**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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|  | **38.300** | **CR** | 0978 | **rev** | **-** | **Current version:** | 18.5.0 |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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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 explanation for the feature in stage2 spec | | | | | | | | |
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| ***Consequences if not approved:*** | | The introduced feature is not clear in stage2 spec. | | | | | | | | |
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| ***Clauses affected:*** | | 7.3.1 | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 38.331 CR 5288  TS 38.305 CR 0184  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====================================

7.3 System Information Handling

7.3.1 Overview

System Information (SI) consists of a MIB and a number of SIBs, which are divided into Minimum SI and Other SI:

- **Minimum SI** comprises basic information required for initial access and information for acquiring any other SI. Minimum SI consists of:

- *MIB* contains cell barred status information and essential physical layer information of the cell required to receive further system information, e.g. CORESET#0 configuration. *MIB* is periodically broadcast on BCH.

- *SIB1* defines the scheduling of other system information blocks and contains information required for initial access. SIB1 is also referred to as Remaining Minimum SI (RMSI) and is periodically broadcast on DL-SCH or sent in a dedicated manner on DL-SCH to UEs in RRC\_CONNECTED.

- **Other SI** encompasses all SIBs not broadcast in the Minimum SI. Those SIBs can either be periodically broadcast on DL-SCH, broadcast on-demand on DL-SCH (i.e. upon request from UEs in RRC\_IDLE, RRC\_INACTIVE, or RRC\_CONNECTED), or sent in a dedicated manner on DL-SCH to UEs in RRC\_CONNECTED (i.e., upon request, if configured by the network, from UEs in RRC\_CONNECTED or when the UE has an active BWP with no common search space configured or when the UE configured with inter cell beam management is receiving DL-SCH from a TRP with PCI different from serving cell's PCI). For on-demand SI requests made in RRC\_CONNECTED, the UE may also request the number of posSIB deliveries in a dedicated manner on DL-SCH, if configured. Other SI consists of:

- *SIB2* contains cell re-selection information, mainly related to the serving cell;

- *SIB3* contains information about the serving frequency and intra-frequency neighbouring cells relevant for cell re-selection (including cell re-selection parameters common for a frequency as well as cell specific re-selection parameters);

- *SIB4* contains information about other NR frequencies and inter-frequency neighbouring cells relevant for cell re-selection (including cell re-selection parameters common for a frequency as well as cell specific re-selection parameters), which can also be used for NR idle/inactive measurements;

- *SIB5* contains information about E-UTRA frequencies and E-UTRA neighbouring cells relevant for cell re-selection (including cell re-selection parameters common for a frequency as well as cell specific re-selection parameters);

- *SIB6* contains an ETWS primary notification;

- *SIB7* contains an ETWS secondary notification;

- *SIB8* contains a CMAS warning notification;

- *SIB9* contains information related to GPS time and Coordinated Universal Time (UTC);

- *SIB10* contains the Human-Readable Network Names (HRNN) of the NPNs listed in SIB1;

- *SIB11* contains information related to idle/inactive measurements;

- *SIB15* contains information related to disaster roaming;

*- SIB16* contains slice-based cell reselection information;

- *SIB17* and *SIB17bis* contain information related to TRS configuration for UEs in RRC\_IDLE/RRC\_INACTIVE;

- *SIBpos* contains positioning assistance data as defined in TS 37.355 [43] and TS 38.331 [12];

- *SIB18* contains information related to the Group IDs for Network selection (GINs) associated with SNPNs listed in SIB1.

*- SIB19* in TN contains NTN-specific parameters for NTN neighbour cells as defined in TS 38.331 [12].

For sidelink, Other SI also includes:

- *SIB12* contains information related to NR sidelink communication, ranging and sidelink positioning;

- *SIB13* contains information related to *SystemInformationBlockType21* for V2X sidelink communication as specified in TS 36.331 clause 5.2.2.28 [29];

- *SIB14* contains information related to *SystemInformationBlockType26* for V2X sidelink communication as specified in TS 36.331 clause 5.2.2.33 [29];

- *SIB23* contains information related to ranging and sidelink positioning.

For non-terrestrial network, Other SI also includes:

- *SIB19* contains NTN-specific parameters for serving cell and optionally NTN-specific parameters for neighbour cells as defined in TS 38.331 [12].

- *SIB25* contains TN coverage information as defined in TS 38.331 [12].

For MBS broadcast, Other SI also includes:

- *SIB20* contains MCCH configuration;

- *SIB21* contains information related to service continuity for MBS broadcast reception.

For MBS multicast reception in RRC\_INACTIVE state, Other SI also includes:

- *SIB24* contains the information required to acquire the multicast MCCH/MTCH configuration as defined in TS 38.331 [12].

For ATG network, Other SI also includes:

- *SIB22* contains ATG-specific parameters for serving cell and optionally ATG-specific parameters for neighbour cells as defined in TS 38.331 [12].

Figure 7.3.1-1 below summarises System Information provisioning.

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**Figure 7.3.1-1: System Information Provisioning**

For a cell/frequency that is considered for camping by the UE, the UE is not required to acquire the contents of the minimum SI of that cell/frequency from another cell/frequency layer. This does not preclude the case that the UE applies stored SI from previously visited cell(s).

If the UE cannot determine the full contents of the minimum SI of a cell by receiving from that cell, the UE shall consider that cell as barred.

In case of BA, the UE only acquires SI on the active BWP.

If the UE is configured with inter cell beam management:

- the UE is not required to acquire the SI from the serving cell while it is receiving DL-SCH from a TRP with PCI different from serving cell's PCI.

====================================CHANGE END====================================