**Agenda item:** 10.6

**Source:** Qualcomm Inc.

**Title: [5G\_RTP\_Ph2] On the inaccuracy of PDU Set Size and data burst size**

**Document for** Discussion andAgreement

# Introduction

In the 5G\_RTP\_Ph2 WID, the first objective has a note on identifying the PDU Set size accuracy requirements:

1. *Conduct normative work towards solutions that mitigate the potential inaccuracy of PDU Set Size information.*

*NOTE: Coordination with RAN2 is necessary to identify the PDU set size accuracy requirements.*

The objective is based on the study of how to address the issue of the inaccuracy of the PDU Set Size (PSSize) information in Rel-19 FS\_5G\_RTP\_Ph2. TR 26.822 [1] documented the following solutions:

* Solution #4: Measurement Based Pre-compensation for PDU Set Size Correction,
* Solution #7: PDU Set Size information correction by indicating the remaining PDU Set Size in RTP header extension,
* Solution #23: PDU Set Size and Over Provisioning in RTP HE for PDU Set Marking
* Default (Rel-18): Up to UPF implementation to handle any PDU Set Size inaccuracy

In this paper, we analyse the range of inaccuracy in the PDU Set size resulting from the solutions. We also point out that the same causes of the inaccuracy in the PDU Set size information can cause inaccuracy in the data burst size information. Therefore, we propose to send a single LS on the accuracy of PDU Set size and data burst size to RAN2.

# Inaccuracy analysis

### 2.1 Performance comparison of PDU Set Size correction methods

Clause 6.4 of [1], shows that without any correction, the error in the PDU Set size information can be as large as about 5%. This motivated Solution #23 which proposes over-provisioning of the PDU Set size. With overprovisioning of 5%, however, the error could be as large as 10%, because another 5% error occurs when the actual PSSize is 5% already lower than the indicated PSSize.

With Solution #4, the error is less than 0.1% (specifically the errors for the two scenarios considered there are 0.088% and 0.041%, respectively).

**Observation 1:** Over-provisioning could result in an error as large as 10% in the PDU Set Size, and measurement-based pre-compensation can reduce the error to 0.1%.

# Spec change to the RAN

It is observed that there will be no spec change to the RAN, regardless of Solution #4 or Solution # 23 is adopted to correct the PDU Set size.

**Observation 2:** There is no impact to the RAN specification, regardless of measurement-based pre-compensation or over-provisioning is adopted to correct the PDU Set size or the burst size.

# Proposals

Based on the observations 1-2, we propose to agree:

**Proposal:** SA4 sends an LS to RAN2, and the LS

* asks RAN2 to identify the PDU set size accuracy requirements,
* notes that there will be no spec change to the RAN,
* provides information on the accuracy of the candidate solutions.

# References

[1] TR26.822, Study on 5G Real-time Transport Protocol Configurations, V1.2.0, Rel-19, Nov 2024.