3GPP TSG-RAN WG2 #114-e Tdoc R2-21xxxxx

Electronic meeting, 2021-05-19 - 2021-05-27

**Title: DRAFT** Reply LS on PDB for new 5QI

**Reply to:** LS on PDB for new 5QI (S2-2103552)

**Release:** Release 17

**Work Item:** **5GSAT\_ARCH, NR\_NTN\_solutions-Core**

**Source:** Ericsson (to be: TSG RAN WG2)

**To:** SA2

**Cc:** RAN1, RAN3

**Contact Person:**

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**Attachments:** None

**1. Overall Description:**

RAN2 would like to thank SA2 for sending their LS on PDB for new 5QI.

According to TR 38.821, the max round trip delay (propagation delay only) for GEO satellite access with transparent payload is 541.46 ms. Thus, the AN PDB of 812 ms is about 1.5 RTT of the maximum round trip delay.

RAN2 understands the procedure considered by SA2 is UE sends scheduling request to gNB, then gNB provides UL-Grant to UE, finally UE sends uplink data. So 1.5 RTT only covers initial data transmission, i.e. no HARQ/RLC retransmission is counted here. GEO systems may not use HARQ retransmission.

Further the PER of 10-6 while meeting a PDB of about 1.5 RTT will be challenging and will require excessive resources for this initial transmission and thus lead to low spectral efficiency. The detailed evaluation is in RAN1 scope.

We also request SA2 to consider providing more flexible QoS by supporting flexible scaling factors for Packet Delay Budget (PDB) and Packet Loss Error Rate (PLER) for various 5QI is so that the NTN operators can support diverse services (e.g., VoIP and gaming with relaxed QoS compared to the existing QoS) to their customers, flourishing the NTN ecosystem.

**2. Actions:**

**To SA2 group.**

**ACTION:** RAN2 respectfully requests SA2 to take the above into account.

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

TSG-RAN WG1 Meeting #115-e 16 – 27 August 2021 Electronic Meeting

TSG-RAN WG1 Meeting #116-e 01 – 12 November 2021 Electronic Meeting