**3GPP TSG-WG SA2 Meeting #155 *S2-2303352***

**Athens, Greece, February 20 – 24, 2023 (revision of S2-2302677+S2-2302330)**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **23.247** | **CR** | **0164** | **rev** | **4** | **Current version:** | **18.0.0** |  |
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| *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 |  | Core Network | **X** |

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| ***Title:*** | On Clarifying the Scenario Considering the Power Saving Mechanism | | | | | | | | | |
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| ***Source to WG:*** | Huawei, HiSilicon, Nokia, Nokia Shanghai-Bell, Ericsson | | | | | | | | | |
| ***Source to TSG:*** | SA2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5MBS\_Ph2 | | | | |  | ***Date:*** | | | 2023-01-08 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | KI#5 had been concluded in SA2#154 meeting.  It is concluded that Sol#14 is used as the basis for normative work with some clarifications as mentioned in TR 23.700-47 clause 8.5.  Therefore, it is possible to specify the conclusion of KI#5 in TS 23.247.  To be specific, a clause with including the general description can be added, it lists the general principles for 5GS providing MBS data to the UEs with requiring the power saving. | | | | | | | | |
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| ***Summary of change:*** | | Add the descriptions for coexistence with existing power saving mechanisms for capability-limited UEs in TS 23.247. | | | | | | | | |
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| ***Consequences if not approved:*** | | Missing the functionalities for KI#5, which has been concluded in TR 23.700-47. | | | | | | | | |
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| ***Clauses affected:*** | | 6.X (new) | | | | | | | | |
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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:*** | |  | | | | | | | | |
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| ***This CR's revision history:*** | | Rev 3: correct the name of the title and align with other agreed CRs. And polish the wording. In addition:  Remove “reception” from the heading of 6.X “Support of MBS reception for UEs using power saving mechanisms” which does not read well.  Remove “DRX (Discontinuous Reception)” which is not specified as power saving function per TS 23.501.  Clarify that eDRX applies to UEs in both RRC\_IDLE and RRC\_INACTIVE states to align with TS 23.501.  Remove EN about RAN alignment for eDRX>10.24s as the agreed mechanism can work irrespective of the length of the eDRX cycle. | | | | | | | | |

\* \* \* \* Start of the change \* \* \* \*

## 6.X Support of MBS data reception for UEs using power saving functions

MBS provide means to deliver data over MBS Session to multiple UEs at the same time. However, for UEs using power saving functions, e.g., MICO (Mobile Initiated Connection Only) mode with Active Time, or extended DRX (Extended Discontinuous Reception)as defined in clause 5.31.7 of TS 23.501 [5], the UEs are usually unreachable for long periods of time. Moreover, different UEs are likely to be reachable at different times.

If a UE becomes unreachable for unicast data transfer due to its using power saving functions, the UE may still be involved in MBS specific operations, e.g., activation/deactivation of the MBS service, MBS data transfer reception, reception of service announcement (if needed).

To receive MBS data, those UEs need to wake up at coordinated times when the MBS data is to be transmitted. The UE is informed via the service announcement about a start time and/or a sequence of scheduled activation times (e.g. a first time and a periodicity) of the MBS Session when the AF may activate the MBS Session and transmit MBS data, as described in clause 6.11.

The AF may send data starting either at the start time or at any scheduled activation times. If the AF sends data using an multicast MBS Session at a scheduled activation time, it shall first activate the multicast MBS Session at that scheduled activation time.

\* \* \* \* End of changes \* \* \* \*