3GPP TSG-RAN WG3 Meeting #124 R3-243778

Fukuoka, Japan, 20 – 24 May, 2024

**Agenda item: 8.3**

**Source: Nokia - moderator**

**Title: Summary of Offline Discussions on Improved KPIs**

**Document for: Approval**

# 1 Introduction

**CB: # 7\_ImprovedKPIs**

**- Check the S-TMSI issue and the feasibility**

**- Provide LS on misalignments between TS 28.552 and TS 28.558, RAN3 will not update the reference till the misalignments are solved**

(moderator - Nokia)

Summary of offline disc R3-243778

# 2 For the Chairman’s Notes

# 3 Discussion

In their LS related to improved KPIs that involve end-to-end data volume transfer time analytics, SA5 informed RAN2 and RAN3 that even though RAN specs (e.g., TS 37.320, TS 38.314) refer to TS 28.552 in the definitions of certain MDT measurements, all of the NG-RAN UE level measurements defined in draft TS 28.558 have been already supported by the MDT for NR (TS 37.320).

Towards this end, SA5 requested RAN2 and RAN3 to take this into account and consider future update of the references in relevant RAN TSs once the TS 28.558 is published.

After checking TS 28.558, RAN3 identified some issues that should be addressed before references of RAN specifications are updated.

## 3.1 Missing M4 measurement and other misalignments between TS 28.558 and TS 28.552

TS 37.320 refers to TS 28.552 for M4 measurement:

⁻ M4: PDCP SDU Data Volume measurement separately for DL and UL, per DRB per UE, see TS 28.552 [17].

There are two measurements in TS 28.552 that may have relevance:

* “DL PDCP SDU Data Volume” and “UL PDCP SDU Data Volume” in subclause 5.1.3.6.2 “PDCP SDU data volume Measurements”, or
* “Total number of UL PDCP SDU Packets” and “Total number of DL PDCP SDU Packets in gNB-CU-UP” in subclause 5.1.3.10 “Packet measurements”

While the first set of measurements is defined *per PLMN ID*, the second set supports "only user-plane traffic (DTCH) and only PDCP SDUs that have entered PDCP (and given a PDCP sequence number)”. It is therefore not clear which metric definition in TS28.552 should be referenced from TS 37.320 as measurement M4: PDCP SDU Data Volume measurement separately for DL and UL, per DRB per UE.Alternatively, a resolution could be to follow the SA5 guideline to update all the references in TS 37.320 for metrics M4-M7 to TS28.558.However, the definition of M4 measurement is missing from TS 28.558 [1], [3].

Furthermore, there seems to be a possible misalignment between TS 28.558 and TS 28.552 with respect to the entity that performs the measurements:

* The “Average delay DL air-interface” is measured by the gNB-DU in TS 28.552 and by NRCellCU (for non-split and 2-split scenario) and GNBCUUPFunction (for 3-split scenario) in TS 28.558 [1], [3]
* The “Average delay DL in gNB-DU” is measured by the gNB-DU in TS 28.552 and by NRCellCU (for non-split and 2-split scenario) and GNBCUUPFunction (for 3-split scenario) in TS 28.558 [1], [3].
* The “UL PDCP SDU Loss Rate” is measured by the GNBCUUPFunction and NRCellCU in TS 28.552 and by GNBCUUPFunction in TS 28.558 [1].

**Q1. Companies are asked to confirm the need to update the missing M4 measurement and correct the misalignments with respect to the entity that performs the measurements in TS 28.558 as described in section 3.1.**

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## 3.2 S-TMSI feasibility

During the online discussion, some companies raised concerns regarding the feasibility of using S-TMSI as a UE identifier in TS 28.558 for every NG-RAN UE measurement. [1] discusses that according to their understanding S-TMSI is a short lived identifier that may change during the course of an MDT session and cannot be identified in the OAM. In addition, [1] mentions that S-TMSI is not available in the gNB-DU or in the gNB-CU-UP. During the online discussion another issue was raised, whether gNB-CU-CP would keep S-TMSI information.

**Q2. Companies are kindly asked to provide their views on the feasibility of S-TMSI as a UE Identifier for each of the NG-RAN UE level measurement definitions in TS 28.558.**

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# 4 Conclusion, Recommendations [if needed]

If needed

# 5 References

[1] [R3-243488](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_124%5CDocs%5CR3-243488.zip), Discussion on Improved KPIs, Nokia

[2] [R3-243489](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_124%5CDocs%5CR3-243489.zip) [Draft] Reply LS to SA5 on improved KPIs involving end-to-end data volume transfer time analytics, Nokia

[3] [R3-243504](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_124%5CDocs%5CR3-243504.zip) Further discussion related to the Reply LS on improved KPIs, Ericsson, CATT

[4] [R3-243505](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_124%5CDocs%5CR3-243505.zip) Reply LS on improved KPIs, Ericsson, CATT