3GPP TSG-RAN1 Meeting #120 **R1-2501633**
Athens, Greece, 17th – 21st February 2025

Title: LS on time location of on-demand SSB for SCell
Release: Rel-19
Work Item: Netw_Energy_NR_enh

Source: RAN WG1
To: RAN WG4
Cc: RAN WG2

Contact Person:
Name: Seonwook Kim
E-mail Address: sseonwook.kim@lgepartner.com

Send any reply LS to: 3GPP Liaisons Coordinator, mailto:3GPPLiaison@etsi.org

Attachments: -

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1. Overall Description:

RAN1 discussed the relation in terms of time location between the always-on SSB and on-demand SSB and agreed the following in RAN1#120.

Agreement

Regarding the relation in terms of time location between the always-on SSB and on-demand SSB,

- For the case when the center frequency locations of always-on SSB and on-demand SSB are same,
  - Alt Time-C: RAN1 specification has no restriction with regards to overlapping
  - From RAN1 perspective,
    - Alt Time-C1: The case that, during OD-SSB transmission, the union of AO-SSB transmission and OD-SSB transmission has a periodic time domain pattern is supported (the interval between SSB bursts is even and supported in legacy specification).
    - Alt Time-C2: The case that, during OD-SSB transmission, the union of AO-SSB transmission and OD-SSB transmission has a non-periodic time domain pattern is supported.
  - It is up to RAN4 to define requirements, if any, corresponding to both or either of Alt Time-C1 or Alt Time-C2
  - At least the following is supported: PBCH payload for the same SSB index (other than SFN index, half frame index) is the same for AO-SSB and OD-SSB
    - FFS: Whether half frame index is the same or different for AO-SSB and OD-SSB
- For the case when the center frequency locations of always-on SSB and on-demand SSB are different,
  - Alt Time-C: RAN1 specification has no restriction with regards to overlapping
  - UE assumes that frequency resources of always-on SSB are not overlapped with those of on-demand SSB in frequency domain.

    - AO-SSB and OD-SSB are located in the same BWP
    - FFS: PBCH payload for the same SSB index (other than SFN index, half frame index) should be the same for AO-SSB and OD-SSB
- NOTE: AO-SSB periodicity is not adapted

2. Actions:

To RAN WG4

ACTION: RAN1 respectfully ask RAN4 to take the above into consideration.

3. Date of Next TSG-RAN1 Meetings:

TSG RAN1 Meeting #120bis	7 - 11 April 2025	Wuhan, China
TSG RAN1 Meeting #121	19 - 23 May 2025	St. Julian, Malta