**3GPP TSG-RAN2 Meeting #129bis *R2-250***

Wuhan, P. R. China, 7th – 11th Apr, 2025

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.305** | **CR** | 0184 | **rev** | **-** | **Current version:** | 18.5.0 |  |
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| *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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

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| ***Title:*** | Introduction of control parameters for on-demand posSIB request [PosOdSIB-Req] | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI19 | | | | |  | ***Date:*** | | | 2025-04-14 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19) Rel-20 (Release 20)* | |
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| ***Reason for change:*** | | For positioning SIB, the assistance data for some of the SIBs require periodic update and periodic delivery of the posSIb is thus required. For instance, RTK message is typically updated periodically (a typical update periodicity is 640ms) and the update needs to be delivered to the UE in a timely manner.  During R16 discussion, we have agreed to introduce on-demand SIB request in RRC\_CONNECTED. When a certain SIB/posSIB that the UE needs is not currently broadcasted, the UE may send a UL dedicated RRC message to the gNB to request this needed SIB/posSIB. Then, based on the request, the gNB may send delivers the SIB/posSIB either by dedicated signaling or by system information.  The issue is that, based on the current mechanism, the network does not know how many time the SIB should be delivered to the UE. Take posSIB for RTK for example:   * If the network delivers multiple RTK posSIB per UE request, the network does not know when it should stop * If the network delivers only one RTK posSIB per UE request, the UE might repeatedly send the request to the network, which results in much signalling overhead.   This hence motivates us to allow for UE to indicate the amount of periodic deliveries that it needs when requesting the posSIB.  Note that for the support of RTK in LPP, LPP control parameters are defined for periodic assistance delivery with periodicity and requested amount.    We can follow what has been defined in LPP for the delivery amount and the posSIB can be delivered to the UE periodically whenever the gNB receives an updated posSIB from the LMF.  ========== UPDATE after RAN2#129===========  After the discussion during RAN2#129, the following agreement has been achieved  Agreements:  Introduce control parameters, including delivery amount and start/stop, for posSIBs with periodic delivery requirements for SI request in RRC\_CONNECTED.  Control signalling in reconfiguration to be encoded as ENUMERATED { enabled } OPTIONAL Need R. | | | | | | | | |
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| ***Summary of change:*** | | Add description for the control parameters for the deliveries of the posSIB in dedicated RRC messages. | | | | | | | | |
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| ***Consequences if not approved:*** | | The introduced feature is not clear in its usage in stage2. | | | | | | | | |
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| ***Clauses affected:*** | | 7.5.1 | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 38.331 CR 5288  TS 38.300 CR 0978  TS 38.306 CR 1248 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

====================================CHANGE START====================================

## 7.5 Procedures for Broadcast of Assistance Data

### 7.5.1 General

Positioning assistance data can be included in positioning System Information Blocks (posSIBs) as described in TS 36.331 [13], TS 38.331 [14] and TS 36.355 [19]. The posSIBs are carried in RRC System Information (SI) messages. The mapping of posSIBs (assistance data) to SI messages is flexibly configurable and provided to the UE in SIB1 for NG-RAN node TS 36.331 [13], TS 38.331 [14].

The UE may request posSI by means of on-demand SI request in RRC\_IDLE/RRC\_INACTIVE and also request posSIBs by means of on-demand SI request in RRC\_CONNECTED as described in TS 38.331 [14]. For on-demand SIB request in RRC\_CONNECTED, the UE may additionally request the number of posSIB deliveries, if configured. U2N Remote UE may also request posSIB via a U2N Relay UE as described in TS 38.331 [14]. The U2N relay UE forwards the posSIB transparently to the U2N Remote UE.

For each assistance data element, a separate posSIB-type is defined in TS 36.355 [19]. Each posSIB may be ciphered by the LMF using the 128-bit Advanced Encryption Standard (AES) algorithm (with counter mode) as described in TS 36.355 [19], either with the same or different ciphering key. The posSIBs which exceed the maximum size limit defined in TS 36.331 [13], TS 38.331 [14] shall be segmented by the LMF.

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