**3GPP TSG-RAN WG2 Meeting #131bis *R2-2506780***

**Prague, Czech Republic, Oct. 13th – 17th, 2025**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.305** | **CR** | **0197** | **rev** | **-** | **Current version:** | **18.6.0** |  |
|  | | | | | | | | |
| *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:*** | Corrections on 38.305 CR for AIML Positioning | | | | | | | | | |
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| ***Source to WG:*** | CATT | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_AIML\_air-Core | | | | |  | ***Date:*** | | | 2025-10-01 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
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| ***Reason for change:*** | | To capture the RAN2#131 agreement “The UE asks specific TRPs for PRS transmission with on-demand PRS configuration, i.e., within NR-On-Demand-DL-PRS-Request”, and some editorial corrections are made. | | | | | | | | |
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| ***Summary of change:*** | | 1. To capture “UE-initiated On-Demand PRS transmission procedure allows the UE to request DL-PRS configuration information for specific TRPs” in 38.305 Clause 7.6.1 2. Some editorial changes are made. | | | | | | | | |
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| ***Consequences if not approved:*** | | No support of On-Demand PRS transmission for specific TRPs. | | | | | | | | |
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| ***Clauses affected:*** | | 5.4.4, 7.6.1, 7.x.1, 8.X | | | | | | | | |
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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:*** | | This CR is based on R2-2506617 with all changes accepted. | | | | | | | | |

*START OF CHANGES*

5.4.4 Location Management Function (LMF)

The LMF manages the support of different location services for target UEs, including positioning of UEs and delivery of assistance data to UEs. The LMF may interact with the serving gNB or serving ng-eNB for a target UE in order to obtain position measurements for the UE, including uplink measurements made by an NG-RAN and downlink measurements made by the UE that were provided to an NG-RAN as part of other functions such as for support of handover.

The LMF may interact with a target UE in order to deliver assistance data if requested for a particular location service, or to obtain a location estimate if that was requested.

The LMF may interact with multiple NG-RAN nodes to provide assistance data information for broadcasting. The assistance data information for broadcast may optionally be segmented and/or ciphered by the LMF. The LMF may also interact with AMFs to provide ciphering key data information to the AMF as described in greater detail in TS 23.273 [35].

For positioning of a target UE, the LMF decides on the position methods to be used, based on factors that may include the LCS Client type, the required QoS, UE positioning capabilities, gNB positioning capabilities and ng-eNB positioning capabilities. The LMF then invokes these positioning methods in the UE, serving gNB and/or serving ng‑eNB. The positioning methods may yield a location estimate for UE-based position methods and/or positioning measurements for UE-assisted and network-based position methods. The LMF may combine all the received results and determine a single location estimate for the target UE (hybrid positioning). Additional information like accuracy of the location estimate and velocity may also be determined.

The LMF may interact with the AMF to provide (updated) UE Positioning Capability to AMF and to receive stored UE Positioning Capability from AMF as described in TS 23.273 [35].

For NTN, the LMF is configured by the OAM with satellite related information (described in TS 38.300 [52]), as well as the association between TRP(s) and satellite(s), the association between gNB and TRP(s).

The LMF may host AI/ML models to infer the target UE location from measurement information received from gNBs. The AI/ML model that is used for UE location inference by the LMF may have been trained by the LMF.

The LMF may provide ground truth labels and related data to the gNB, if requested, for NG-RAN node assisted positioning with gNB-side model, as specified in 7.x.

*NEXT CHANGE*

## 7.6 Procedures for On-Demand PRS transmission

### 7.6.1 General

On-Demand PRS transmission procedure allows the LMF to control and decide whether PRS is transmitted or not and to change the characteristics of an ongoing PRS transmission. The on-demand PRS transmission procedure can be initiated either by the UE or LMF. The actual PRS changes are requested by the LMF irrespective of whether the procedure is UE- or LMF-initiated. UE-initiated On-Demand PRS transmission procedure allows the UE to request DL-PRS configuration information for specific TRPs.

*NEXT CHANGE*

## 7.x NG-RAN node assisted positioning with gNB-side model

### 7.x.1 General

The gNB that supports NG-RAN node assisted positioning with gNB-side model may require ground truth labels and related data from the LMF and measurements from the TRPs.

*NEXT CHANGE*

##### 8.X.3.1.2 Assistance Data Transfer Procedure

###### 8.X.3.1.2.0 General

The purpose of this procedure is to enable the LMF to provide assistance data to the UE (e.g., as part of a positioning procedure) and the UE to request assistance data from the LMF (e.g., as part of a positioning procedure). The LMF may provide the pre-configured DL-PRS assistance data (with associated validity criteria) to the UE (before or during an ongoing LPP positioning session), to be utilized for potential positioning measurements at a future time. Pre-configured DL-PRS assistance data may consist of multiple instances, where each instance is applicable to a different area within the network. One or more assistance data instances may be provided. Each instance is provided in one LPP Assistance Data message.

If a UE receives assistance data for a TRP for which it has already stored assistance data, it overwrites the stored assistance data, whereas if a UE receives assistance data for a TRP for which it has not stored assistance data, it stores the assistance data for the TRP and maintains the already stored assistance data for other TRPs. The TRPs are uniquely identified using a combination of PRS-ID and Cell-ID. The number of TRPs for which the UE can store Assistance Data is a UE capability and is indicated by the number of areas a UE can support.

*END OF CHANGE*