3GPP TSG SA WG4#115-e meeting TDoc S4-211132

E-meeting, 18th – 27th Aug 2021

**Title: [Draft] Reply LS on QoE configuration and reporting related issues**

**Response to: S4-211059/R2-2106776**

**Release: R17**

**Work Item: NR\_QoE-Core**

**Source: TSG SA WG4**

**To: TSG RAN WG2,**

**Cc: TSG RAN WG3, TSG SA WG5**

**Contact person: Qi Pan**

**panqi8@huawei.com**

**Send any reply LS to: 3GPP Liaisons Coordinator,** [**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

**Attachments:** none

# 1 Overall description

3GPP TSG SA WG4 (SA4) would like to thank 3GPP TSG RAN WG2 (RAN2) on the LS on QoE configuration and reporting related issues.

On your questions about the maximum container size for one QoE measurement configuration or report, SA4 would like to give the answers together.

*Issue 3: The maximum container size for one QoE measurement configuration*

*RAN2 assumes to re-use the maximum container size of 1000 bytes for QoE measurements configuration which is the same as in LTE. RAN2 would like SA4 to confirm the assumption.*

*Issue 4: The maximum container size for one QoE report*

*RAN2 discussed how to report QoE measurements in RRC layer, e.g. whether multiple QoE reports could be included in one RRC message. RAN2 discussed whether to re-use from LTE the maximum container size of 8000 bytes for one QoE report and would like to check with SA4 whether the maximum container size for one QoE report could go beyond 8000 bytes in NR?*

The current limits were defined based on the then-existing QoE metrics from the MTSI and Streaming services. While there could be no hard guarantees, it was seen as unlikely that these limits would be exceeded, except for rare cases. Currently any QoE container exceeding the size limit is simple discarded, under the assumption that these discard are very rare.

However, more advanced networks, such as NR, makes it even more relevant to use more advanced immersive services, such as Virtual Reality (VR). These services have much more complex metrics (defined in TS 26.118, clause 9), and there is a higher risk that both the configuration and the reporting size limits might be exceeded.

As a test case, SA4 evaluated the implementation of one possible VR metric, and with reporting every ten minutes the resulting zipped report container was then about 18kB large. Although that metrics can be configurated in different ways, it illustrates that newer services can in some cases produce larger reports

Unfortunately it is diffcult to specify a certain (higher) limit which would always be enough for these services, as (especially) the QoE report size is dependent on things like user head movements etc., thus the only safe way forward is to use data segmentation.

While defining a new application-level QoE segmentation protocol would in principle be possible, SA4 understands that RRC segmentation is already available in NR. As the amount of QoE data sent will be the same irrespective if any segmentation is done in the application or at the RRC level, SA4 proposes that the current size limits are removed, and that RRC segmentation is used in the (still rare) cases where a QoE configuration or report exceeds the PDCP size limit.

Note that removing the size limits does not imply that QoE data in general will be more bulky, as the QoE data collection is still done in exactly the same way. But using the existing NR RRC segmentation functionality would handle the odd cases of slightly larger data, without adding any further complexity to the QoE architecture.

# 2 Actions

**ACTION:**

**To** **RAN2**

SA4 kindly asks RAN2 to take the above information into account and provide feedback if any.

# 3 Dates of next TSG SA WG 4 meetings

SA4#116-e 15 – 19 November 2021 E-Meeting

SA4#117 14 – 18 February 2022 Sophia Antipolis, FR