3GPP TSG RAN Release 18 Workshop

28th June – 2nd July 2021

RWS-210374

Rel-18 NR MBS enhancements

Agenda Item:	4.2
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Leftovers from Rel-17

- Rel-17 is the first release to introduce MBS in NR. Rel-17 MBS design is not complete yet, so it is difficult to estimate all the baseline MBS features that will be available at the end of Rel-17.
- Following features will not be (or not likely to be) considered in Rel-17, and can be considered as Rel-18 enhancements:
  - RLC-AM support for PTM: RAN2 agreed not to support this feature in Rel-17. The feature is helpful to fulfill high reliability requirement with high radio efficiency.
  - Multicast for RRC_INACTIVE / delivery mode 2: RAN2 agreed to deprioritize this feature in Rel-17 due to diverged views on different solutions. The feature is helpful to address SA6 requirements on "large number of UEs per cell" (TR 23.774 clause 9).

Potential enhancements for Rel-18 MBS

- Mobility enhancements: RAN2 aims to support lossless handover for MBS mobility for relevant services in Rel-17. Depending on outcome of Rel-17 discussion, mobility enhancements (e.g. considering mobility related features supported in unicast) can be considered for Rel-18 MBS.
- Power saving enhancements: RAN2 agreed to use LTE SC-PTM DRX scheme as baseline for NR MBS in Rel-17. Depending on outcome of Rel-17 discussion, further enhancements can be considered.
- Single Frequency Network (SFN) support in NR: It is assumed that LTE based 5G terrestrial broadcast is sufficient for the targeted scenarios of SFN, therefore no need to consider SFN support in NR.
- UL Feedback for Reliability for RRC_IDLE/INACTIVE UEs: NACK-only based HARQ feedback will be supported for connected UEs but unlikely to be supported for IDLE/INACTIVE UEs. This can be potentially extended in Rel-18.
- If MBS Rel-18 SI/WI was agreed by SA WGs (e.g. SA2), RAN WGs need to address related impacts.

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