool area the eNB belongs to.

It then enables proper routeing via the S1-MME interface.

On S1, no specific procedure corresponds to the NAS node selection function.

The S1 interface supports the indication by the MME of its relative capacity to the eNB, in order to achieve load-balanced MMEs within the pool area.

When the eNB is configured to ensure that the selected MME serves the country where the UE is located, as described in TS 23.401 [9], the eNB takes into account UE location information, if available, when determining the MME.

**END OF CHANGES**