**3GPP TSG RAN WG1#106bis-e R1-211xxxx**

**e-Meeting, October 11th – 19th, 2021**

**Title: [DRAFT]** Reply LS on L2 buffer size reduction

**Reply to:**

**Release:** Rel-17

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

**Source:** Intel [RAN WG1]

**To:** RAN WG2

**Cc:**

**Contact Person:**

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

**Attachments:** None

**1. Overall Description:**

RAN1 would like to thank RAN2 for the LS on L2 buffer size reduction for Rel-17 RedCap in R1-2108713 (R2-2109198). RAN1 has discussed the issue during RAN1 #106-e and RAN1 #106bis-e meetings, and the status of the RAN1 discussions is summarized below.

* *RAN1 discussed various options for use of peak rate scaling factor as potential means of L2 buffer size reduction for Rel-17 RedCap but has not arrived at a consensus on whether and how to pursue L2 buffer size reduction as a cost/complexity reduction feature.*
  + *RAN1 does not intend to continue discussions on the issue unless further indication is received from RAN2.*
* *In addition to the options of maintaining Rel-15 specifications (no spec change) or defining that peak rate scaling factors are not applicable for Rel-17 RedCap UEs, RAN1 also discussed the following options towards optimizing peak rate scaling factor for RedCap for L2 buffer size reduction:*
  + *Relaxing the product of max number of layers, max modulation order, and scaling factor < 4, and/or*
  + *Reducing the scaling factor < 0.4*
* *While it was observed that Rel-15 specifications with the same scaling factors and constraints may still be available for RedCap UEs (no spec changes), RAN1 could not converge on whether the cost/complexity benefits are sufficient to justify the above options for optimization of peak rate scaling factor for RedCap for L2 buffer size reduction.*
* *It was noted the proponent companies for optimizing peak rate scaling factor for RedCap towards L2 buffer size reduction could converge to a single proposal, i.e. relaxing the product to be smaller value (4->[1.5]) while keeping the existing scaling factor unchanged for Rel-17 RedCap.*
* *It was also noted by multiple companies in RAN1 that more effective UE cost/complexity reduction features with the same performance impact, but high cost/complexity reduction potential, were discussed and not pursued by RAN1 during the SI phase. Thus, such companies consider L2 buffer size reduction via peak rate scaling factor optimization as out-of-scope for the current WI.*

**2. Actions:**

**To RAN2 group**

**ACTION:** RAN1 respectfully asks RAN2 to kindly take the above into account in future RAN2 discussions.

**3. Date of Next TSG-RAN1 Meetings:**

RAN1#107-e November 11th – November 19th, 2021 E-meeting