3GPP TSG-RAN WG2 Meeting #118-e R2-220XXXX

Electronic Meeting, 9 May – 20 May 2022

**Agenda item: 6.14.4**

**Source: CMCC**

**Title: Report for** **[AT118-e][080][QoE] UE capabilities (CMCC)**

**WID/SID: NR\_QoE**

**Document for: Discussion and Decision**

# Introduction

This document captures the following UE capabilities discussion:

* [AT118-e][080][QoE] UE capabilities (CMCC)

 Scope: Treat R2-2205944, R2-2204849. Determine agreeable parts. Update CR to reflect agreeable part and agree CR.

 Intended outcome: Report, Endorsed CR(s) for merge

 Deadline: CB W2 Wed (if needed), CR can be finally agreed in a post-meeting disc.

**Contact List**

|  |  |  |
| --- | --- | --- |
| Company | Name | Email |
| Lenovo | Hyung-Nam Choi | hchoi5@lenovo.com |
| Apple | Ping-Heng Wallace Kuo | pingheng\_kuo@apple.com |
| CATT | Ni Chunlin | nichunlin@catt.cn |
| Huawei, HiSilicon | Jun Chen | jun.chen@huawei.com |
| China Unicom | Shuai Gao | gaos30@chinaunicom.cn |
| ZTE | Liu Yansheng | Liu.yansheng@zte.com.cn |
| Ericsson | Cecilia Eklöf | cecilia.eklof@ericsson.com |
| Nokia | Malgorzata Tomala | malgorzata.tomala@nokia.com |
| Intel | Ziyi Li | Ziyi.li@intel.com |
| Samsung | Seungbeom | s90.jeong@samsung.com |

# Discussion

## Minimum memory size for QoE paused measurements report

As suggested in [1], the agreement that minimum memory size of QoE paused measurement reports is 64KB should be captured in TS 38.306, as a conditionally mandatory feature without UE radio access capabilities parameters. Therefore, the following change is proposed:

| Features | Condition |
| --- | --- |
| Acquisition of SI messages with explicit SI window positions | It is mandatory to support acquisition of SI messages with explicit SI window positions for UEs which support the SIB types in *schedulingInfoList2* as specified in TS 38.331 [9]. |
| AS layer memory size for QoE paused measurement reports | It is mandatory to support the minimum AS layer memory size of 64KB for QoE paused measurements reports for UEs which support *qoe-Streaming-MeasReport-r17*, *qoe-MTSI-MeasReport-r17* or *qoe-VR-MeasReport-r17*. |

**Q1: Do you agree with the change above？**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes or no** | **Comments** |
| Lenovo | Yes | Proponent |
| Apple | Yes | We are fine to have this addition in order to capture the agreement. |
| CATT | Yes | We support this change |
| Huawei, HiSilicon | Yes |  |
| China Unicom | Yes |  |
| ZTE | Yes |  |
| Ericsson | Yes |  |
| Nokia | Yes | Fine to follow UE vendors acceptable value |
| Intel | Yes | Fine to follow UE vendors acceptable value |
| Samsung | Yes |  |

Summary for Q1:

10 of 10 companies agree to capture the agreement that minimum memory size of QoE paused measurement reports is 64KB in TS 38.306.

**(10/10) Proposal 1: Agree to capture the minimum AS layer memory size of QoE paused measurement reports as a conditionally mandatory feature without UE radio access capabilities parameters in TS 38.306.**

## Correction on RAN visible QoE

In [2], it is suggested that since RAN3 agreed the RAN visible QoE metrics is a subset of legacy QoE metrics, the dependency of RAN visible QoE and the corresponding legacy QoE should be clarified. And the following changes are proposed:

| Definitions for parameters | Per | M | FDD-TDD DIFF | FR1-FR2 DIFF |
| --- | --- | --- | --- | --- |
| ***qoe-Streaming-MeasReport-r17***Indicates whether the UE supports NR QoE Measurement Collection for streaming services, see TS 26.247 [29]. | UE | No | No | No |
| ***qoe-MTSI-MeasReport-r17***Indicates whether the UE supports NR QoE Measurement Collection for MTSI services, see TS 26.114 [30]. | UE | No | No | No |
| ***qoe-VR-MeasReport-r17***Indicates whether the UE supports NR QoE Measurement Collection for VR services, see TS 26.118 [31]. | UE | No | No | No |
| ***ran-VisibleQoE-Streaming-MeasReport-r17***Indicates whether the UE supports RAN visible QoE Measurement Collection for streaming services. A UE supporting this feature shall also support *qoe-Streaming-MeasReport-r17*. | UE | No | No | No |
| ***ran-VisibleQoE-VR-MeasReport-r17***Indicates whether the UE supports RAN visible QoE Measurement Collection for VR services. A UE supporting this feature shall also support *qoe-MTSI-MeasReport-r17*. | UE | No | No | No |
| ***ul-MeasurementReportAppLayer-Seg-r17***Indicates whether the UE supports RRC segmentation of the MeasurementReportAppLayer message in UL, as specified in TS 38.331 [9]. | UE | No | No | No |

**Q2: Do you agree with the change above?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Yes or no** | **Comments** |
| Lenovo | Yes but | In the description of ran-VisibleQoE-VR-MeasReport-r17 the reference to qoe-MTSI-MeasReport-r17 is wrong. On the actual changes we prefer to say:***ran-VisibleQoE-Streaming-MeasReport-r17***“A UE indicating support of *ran-VisibleQoE-Streaming-MeasReport-r17* shall indicate support of *qoe-Streaming-MeasReport-r17*.”***ran-VisibleQoE-VR-MeasReport-r17***“A UE indicating support of *ran-VisibleQoE-VR-MeasReport-r17* shall indicate support of *qoe-VR-MeasReport-r17*.” |
| Apple | Yes (with correction) | We prefer the original wordings in R2-2205944. However, there is a typo that should be corrected: ***ran-VisibleQoE-VR-MeasReport-r17***Indicates whether the UE supports RAN visible QoE Measurement Collection for VR services. A UE supporting this feature shall also support *qoe-~~MTSI~~VR-MeasReport-r17*. |
| CATT | Yes(with correction) | Share with Apple on this addition in 38.306. But in 38.331, we don’t reflect this dependency when specify this capability. Do we need to change RVQOE capability from optional to condition? [Lenovo2] In ASN.1 need codes and conditions are applied only for DL. So, no change is needed in 38.331. |
| Huawei, HiSilicon | Yes | Agree with Apple that the typo should be corrected. |
| China Unicom | Yes | Agree with the Apple about the correction in 38.306. In 38.331, we share the same view with CATT to consider changing RVQoE capability from optional to conditional.[Lenovo2] In ASN.1 need codes and conditions are applied only for DL. So, no change is needed in 38.331. |
| ZTE | Yes | Agree with apple’s correction. |
| Ericsson | Yes | We prefer the original version plus Apple’s correction. |
| Nokia | Yes | In principle acceptable |
| Intel | Yes | We are fine with the original wording in R2-2205944 plus Apple’s correction, as original text is more aligned with current wording used in TS38.306. For example: |
| Samsung | Yes | Agree with apple’s correction. |

Summary for Q2:

10 of 10 companies agree to declare the dependency of RAN visible QoE and the relevant legacy QoE in TS 38.306. In Q2, companies discussed on the wording of description for RVQoE definitions and whether the RVQoE capability is optional or conditional.

For the definition of the capabilities, 9 of 10 companies prefer the description for RVQoE definitions in [2] with typo correction. So, moderator suggests to follow the majority view to apply the definitions in [2] with typo correction.

CATT and China Unicom suggested to consider changing RVQoE capability from optional to conditional in TS 38.331. But Lenovo thought that in ASN.1, need codes and conditions are applied only for DL. Based on the above information, moderator suggests to not change the optional field for RVQoE capability in TS 38.331.

**(9/10) Proposal 2: The definitions for RVQoE parameters are changed to the following:**

1. ***ran-VisibleQoE-Streaming-MeasReport-r17*: Indicates whether the UE supports RAN visible QoE Measurement Collection for streaming services. A UE supporting this feature shall also support *qoe-Streaming-MeasReport-r17*.**
2. ***ran-VisibleQoE-VR-MeasReport-r17*: Indicates whether the UE supports RAN visible QoE Measurement Collection for VR services. A UE supporting this feature shall also support *qoe-VR-MeasReport-r17*.**

# Summary

The summary provides following proposals.

**Easy agreement:**

**(10/10) Proposal 1: Agree to capture the minimum AS layer memory size of QoE paused measurement reports as a conditionally mandatory feature without UE radio access capabilities parameters in TS 38.306.**

**(9/10) Proposal 2: The definitions for RVQoE parameters are changed to the following:**

* + - 1. ***ran-VisibleQoE-Streaming-MeasReport-r17*: Indicates whether the UE supports RAN visible QoE Measurement Collection for streaming services. A UE supporting this feature shall also support *qoe-Streaming-MeasReport-r17*.**
1. ***ran-VisibleQoE-VR-MeasReport-r17*: Indicates whether the UE supports RAN visible QoE Measurement Collection for VR services. A UE supporting this feature shall also support *qoe-VR-MeasReport-r17*.**

# References

1. R2-2204849 Introduction of AS layer memory size for QoE paused measurement reports, Lenovo
2. R2-2205944 Correction on QoE capabilities dependencies, Huawei, HiSilicon