3GPP TSG-RAN WG3 Meeting #111-e R3-211012

E-meeting, 25 January – 4 February, 2021

**Agenda item: 15.2**

**Source: Nokia (moderator)**

**Title: CB: # NRQoE2-Mobility - Summary of email discussion**

**Document for: Approval**

# 1 Introduction

This paper provides summary of discussions at RAN#111-e on:

**CB: # NRQoE2-Mobility**

**- Remove FFS on “Management-based QoE measurement shall not overwrite a corresponding signalling-based existing configuration”?**

**- Whether to exchange management-based QoE measurement configuration between source and target at mobility? No, CATT, Nokia, ZTE, HW, CMCC**

**- Framework type indication at mobility?**

**- How to support supporting QoE measurements in mobility scenarios fulfilling SA4 requirements i.e., avoid stopping a QoE measurement for an ongoing session, even if the UE moves across area boundaries?**

**- Sending the release command to the UE upon the UE’s moving outside the configured area for QoE measurement?**

**- Support inter-RAT mobility in R17? Support inter-system mobility in R17? If yes, how to support? How to handle the case when the target RAT/system does not support QoE measurement signalling?**

**- Support MR-DC scenario in R17? If yes, how to support?**

**- Capture agreements as TP for TR**

(Nok - moderator)

**If possible, please provide comments for phase 1 by Friday, Jan. 28, EOB so we can check whether clear phase 1 agreements can be formulated and in that case also start preparing phase 2 (TP for the TR) before the online session on Tuesday, Feb. 2.**

# 2 For the Chairman’s Notes

[To be completed]

# 3 Discussion

## 3.1 Phase 1

### 3.1.1 Issue 1 - Measurement reporting continuity in intra-RAT mobility scenarios

The following questions captured by the chairman relate to measurement reporting continuity in intra-RAT mobility scenarios. These questions are:

**- Q1: Whether to exchange management-based QoE measurement configuration between source and target at mobility? No, CATT, Nokia, ZTE, HW, CMCC**

**- Q2: How to support ~~supporting~~ QoE measurements in mobility scenarios fulfilling SA4 requirements i.e., avoid stopping a QoE measurement for an ongoing session, even if the UE moves across area boundaries?**

**- Q3: Sending the release command to the UE upon the UE’s moving outside the configured area for QoE measurement?**

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| Company | Comment |
| Nokia | Q1: no.  Q2: measurement reporting continuity covering both inter-node mobility and idle mode transitions can be fulfilled based on s-based QoE.  Q3: not needed. The RRC layer in the UE is aware of the area scope, and the application client session will not be able to handle such release command. |
| Qualcomm | Q1: No. To keep it simple and avoid handling the prioritization of signaling based QoE over management based QoE, we propose to not exchange management based QoE context upon handover. OAM can configure a new management based QoE to NG-RAN if needed.  Q2: RAN2 is discussing this. UE should be configured with the allowed area config or a WithinArea indication to decide whether it should perform QoE measurements for new application sessions upon moving into a new area. UE APP layer doesn’t stop QoE measurements for ongoing APP sessions and UE AS will report it even if it has moved across area boundaries (satisfies SA4 requirement by default)  Q3: Not needed. Same view as Nokia |
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### 3.1.2 Issue 2 - Measurement reporting continuity in inter-RAT mobility scenarios

**- Support inter-RAT mobility in R17? Support inter-system mobility in R17? If yes, how to support? How to handle the case when the target RAT/system does not support QoE measurement signalling?**

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| Company | Comment |
| Nokia | We should ideally support reporting continuity in intra-system inter-RAT HO scenario in Rel-17, but feasibility depends on decision taken for NR QoE, e.g. support of multiple QoE reporting configurations, which may be not straight-forward to propagate to LTE QoE. |
| Qualcomm | We also agree to support intra-system inter-RAT scenario if feasible. FFS on how E-UTRAN will handle multiple QoE configuration and RAN visible QoE (if agreed) upon inter-RAT context transfer.  Deprioritize inter-system scenarios (signalling needed over NG and S1) |
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### 3.1.3 Issue 3 - Management-based QoE configuration overwriting a corresponding signalling-based existing configuration

**- Remove FFS on “Management-based QoE measurement shall not overwrite a corresponding signalling-based existing configuration”?**

**- Framework type indication at mobility? (i.e., “signalling based” or “management based”)**

Discussion can be found in (at least) 0529 and 0847. Do we need any solution to avoid that a new management-based QoE configuration overwrites a signalling-based configuration? Comment on the solution proposed in 0529? Any other solution? The topic has mobility impact but also seems linked to whether to support or not multiple QoE configurations in the UE which might be in the scope of the CB NRQoE3-RANConfig\_Report.

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| Company | Comment |
| Nokia | This may not be an issue with m-based QoE limited to intra-node mobility, and stopping at transition to idle mode. |
| Qualcomm | Issue will not exist if we don’t transfer management based QoE context with mobility. |
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### 3.1.2 Issue 4 - MR-DC scenario

**- Support MR-DC scenario in R17? If yes, how to support?**

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| Company | Comment |
| Nokia | QoE measurements are done at application layer which will not be aware of AS configuration like MR-DC. It is up to RAN2 whether to support measurement configuration and reporting on SRB3. |
| Qualcomm | Don’t support MR-DC scenario in R17.  QoE configuration and reporting in MR-DC involves considering multiple things such as  • For MR-DC, can MN and SN both be allowed to configure QoE measurements to UE (at same time?) or only node should be allowed? If only one node, which one?  • For MR-DC, can UE send QoE reports to SN directly via SRB3 or indirectly via MN?  Also considering QoE is application layer measurement, it does not matter which node (MN or SN) configures the QoE as the objective is not to optimize anything at RAN. Unless there is a requirement to optimize MN and SN separately, say for the case of RAN visible QoE, there is no immediate use case.  Propose to deprioritize this. |
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## 3.2 Phase 2 - TP handling

TBD

# 4 Conclusion, Recommendations [if needed]

If needed

# 5 References

[1] R3-21xxxx, Title, Company