**3GPP TSG-RAN WG3 Meeting #117-bis-eR3-225897**

**Online, Oct 10th – 18th 2022**

Agenda Item: 9.2.1

Source: Huawei (moderator)

Title: CB: # 4\_RVQoE - Summary of email discussion

Document for: Approval

# Introduction

**CB: # 4\_RVQoE**

**- Take reply LS from SA4 into account**

**- Stage2 updates?**

**- Focus on the questions from RAN2, and provide reply LS to RAN2**

(HW - moderator)

[NWM] Summary of offline disc [R3-225897](Inbox\R3-225897.zip)

The discussion will have two phases. The deadline for providing replies to Phase 1 is **Thursday, Oct 13th at 8:00 am UTC.**

# For the Chairman notes

**TBW**

# First round Discussion

## Measurement periodicity for RAN visible QoE

This issue relates to Q1 from the RAN2 LS and the answer provided by SA4 LS [1].

A couple of contributions are submitted to address the issue. In general, the proposals can be concluded as:

**Solution 1 ([2], [3])**: UE APP layer measurement behavior should not be impacted. OAM is required to explicitly signal the integer n value to NG-RAN to assist design the buffer level reporting periodicity.

**Solution 2 ([3], [4], [5], [6])**: Change the UE application layer measurement behavior.

* **Solution 2.1 ([4])**: Add new parameter with fixed value for the periodicity of the measurement
* **Solution 2.2 ([5], [6])**: Calculate periodicity of measurement based on the reporting interval

It is noted that, there is also a CR [8] submitted, which relates to the result of this discussion and will be treated in the second round if needed.

**Q1.1: Which direction do you prefer, Solution 1 or Solution 2 ?**

**Q1.2: If Solution 2 is preferred, which detailed solution do you prefer, solution 2.1 or solution 2.2?**

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| **Company** | **Answer** | **Comment** |
| Huawei | Solution 1 | Buffer level is one of the QoE metrics that is collected in a RAN visible way, where the measurement periodicity is decided by OAM. Although SA4 in their LS gave suggestions which impact the UE APP layer measurement behaviour, SA4 clearly said it defers to RAN3 to making decision. Moreover, whether it is acceptable to change the measurement behaviour should not be answered by SA4. In our view, it increases the burden of UE application layer, which is forced to carry extra measurement jobs, and is not desired.  Instead, we can let OAM signal the n value to NG-RAN, so RAN can correspondingly configure the reporting periodicity which is not smaller than the recording periodicity |
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**Summary:**

## Indication of PDU Session ID in RVQoE reports

Contribution [2] suggests PDU session ID(s) should be mandatory in the signalling, as it is simple. While [3], [4] and [6] prefer to keep it as optional. To not repeat the same discussion in the last meeting and try to progress this remaining issue, the moderator would like to first check companies’ views on the following question.

**Q2.1: Do you acknowledge that no matter which solution to take, we need to make sure RAN side can have enough knowledge to link each RAN visible QoE report and its corresponding PDU session ID?**

**Q2.2: If the answer to Q2.1 is yes, and it is preferred to keep PDU session ID as optional, how to make sure the goal in Q2.1 is achieved, e.g. like proposed in [4], it should be provided at least in the first RVQoE report sent to the RAN node during a session, and in the last RAN visible QoE report of the session.**

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| **Company** | **Answer** | **Comment** |
| Huawei | Yes to Q2.1 | The goal is we need to make sure RAN side can have enough knowledge to link each RAN visible QoE report and its corresponding PDU session ID. And for this reason, we think make it as mandatory is the simplest solution.  In the meanwhile, if we include it in the first RAN Visible QoE report and the last RAN Visible QoE report of the session, it cause problems in handover scenario. In case of a handover, the UE APP layer will not realize a handover happens, and UE will not report the PDU session ID to the new RAN node, so the new RAN node has no ability to link the PDU session ID and corresponding RAN Visible QoE report. |
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**Summary:**

## Separate sending of regular QoE and RAN Visible QoE reports

Contributions [2], [3], [4] and [6] have proposals relates to this remaining issue, while it seems companies still not have the same understanding. In [6], it observes the agreement at RAN3#115-e and the corresponding specification focuses on different points and are not contradictory with each other. While in [4], it proposes to change the text of TS 38.300 so it becomes ‘If there is no reporting periodicity defined in the RAN visible QoE configuration, RAN visible QoE reports can be sent together with the non-RAN visible QoE reports.’ Anyway, we RAN3 should have a consistent understanding before replying to RAN2.

**Q3: In case the RAN Visible QoE reporting periodicity is not explicitly configured, it is up to UE implementation (option 1), or the RAN Visible QoE reports and legacy QoE reports are always sent together from the UE App layer to the UE AS layer (option 2)?**

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| **Company** | **Answer** | **Comment** |
| Huawei | Option 2 | we believe RAN visible QoE reports being sent together with legacy QoE reports is the most natural and straightforward solution. Application layer measures all the QoE metrics including the ones visible to RAN according to the measurement periodicity indicated in the configuration container, and then sends the QoE measurement result to UE AS layer whenever the measurement result is available. If no RAN visible QoE reporting periodicity is configured, the results are sent together. |
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**Summary:**

# References

1. R3-225328, Reply LS on questions on RAN visible QoE (SA4)
2. R3-225687, Further discussion on RAN visible QoE (Huawei)
3. R3-225429, Discussion on RAN visible QoE (Samsung)
4. R3-225336, [Draft] LS Reply to Questions on RAN Visible QoE (Ericsson)
5. R3-225771, Discussion of RAN2 LS on questions on RAN visible QoE (CATT)
6. R3-225817, Discussion on RAN visible QoE open issues (ZTE)
7. R3-225688, [DRAFT] Relpy LS on questions on RAN visible QoE (Huawei)
8. R3-225818, draft CR to 38.300 on RAN visible QoE (ZTE)