3GPP TSG-RAN WG2#115-e R2-21xxxxx

Electronic meeting, 16th August – 27th August 2021

Agenda Item: 6.4.1

Source: Ericsson

Title: Report of [Offline-886][SONMDT] On corrections to packet loss rate measurements (Ericsson)

Document for: Discussion, Decision

# 1 Introduction

This document provides the outcome of the following offline discussion conducated during RAN2#115 meeting:

* [AT115e][886][SON/MDT] On corrections to packet loss rate measurements (Ericsson)

Collect companies’ view on the CR (R2-2108304). If and only if everyone is fine with the change, the outcome of the email discussion is the agreed CR.

 Intended outcome: Agreed CR

 Deadline:11:00 UTC, Thursday August 26th

# 2 Contact Information

To make it easier to find the correct contact delegate in each company for potential follow-up questions, the rapporteur encourages the delegates who provide input to provide their contact information in this table:

|  |  |
| --- | --- |
| Company | Contact: Name (E-mail) |
| Ericsson (Rapporteur) | Pradeepa Ramachandra (pradeepa.ramachandra@ericsson.com) |
| Qualcomm | Rajeev Kumar (rkum@qti.qualcomm.com) |
| Samsung | Sangyeob Jung (sy0123.jung@samsung.com) |
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| vivo | Ming WEN (ming.wen@vivo.com) |
|  |  |
|  |  |

# 3 Discussion

The contribution in [1] has addressed two issues.

## 3.1 Issue#1

**Reason for change:**

As part of the objective of some of the individual delay measurements, it is explicitly stated that the measurement can be used for the OAM performance observability or for QoS verification of MDT.

However, the packet loss rate measurements introduced in the layer-2 specification mention only OAM performance observability as the objective and not the QoS verification of MDT.

**Proposed change:**

QoS verification of MDT is added as an objective for the ‘Packet Uu Loss Rate in the DL per DRB per UE’ measurement.

4.2.1.5.1 Packet Uu Loss Rate in the DL per DRB per UE

The objective of this measurement is to measure packets that are lost at Uu transmission, for OAM performance observability or for QoS verification of MDT.

**Question-1: Is the changes associated to issue#1 acceptable?**

|  |  |  |
| --- | --- | --- |
| **Company name** | **Yes/No** | **Comments**  |
| Qualcomm | With modification | or for QoS verification ~~of MDT.~~ I believe that QoS verification is for PDU sessions and others, not MDT.  |
| Samsung | Yes |  |
| Huawei, HiSilicon | Yes |  |
| Apple | Yes | To QC: according to 37.320 Annex B “QoS verification use cases”, all the use cases are for MDT. |
| ZTE | Yes |  |
| CATT | Yes |  |
| vivo | Yes |  |

**Rapporteur Summary:**

To be added later

## 3.2 Issue#2

**Proposed change:**

It is also clarified that the F1-U packet loss measurement specified in TS 28.552 is performed per DRB per UE level granularity to handle the MDT related UE specific measurement.

4.2.1.6 Other measurements defined in TS 28.552 [2]

The granularity for PDCP SDU Data Volume measurement defined in TS 28.552 [2] is per DRB per UE.

The granularity for Average UE throughput measurement defined in TS 28.552 [2] is per UE and per DRB per UE.

The granularity for UL F1-U Packet Loss Rate and DL F1-U Packet Loss Rate measurement defined in TS 28.552 [2] is per DRB per UE.

**Question-2: Is the changes associated to issue#2 acceptable?**

|  |  |  |
| --- | --- | --- |
| **Company name** | **Yes/No** | **Comments**  |
| Qualcomm | May be no | I think SA5 spec defines three different metrics, with different granularity per DRB, per 5QI, and per S-NSSAI, where later two are optionally supported. Therefore, I am not sure whether we need to add the proposed change to TS 38.314.  |
| Samsung | No strong view | We understand the granularity is per DRB per UE to support MDT use cases. But if it is specified in 28.552 as in cover page, it is just editorials not essential correction. Though we do not see a need to have it, we are OK to follow the majority. |
| Huawei, HiSilicon | May be no | We understand that TS 28.552 only defines UE throughput measurements per mapped 5QI/QCI, and it is missing UE throughput measurements per DRB. So the change is to add the missing part in TS 38.314.However, in section 4.1 in TS 38.314, it has been defined:*All the per DRB per cell measurements and per DRB per UE measurements can be aggregated into per QoS level per cell and per PLMN ID per cell by network implementation. All the performance measurements for gNB defined in TS 28.552 [2] 5.1 can be calculated into per PLMN ID level by network implementation. Per QoS level refers to per mapped 5QI for NR SA or per QCI for EN-DC.*We think that the highlighted part means the network can use per DRB per UE measurement to get per QoS level measurements, so the TS 28.552 definitions should be enough. In addition, if the change is going to be agreed in RAN2, we are afraid that there may be more similar changes in future RAN2 meeting, e.g. measurement X has been defined in TS 28.552 and it is per mapped 5QI/QCI, and then a sentence “measurement X defined in TS 28.552 is per DRB per UE” is to be added in TS 38.314. |
| Apple | No | Isn’t this in RAN3 scope? |
| ZTE | No | We also think TS 28.552 is enough. |
| CATT | No | F1-U Packet Loss Rate is not in RAN2 scope, and we do not think it is necessary to specified it in 38.314. |
| vivo | No | The correction is not essential and out of RAN2 scope. |

**Rapporteur Summary:**

To be added later

# 4 Conclusion

To be added later.

# 5 References

1. R2-2108304 On corrections to packet loss rate measurements, Ericsson, RAN2#115-e meeting, August 2020.