**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:**

**Name:** Debdeep Chatterjee

**Email Address:** debdeep (dot) chatterjee (at) intel (dot) com

**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 (i.e., scaling factor = 1), 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 to < 4, and/or*
  + *Reducing the scaling factor to < 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 changes 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 agree to 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, 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