

Qualcomm

RP-213454

3GPP TSG RAN#94e

Electronic Meeting, Dec. 06-17, 2021

Agenda Item: 8A.2

Views on MBS project

5G

Background

- The moderator's draft on NR MBS (RP-212714) includes the following objectives:

- Specify the enhancements of SFN for [inter-DU and inter-CU] scenario based on existing numerology and Cyclic Prefix [RAN3]
 - o [Study and specify mechanism to support coordination and synchronization across gNBs/DUs for SFN [RAN3]]
- Specify support of multicast reception by UEs in RRC_INACTIVE [and RRC_IDLE] states [RAN2, RAN3, RAN1?]
 - o PTM configuration for UEs receiving multicast in RRC_INACTIVE [and RRC_IDLE] states [RAN2, RAN1?]
 - o Study this impact of mobility and state transition for UEs receiving multicast in RRC_INACTIVE [and RRC_IDLE states] [(Seamless/lossless mobility is not required)] [RAN2, RAN3]
- Study and if necessary, specify enhancements to improve the resource efficiency for MBS reception in RAN sharing scenarios [RAN3]
- [Specify signalling enhancements for improved support of Free-To-Air (FTA) / Receive Only Mode (ROM), i.e. including UE capability related assistant information report regarding simultaneous reception of FTA / ROM and unicast services provided by the same or different operator [RAN2]]
- [(Low priority) Specify enhancements of power saving mechanism for MBS [RAN2, RAN1]]

Note: collaboration with SA2 is expected in due course for the above objectives.

Rel-17 left-overs might also be included, but final decision to be taken after finalisation of Rel-17:

- x
- y
- z

- In this contribution, we present our views on some of the aspects above.

IDLE / INACTIVE support for multicast

- The current draft WID has support of multicast in RRC_IDLE in square brackets.
- Although we acknowledge that reception of broadcast / multicast in IDLE is an important feature, **Rel-17 already supports broadcast reception in all RRC modes including the IDLE mode.**
- Support of multicast in IDLE negates the main defining features of multicast, namely:
 - Adjustment of transmission area (UEs can move between cells in IDLE mode).
 - Reliability (no feedback in IDLE mode).
- Support of multicast in IDLE mode would require large changes in the RAN and core network.
- **Proposal:** Do not consider IDLE support for multicast.

ROM / FTA

- Support of ROM / FTA is in square brackets in the current WID.
- ROM / FTA has much more impact in SA than RAN, and SA2#148 approved MBS SID (S2-2109362) does not include objectives for ROM/FTA
- **Proposal:** Do not consider ROM / FTA for Rel-18 MBS unless if SA confirms they will do the work.

RAN sharing

- The approved SA2 SID has the following objective regarding RAN sharing:

WT#1.2 Study feasible and efficient resource utilization for the same broadcast content to be provided to 5G MOCN network sharing scenarios (i.e., multiple CNs are connected to the same NG-RAN);

NOTE 2: The NG-RAN is assumed not to be aware of the same content via the application layer information detection.

NOTE 3: Collaboration with RAN WGs is needed.

- We propose to align the objective in the RAN work item with the SA2 wording.
- **Proposal:** Align the RAN sharing objective with the SA2 wording, e.g.:
 - Study and if necessary, specify enhancements to improve the resource efficiency for the same broadcast content to be provided to 5G MOCN network sharing scenarios (i.e., multiple CNs are connected to the same NG-RAN) [RAN3]

Rel-17 leftovers

- One of the missing items in the WID description is the details of the leftovers, which were to be revisited after more progress in the WGs.
- The leftovers should be prioritized based on the commercial importance, and not just included because they are “leftovers”.
- If any leftovers are to be specified in Rel-18, these should be considered:
 - **Support of case D / case E [RAN1]**: These cases were agreed in RAN plenary (RAN#93e), but not concluded in RAN1.
 - Case E is especially important, as it would enable larger bandwidth reception with a small initial BWP.
 - **Support of TRS for broadcast [RAN1]**: RAN#93 concluded that this is in scope, but was not agreed in RAN1.
 - **L2 retransmissions for multicast PTM leg based on L2 feedback [RAN2]**



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