**3GPP TSG-RAN2 Meeting # 109bis *R2-******200xxxx***

**Electronic meeting, 20 April – 30 April 2020**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.305** | **CR** | **<CR#>** | **rev** | **-** | **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)*.* | | | | | | | | |
|  | | | | | | | | |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Clarification on UE Positioning Architecture | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | CATT | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_newRAT-Core | | | | |  | ***Date:*** | | | 2020-4-22 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | A |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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:*** | | The connection between E-SMLC/ SLP and LMF in Figure 5.1-1 is not accurate because the connection of E-SMLC and LMF is not defined in SA2 in R15. The connection between E-SMLC and LMF can follow the design of connection between E-SMLC and SLP in TS36.305. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add a note to clarify the connection between E-SMLC/ SLP and LMF in Figure 5.1-1 is a proprietary interface and clarify the connection between E-SMLC and LMF is a proprietary connection. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The structure of UE Positioning Architecture applicable to E-UTRAN in 38.305 is not aligned with SA2 structure in 23.271. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **x** | Other core specifications | | | | TS/TR ... CR ...  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:*** | |  | | | | | | | | |

|  |
| --- |
| **Start of change** |

5.1 Architecture

Figure 5.1-1 shows the architecture in 5GS applicable to positioning of a UE with NR or E-UTRA access, the NG-RAN architecture to support positioning is described in TS 38.401 [38].

The AMF receives a request for some location service associated with a particular target UE from another entity (e.g., GMLC) or the AMF itself decides to initiate some location service on behalf of a particular target UE (e.g., for an IMS emergency call from the UE) as described in TS 23.502 [26]. The AMF then sends a location services request to an LMF. The LMF processes the location services request which may include transferring assistance data to the target UE to assist with UE-based and/or UE-assisted positioning and/or may include positioning of the target UE. The LMF then returns the result of the location service back to the AMF (e.g., a position estimate for the UE. In the case of a location service requested by an entity other than the AMF (e.g., a GMLC), the AMF returns the location service result to this entity.

An NG-RAN node may control several TRPs/TPs, such as remote radio heads, or DL PRS-only TPs for support of PRS-based TBS.

An LMF may have a proprietary signalling connection to an E-SMLC which may enable an LMF to access information from E‑UTRAN (e.g. to support the OTDOA for E-UTRA positioning method using downlink measurements obtained by a target UE of signals from eNBs and/or PRS-only TPs in E-UTRAN). Details of the signalling interaction between an LMF and E-SMLC are outside the scope of this specification.

An LMF may have a signalling connection to an SLP. The SLP is the SUPL entity responsible for positioning over the user plane. Further details of user-plane positioning are provided in [15][16].



**Figure 5.1-1: UE Positioning Architecture applicable to NG-RAN**

NOTE 1: The gNB and ng-eNB may not always both be present.

NOTE 2: Void

NOTE 3: Proprietary interface is possible.

|  |
| --- |
| **The end** |