3GPP TSG-RAN WG2 Meeting #118-e draftTdoc R2- 2204486

Electronic Meeting, May 9th - 20th, 2022

**Title:** [DRAFT] Reply LS on NCD-SSB issues for RedCap UE

**Response to:** LS on NCD-SSB issues for RedCap UE (R4-2207104)

**Release:** Rel-17

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

**Source:** Ericsson (To be RAN2)

**To:** RAN4

**Cc:**

**Contact Person:**

**Name:** Emre A. Yavuz

**E-mail Address:** emre dot yavuz at ericsson dot com

**Send any reply LS to: 3GPP Liaisons Coordinator,** [**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

**Attachments:**

**1. Overall Description:**

RAN2 would like to thank RAN4 for the LS on NCD-SSB issues for RedCap UEs and provide the following replies for the questions RAN4 has asked:

Regarding the measurement related questions:

**Q1** Is it possible to configure CD-SSB and/or multiple NCD-SSB(s) for serving cell measurements?

**Answer**: RAN2 has confirmed in RAN2#118-e that when active BWP of a RedCap UE is associated with NCD-SSB, it is up to network to configure the UE to perform serving cell measurements on NCD-SSB or CD-SSB. RAN2 has agreed that a BWP specific serving cell measurement object, i.e., *servingCellMO* defined under *BWP-DownlinkDedicated*, can be configured when BWP is associated with NCD-SSB. A RedCap UE uses this *servingCellMO* for serving cell measurements when configured in the active BWP, otherwise, it uses the legacy *servingCellMO* defined under *ServingCellConfig*. It is possible to configure CD-SSB and/or multiple NCD-SSB for serving cell measurements, but the UE shall perform the measurements using the configured serving cell measurement object of the active BWP which can either be associated with CD-SSB or NCD-SSB.

**Q2** If yes, is it feasible from RAN2’s signaling design perspective to explicitly indicate which SSB is the reference SSB to define intra-frequency measurement?

**Answer**: From RAN2 signaling point of view, a BWP-specific *servingCellMO* can be configured under *BWP-DownlinkDedicated*. The SSB defined in this *servingCellMO* is the reference SSB to be used for serving cell measurements when the UE is in this active BWP; if the field is absent, SSB defined in *servingCellMO* under *ServingCellConfig* is the reference SSB to be used for serving cell measurements. This reference SSB is used to define intra-frequency measurements.

Regarding the handover related questions:

**Q3** Are the following Handover scenarios valid from RAN2’s perspective?

* 1. Handover to a target cell’s specific Redcap BWP associated with NCD-SSB directly other than to the initial BWP associated with CD-SSB
  2. Handover to a target cell’s initial BWP and further switch to the specific Redcap BWP to send the RACH
     + the specific Redcap BWP associated with NCD-SSB
     + the specific Redcap BWP without presence of NCD-SSB

**Answer**: From RAN2 standpoint, handover scenario a) is supported whereas scenario b) is not supported.

**2. Actions:**

**To RAN4**

**ACTION:** RAN2 kindly asks RAN4 to take the information above into consideration.

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

TSG-RAN WG2 Meeting #119 22nd - 26th Aug 2022 e-Meeting

TSG-RAN WG2 Meeting #119bis-e 10th - 26th Oct 2022 e-Meeting