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

**e-Meeting, 9th - 27th August, 2021**

**Title:** [Draft] LS on RRM Relaxations for RedCap

**Response to:**

**Release:** Rel-17

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

**Source:** Huawei, HiSilicon [to be RAN2]

**To:** RAN4

**Cc:**

**Contact person:** Yiru Kuang, kuangyiru@huawei.com

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

**Attachments:** None

# 1 Overall description

RAN2 have discussed the RRM relaxations and achieved the following agreements on RRM relaxation criteria.

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| **Agreements in RAN2#113bis-e:*** At least for RRC idle/inactive, a measurement-based R17 stationarity criterion can be configured separately from R16 low-mobility criterion for R17 UEs supporting the feature.
* Network can configure R17 stationarity criterion/criteria together with a not-at-cell-edge criterion, to trigger RRM relaxations in RRC Idle/Inactive for R17 UEs supporting the feature. FFS whether the R16 not-at-cell-edge thresholds can be reused or separate R17 not-at-cell-edge thresholds are needed.

**Agreements in RAN2#114-e:*** An RSRP/RSRQ based stationarity criterion (Working Assumption: the same as in idle/inactive) can be configured for UEs in RRC Connected. If the criterion is met, this is reported to the network (FFS how/when). It is FFS whether, based on this, besides possibly reconfiguring RRM measurements (up to network implementation), the network can enable RRM measurement relaxation (FFS whether same method as in Idle/Inactive).
* Subscription based relaxation criteria will not be considered in Rel-17 RRM relaxation.
* Reuse R16 low mobility criterion, as part or whole of Rel-17 stationary criterion in RRC\_IDLE/INACTIVE. When NW configures both Rel-17 stationary criterion and Rel-16 low mobility criterion, NW configures different Rel-17 thresholds (i.e., SSearchDeltaP\_stationary/TSearchDeltaP\_stationary) from Rel-16 (SSearchDeltaP / TSearchDeltaP). How to configure the criterion (e.g. more stringent) is left to NW implementation (i.e. no specification impact to RAN2).
* Postpone the following discussion until RAN4 defines RRM relaxation method for Rel-17:

When NW configures both R16/R17 relaxation criteria and the UE fulfills both, UE performs:- Option 1) UE performs Rel-17 RRM relaxation method- Option 2) It is up to UE implementation to select either Rel-16 or Rel-17 relaxation operation* When NW configures Rel-17 RRM relaxation for RRC\_IDLE/INACTIVE, Rel-17 stationary criterion is mandatory, and Rel-17 not-at-cell-edge criterion is optional configuration.

**Agreements in RAN2#115-e:*** Do not introduce nor reuse not-at-cell-edge threshold for R17 RRC\_CONNECTED UEs.
* Do not introduce beam change based criterion in Rel-17.
* The network provides the configuration of stationarity criterion to the UE via dedicated signalling (e.g. RRCReconfiguration message) in RRC\_CONNECTED.
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RAN2 respectfully asks RAN4 to take the above agreements into account.

For RRC\_IDLE/INACTIVE, RAN4 is asked to study and define the corresponding Rel-17 RRM relaxation method.

For RRC\_CONNECTED, RAN2 will continue discussing the details.

# 2 Actions

**To RAN4** **group:**

**ACTION:** RAN2 respectfully asks RAN4 to take the above agreements into account.

For RRC\_IDLE/INACTIVE, RAN4 is asked to study and define the corresponding Rel-17 RRM relaxation method.

# 3 Dates of next TSG-RAN WG2 meetings

TSG-RAN2 Meeting #116-e 1-12 November 2021 Electronic Meeting

TSG-RAN2 Meeting #117-e 17-26 January 2022 Electronic Meeting