3GPP TSG-RAN WG2 Meeting #115-e R2-210xxxx

**e-Meeting, 16th - 27th August, 2021**

**Title: [Draft]** LS on the MBS broadcast service continuity and MBS session identification

**Response to:**

**Release:** Release 17

**Work Item:** NR\_MBS-Core

**Source:** To be RAN2

**To:** RAN3, SA2, SA4

**Cc:** -

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**Attachments:** -

**1. Overall Description:**

In RAN2#112-e, RAN2 agreed to support delivery mode 1 (which is used only for multicast sessions) and delivery mode 2 (which is used for broadcast sessions in Rel-17).

In RAN2#115-e, RAN2 discussed the service continuity for delivery mode 2 (i.e. for broadcast session) to allow the RRC\_IDLE/INACTIVE UE to prioritize the frequency which provides the UE’s interested MBS service and to allow the RRC\_CONNECTED UE to report MBS interest information to the network. Regarding the MBS service continuity function, RAN2 agreed that the RRC\_IDLE/INACTVE/CONNECTED UE may use the MBS service information in both SIB and upper layer signalling (e.g. USD).

For RRC\_IDLE/INACTIVE UE, RAN2 has made a working assumption that there would be a mapping between frequency and “MBS ID” (e.g. same or similar to MBMS SAI) in SIB, and RAN2 also assumes that a mapping between frequency and MBS ID is provided in upper layer signalling (e.g. USD). If the “MBS ID” of the UE’s MBS service of interest (identified by TMGI) in upper layer signalling (e.g. USD) is mapped to the same “MBS ID” to which a frequency is mapped in SIB, the UE is allowed to prioritize the corresponding frequency indicated in SIB. As an alternative, if the mapping between frequency and “MBS ID” is not provided in SIB, then the UE is allowed to prioritize the frequency provided in upper layer signalling, i.e. based on the mapping between frequency and “MBS ID” of the UE’s the MBS service of interest (identified by TMGI) in the upper layer signalling (e.g. USD),. From RAN2 perspective, some kind of identifier as SAI in LTE is needed for the mapping between MBS services and frequencies in SIB as the overhead related to signalling all TMGIs separately might be too large to fit into SIB.

To support the MBS service continuity, RAN2 would like to ask SA2, RAN3 and SA4 the following question:

Question 1: Can an “MBS ID” (similar to SAI in LTE) be defined for NR MBS for use in SIB and the upper layer signalling (e.g. USD), to avoid too many TMGIs from being broadcast in System Information?

Question 2: Can the mapping between frequency and “MBS ID” (similar to TMGI in LTE) be provided in the upper layer signalling (e.g. USD), as in LTE SC-PTM?

Another issue discussed during RAN2#115-e meeting was the identification of an MBS session in 5G/NR system. RAN2 noted that in RRC signalling provided from the network to the UE to configure (SC-) MRB in LTE MBMS, an MBMS session is identified by TMGI and an optional sessionID parameter, which is defined in the following way in 3GPP TS 36.331:

|  |
| --- |
| ***sessionId***  Indicates the optional MBMS Session Identity, which together with TMGI identifies a transmission or a possible retransmission of a specific MBMS session: see TS 29.061 [51], clauses 20.5, 17.7.11, and 17.7.15. The field is included whenever upper layers have assigned a session identity i.e. one is available for the MBMS session in E-UTRAN. |

RAN2 would like seek a guidance from SA2:

**Question 3: For both broadcast and multicast session, is sessionID parameter or alike required in NR or is TMGI sufficient to identify the MBS session?**

**2. Actions:**

**To RAN3 group.**

**ACTION:** RAN2 respectfully asks RAN3 to answer the Question 1 above.

**To SA2 group.**

**ACTION:** RAN2 respectfully asks SA2 to answer the Question 1, Question 2 and Question 3 above.

**To SA4 group.**

**ACTION:** RAN2 respectfully asks SA4 to answer the Question 1 and Question 2 above.

**3. Date of Next TSG-RAN WG2 Meetings:**

3GPP RAN2#116-e from 2021-11-01 to 2021-11-12 Electronic Meeting