**3GPP TSG-WG SA2 Meeting #139E e-meeting  *S2-2004031r01***

**Elbonia, June 1 - 12, 2020 (revision of S2-200xxxx)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.737** | **CR** | **0012** | **rev** |  | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Key Issue 10 conclusions | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell, Thales, TNO | | | | | | | | | |
| ***Source to TSG:*** | SA2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | FS\_5GSAT\_ARCH | | | | |  | ***Date:*** | | | 2020-05-11 |
|  |  | | | |  | |  | | |  |
| ***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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Key Issue #10 conclusions are incomplete. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Conclusion for Key Issue #10 is proposed. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | If no solution can be selected, then the regulatory requirements for satellite access in Key Issue #10 can't be supported. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.10 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\*\*\* 1st Change \*\*\*

## 8.10 Conclusion on solutions for Key Issue #10

Candidate Solution #12 and Candidate Solution #13 have been evaluated. SA2 is not aware of any issues that would prevent the feasibility of either solution.

## Solution #13 is selected as the way forward for normative work with the following assumptions and observations:

* In case cells are earth-fixed from 5GCN perspective cells (as core network sees them) with a Cell ID determined and provided by RAN, such Cell ID can be used to represent UE location in different services and systems (e.g. to route emergency calls to a suitable PSAP).
* Based on above assumption, and the assumption that the UE is using a PLMN ID of the country where the UE is located, that 5GCN can determine the UEs location (with an accuracy depending on radio cell size) for support of regulatory services e.g. LI, emergency services etc. Additional mechanisms such as UE positioning by the network may be needed for a more accurate determination of the UE location.
* Whether satellite coverage e.g. with moving beams, and earth-moving cells (as core network sees them) SA2 is awaiting feedback from RAN2/3, whether they are in scope or not. If they are in scope how this assumption will affect the agreed solution #13 is FFS.
* In case of earth-fixed cells (as core network sees them), whether and how the RAN node connected to 5GCN (e.g. CU or gNB) can map the radio component of the cell that can potentially have moving coverage (e.g. in case of NGSO satellite) to earth-fixed cells represented by CGI would be up to RAN WGs to decide. This may e.g. include “fluctuations” in the earth-fixed border areas due to the mapping, similar to what is described for “TAC fluctuation” in TR 38.821.
* NG-RAN needs to ensure that the CN is in the country that the UE is located without the use of UE based information. Whether this is feasible need to be verified by RAN WGs.

Any RAN/CT alignment, as needed, will be resolved during normative phase.