**3GPP TSG-RAN WG3 Meeting #116-e R3-22xxxx**

**E-meeting, 09 May – 19 May 2022**

Agenda Item: 9.1.4.1

Source: Huawei (moderator)

Title: Summary of Offline Discussion on CB: # QoE2\_Stage3

Document for: Discussion and Decision

# Introduction

**CB: # QoE2\_Stage3**

**- TS38.413: Discussion on QMC capability IE, e.g., whether to include explicitly over NG, whether RVQoE capability is needed, whether segmentation IE is needed, add text about how AMF use the QMC capability information? Align the IE name and wording between NG and Xn? Align the IE name of RVQoE metrics with 38.331? Update some semantic descriptions, e.g., QoE Reference, QMC configuration information? Add references for some specifications, e.g, 26.114, 26.118? Correction on the IE type and reference of Measurement Configuration Application Layer ID? Separate the NGAP QMC Configuration Information IE into two separate IEs, respectively for s-based activation (QMC Activation IE) and NG mobility (QMC context IE)? The Cell ID List for QMC IE within the Area Scope of QMC IE should only include the NR CGI? Other?**

**- TS38.423: Align the IE name and description with NGAP? Correction on the IE type and reference of Measurement Configuration Application Layer ID? Add references for some specifications, e.g, 28.405, 26.114, 26.118? Align the IE name of RVQoE metrics with 38.331? Change the presence of Measurement Configuration Application Layer ID into Optional? Other?**

**- TS38.473: Add definition for RVQoE measurements? Change the F1AP procedure name? Identify RVQoE report information over F1 using QoE Reference or short RRC id (measConfigAppLayerId)? Convey RVQoE report information over F1 using the RRC RAN-VisibleMeasurements-r17 IE? Other?**

**- Capture agreements and provide CRs if agreeable**

**(HW - moderator)**

Summary of offline disc

# For the Chairman’s Notes

**For chairlady to copy:**

Detailed discussions

First round

**Capability info transfer over NG**

**Missing info for RAN visible QoE metric report over F1**

**Whether to introduce QMC context IE over Xn to differentiate from QMC configuration IE over NG**

**IE naming**

**Miscellaneous corrections**

Second round

During second round discussion,

# Discussion

The discussion will try to cover all the proposals listed in the contributions, as indicated in guidance from chairlady for this CB, there are mainly the following issues: capability info transfer over NG, IE naming alignment, missing info for RAN visible QoE metric report over F1, to introduce QMC context IE to differentiate from QMC configuration IE over NG and Xn and miscellaneous corrections including mandatory or optional, range correction, reference addition, etc..

## Capability info transfer over NG

As could be seen in [6] [8] [11], there are mainly two issues here, one is remaining open issue which is about whether there is a need to include capability of RRC segmentation of the QoE measurement reporting over NG, the other is whether to remove capability of RAN visible QoE measurement over NG which was agreed in last meeting

### Whether to include capability of RRC segmentation of the QoE measurement report over NG

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| --- | --- | --- |
| Company | Yes/No | Comment |
| CATT | Yes( if AMF is responsible for the capability match.)  No(if RAN is responsible for the capability match) | If the AMF is responsible for the capability match, the capability of the ul-MeasurementReportAppLayer-Seg, should be provided to AMF together with legacy QoE capability. So the AMF can match the QMC consider all capability features. Otherwise the RAN should further match the QMC according the UL seg capability.  If the RAN is responsible for the capability match as specified as SA5, all the capability information don’t need to be explicitly transferred to AMF. It is already included in RAN2 specified NR radio capability information. |
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### Whether to remove capability of RAN visible QoE measurement over NG

Moderator’s Note: if yes to 3.1.1, please companies continue to share your view on the presence of container.

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| Company | Yes/No | Comment |
| CATT | Yes |  |
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## Missing info for RAN visible QoE measurement report over F1

As discussed in [2] and changes in [5], here the main issue is, if the current info over F1 is enough for gNB-DU to associate the received RAN visible QoE measurement report with a specific DRB, so that gNB-DU could take corresponding actions accordingly. It was proposed in [2] that “RAN3 to discuss and agree on identifying RVQoE report information over F1 using QoE Reference or short RRC id (*measConfigAppLayerId*).”, companies are welcome to share views on the following issue:

* **Whether there is any info missing? If yes, what kind of info, QoE Reference, short RRC id (measConfigAppLayerId), or other info?**

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| --- | --- | --- |
| Company | Yes or No  If yes, what info needed | Comment |
| CATT | No | We don’t think there is any benefit from introducing these information. |
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## Whether to introduce QMC context IE over Xn to differentiate from QMC configuration IE over NG

As discussed in [2] and CRs in [3] and [4], the main intention is to differentiate the configuration from CN and the configuration over Xn interface, since there are not exact the same, since the former contains parameters for activation of QMC sessions while the latter carries QMC context information during handover. Note that this change also impacts both NG and Xn.

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| Company | Yes/No | Comment |
| CATT | No strong view | No strong view for the specification optimization from the readable perspective. |
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## IE naming

There are a few proposals to update the IE name in [1] [2] [3] [7] [16]. Moderator tried to list all the proposals below:

1. “QMC Configuration Information” => “QMC Activation” over NG;
2. “QoE Procedures” => “QMC Procedures”, to add “RAN Visible” in the beginning for each QoE related procedure name and IE name, over F1
3. “Buffer Level” => “Application Layer Buffer Level List”, “Playout Delay” => “Playout Delay for Media Startup”, over F1
4. “UE Application Layer Measurement Information” => “UE Application Layer Measurement Configuration Information”, to alignment with Xn over NG
5. “Buffer Level Indication” => “Buffer Level”, “Playout Delay Indication” => “Playout Delay for Media Startup”, over NG
6. “Measurement Collection Entity IP Address” => “MCE IP Address”

Moderator would like each company to share view to each proposal and make comments if needed.

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| --- | --- |
| Company | Yes/No to each item, and comments if any |
| CATT | In general, we agree the wording change for the readability. For 2), I don’t agree to add “RAN visible” for all F1, we may leave it as is for future proof. For 3)and 5), we support this change, we should more clear wording for Playout Delay as proposed. |
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## Miscellaneous correction

There are a few proposals to update the IE name in [9] [10] [11] [12] [13] [14] [15] [17]. Moderator tried to list all the proposals below:

1. To replace Trace with QMC in the semantic descriptions of some tabular, over NG
2. Add references, including 26.114, 26.118 and 28.405, in NG and Xn
3. Update the IE “Measurement Configuration Application Layer ID” from Mandatory to Optional, over Xn
4. To update the range of “measConfigAppLayerID”, (1..16, …) or (0..16, …) or (0..15, …) over NG, similar update to Xn?
5. To clarify that “QMC Configuration Information” and “QoE Measurement Status” apply to both s-based and m-based QoE measurement over NG;
6. To add more definitions, including OAM-QoE measurements/OAM-QoE report/ RAN visible QoE measurements/ RAN visible QoE report, and abbreviations including QMC/MCE/RVQoE/QoE, over NG and Xn
7. NG-RAN CGI => NR CGI or “In this release, this IE only can indicate the NR CGI.”

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| Company | Yes/No to each item, and comments if any |
| **CATT** | Yes 1), 2), 3)  Yes to 4), we need align it with RAN2 i.e (0..15,…) in both NG and Xn  Yes to 5), 7)  For 6), we need further discuss the naming |
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# Conclusion, Recommendations [if needed]

If needed

# References

1. R3-223052, (CR TS 38.473): QoE Rel-17 Corrections (Ericsson) CR0862r, TS 38.473 v17.0.0, Rel-17, Cat. F
2. R3-223128, QMC corrections (Nokia, Nokia Shanghai Bell) discussion
3. R3-223129, Correction on QMC (Nokia, Nokia Shanghai Bell) CR0778r, TS 38.413 v17.0.0, Rel-17, Cat. F
4. R3-223130, Correction on QMC (Nokia, Nokia Shanghai Bell) CR0778r, TS 38.423 v17.0.0, Rel-17, Cat. F
5. R3-223131, Correction on QMC (Nokia, Nokia Shanghai Bell) CR0872r, TS 38.473 v17.0.0, Rel-17, Cat. F
6. R3-223133, Discussion of potential corrections on R17 QoE measurement (China Unicom) discussion
7. R3-223134, CR to TS 38.413 on corrections of QoE configuration (China Unicom, Huawei) CR0779r, TS 38.413 v17.0.0, Rel-17, Cat. F
8. R3-223509, CR to 38.413 for Corrections on NR QoE Capability (CATT) CR0821r, TS 38.413 v17.0.0, Rel-17, Cat. F
9. R3-223510, CR to 38.413 for Corrections on measConfigAppLayerID (CATT) CR0822r, TS 38.413 v17.0.0, Rel-17, Cat. F
10. R3-223511, CR to 38.423 for Corrections on NR QoE (CATT) CR0823r, TS 38.423 v17.0.0, Rel-17, Cat. F
11. R3-223634, Discussion on remaining open issues on R17 QoE measurement (Huawei) discussion
12. R3-223635, CR to 38.413 on corrections to configuration details (Huawei, China Unicom, Qualcomm Incorporated) CR0841r, TS 38.413 v17.0.0, Rel-17, Cat. F
13. R3-223636, CR to 38.423 on corrections to QoE measurement continuity (Huawei) CR0840r, TS 38.423 v17.0.0, Rel-17, Cat. F
14. R3-223661, CR for 38.413 on NR QoE (ZTE) CR0849r, TS 38.413 v17.0.0, Rel-17, Cat. F
15. R3-223662, CR for 38.423 on NR QoE (ZTE) CR0845r, TS 38.423 v17.0.0, Rel-17, Cat. F
16. R3-223050, (CR TS 38.413): QoE Rel-17 Corrections (Ericsson) CR0763r, TS 38.413 v17.0.0, Rel-17, Cat. F
17. R3-223051, (CR TS 38.423): QoE Rel-17 Corrections (Ericsson) CR0769r, TS 38.423 v17.0.0, Rel-17, Cat. F