**3GPP TSG-RAN WG3 Meeting #115-eR3-222440**

**Online, February 21st – March 3rd 2022**

Agenda Item: 15.2.1.2

Source: Ericsson (moderator)

Title: CB: # QoE3\_Configuration\_Report - Summary of email discussion

Document for: Approval

# Introduction

The deadline for providing replies to Phase 1 is **Friday, February 25th at 23.59 UTC.**

**Relevant papers:**

**[Eri1676]** (TP for QoE BL CR for TS 38.300) Stage-2 Aspects of NR QoE Management (Ericsson)

**[Eri2507]** (TP for QoE BL CR for TS 38.413) QoE Configuration and Reporting (Ericsson)

**[Nok2107]** (TP for BL CR to TS 38.413) NGAP rapporteur corrections (Nokia, Nokia Shanghai Bell)

**[CATT2205]** (TP for 38.413) Discussion on NR QoE configuration procedures (CATT)

**[CATT2206]** Discussion on NR QoE configuration details (CATT)

**[Hua2222]** Further discussion on configuration details (Huawei)

**[Hua2223]** TP to 38.413 on configuration details (Huawei)

**[ZTE2365]** (TP to BL CR of TS38.300) Consideration on NR QoE Configuration (ZTE)

A TP for QoE BL CR for TS 38.413 will be drafted based on the outcome of this round.

# For the Chairman notes

**TBW**

# Discussion

## Slice ID in RVQoE report

**[Eri2507]** proposes that a RVQoE report received from the UE can include the S-NSSAI used by the UE during the QoE measurement collection, and to liaise RAN2, SA4 and CT1 to request the signalling support for a slice identifier (S-NSSAI) in the RVQoE report.

**[Hua2222]** and **[CATT2206]** suggest that the indication ofPDU session ID in the RVQoE measurement report is enough and that there is no need to introduce the slice ID.

**Q1: Should the slice identifier (S-NSSAI) be included in the RVQoE report?**

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| **Company** | **Answer** | **Comment** |
| **Ericsson** | **Yes** | In our understanding, the reply LS from SA4 does not indicate that the mapping of an application to a PDU session ID is readily available at the App layer. In our understanding, the App layer could “dig out” the PDU session ID. On the other hand, the S-NSSAI is readily available at the App layer. The DU is the consumer of RVQoE and it knows the mapping between S-NSSAI and DRB ID, where the DRB is what ultimately needs to be modified. |
| Qualcomm | No | SA4 reply LS in S4-211225 clearly states that the application client can identify both the PDU session and S-NSSAI via the AT command as highlighted here. Not sure why application has to “dig” out as E/// has commented above.  ….  *The MSH and the MTSI client are able to identify the PDU session and the corresponding S-NSSAI and DNN, over which the media streaming session or the MTSI call is running. One way to discover the used S-NSSAI is through the +CGDCONT? AT command.*  *….*  Also, NG-RAN should be able to map the PDU session ID to S-NSSAI if needed. Also please note CB#QoE5 also has a similar question, but also discusses QoS flow ID and DRB ID in addition to S-NSSAI. |
| Huawei | No | As already discussed, we think the inclusion of PDU session info would help understand the relation among service type, slice type and PDU session. |
| China Unicom |  | Slice ID can be an option IE for slice related statistic for gNB convenient. |
| CATT | No | Agree with QC that NG-RAN can map the PDU session ID to S-NSSAI, so indication of PDU session ID in the RVQoE measurement report is enough. |
| Samsung | Yes | Agree with E/// |
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## Failure due to interaction with handover

**[CATT2205]** proposes that NG-RAN sends a meaningless UE CONTEXT MODIFICATION RESPONSE to AMF immediately, no matter whether QMC (de)activation is successful or not. If the (de)activation fails, a UE CONTEXT MODIFICATION FAILURE message is initiated to AMF to indicate QMC (de)activation failure due to an interaction with a handover procedure.

**[Eri2507]** proposes to address the scenario of (de)activation failure due to an interaction with a handover procedure in a future release. **[Hua2222]** suggests reusing the existing procedure to indicate QMC (de)activation failure due to an interaction with a handover procedure. No enhancement is needed.

**Q2: Are any enhancements needed to enable the scenario described by [CATT2205]?**

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| **Company** | **Answer** | **Comment** |
| **Ericsson** | **Not in this release** | For Rel-17, it is good enough to assume that the scenario can be avoided by the RAN node configuring the UE with QMC before handing it over. Any other WF at this time would be a hack. |
| Qualcomm | No strong view | Agree with E/// that this could be a corner case scenario and can be avoided by RAN configuring the UE at an appropriate time.  But if we don’t want to initiate UE CONTEXT MODFICATION FAILURE and introduce new cause values informing the AMF upon such a scenario in Rel-17, we should at least have a stage-2 text mentioning that this can be handled via NG-RAN implementation.  Alternatively, we are fine if we handle this via specification support as well as per CATT’s proposal. |
| Huawei | Maybe not | As pointed in our discussion, existing procedure could be reused if this issue is to be recognized and solved. |
| China Unicom | Agree with Ericsson |  |
| CATT | Add text in UE CONTEXT MODIFICATION FAILURE | We do not think it is a corner case as trace activation has considered the interaction with handover. Is there any difference with trace procedures? We shall take the same criteria to judge whether it is a corner case. Actually, Handover procedure is common case and for most of procedures, the description on interaction with handover has been captured in 38.413. So, we think it is a legacy requirement to describe the interaction with handover. So we add the text description for this case.  If the *QMC (de)activation* IE is included in the UE CONTEXT MODIFICATION REQUEST message, the NG-RAN node may initiate UE CONTEXT MODIFICATION FAILURE message due to an interaction with a handover procedure.  There is no ASN.1 IE introduced |
| Samsung |  | Fine with CATT’s proposal |
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## Recording session indication to the NM

**[CATT2205]** proposes to reuse CELL TRAFFIC TRACE NGAP message to provide TR/TRSR from NG-RAN to 5GC. The reason is step 9 in subsection 4.2.1 of TS 28.405, saying that, for m-based QoE, the eNB reports the recording session indication to the NM.

**Q3-1: Should the NG-RAN report the recording session indication to the 5GC?**

**Q3-2: If you answered “yes”, which NGAP message should be used?**

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| **Company** | **Answer** | **Comment** |
| **Ericsson** | **Q3-1:** Liaise SA5.  **Q3-2:** Depends on SA5 answer. |  |
| Qualcomm | Unclear | Is this proposal specific to s-based QoE or or m-based QoE or both? (Not sure why core network needs to be involved at least for m-based QoE)  Also, what is recording session indication? Is this same as the session start/end indication? If not, does NG-RAN need UE to indicate this recording session indication over Uu as well? |
| Huawei | Not sure | We don’t see anything broken so far. |
| China Unicom | **Q3-1: Yes**  **Q3-2: New message** | Since QoE will not reuse the Trace procedure, the TR/TRSR are also different with trace procedure, new message may need to be defined to inform QoE specific information to 5GC. |
| CATT | **Q3-1:agree to LS SA5** | Response to QC, the detail may be found in 28.405. the proposal is only for S-based QoE. For M-based QoE, the recording session indication is sent to OAM directly. |
| Samsung | No | As stated in TS 28.405 for s-based QMC below  8) The application layer sends the AT command +CAPPLEVMR including a recording session indication that indicates that a session is started to the access stratum.  9) The UE sends the message MeasReportAppLayer including the recording session indication to the eNB.  10) The eNB sends a notification including the recording session indication to the NM.  The recoridng session indicaiton is the same as session start/end indication, the eNB will send it to the NM, i.e. OAM, instead of 5GC. |
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## Indicating reporting pause/resume to the MCE

**[CATT2206]** proposes to consult SA5 with respect to sending the pause/resume indication to the MCE. The proposal is based on a TBC from RAN3#114-e.

**Q4: Should RAN3 liaise SA5, asking whether the TS 28.404 requires that pause/resume indication needs to be sent to the MCE?**

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| **Company** | **Answer** | **Comment** |
| **Ericsson** | **Yes** | However, it is unclear what RAN3 should do with this information. |
| Qualcomm | Yes | In addition to pause/resume, we should also check with SA5 whether RAN should indicate to MCE when a QoE configuration has been released. This is important because if MCE doesn’t know when an NG-RAN triggers a QoE release, it might be awaiting QoE reports which will never arrive and cause misunderstanding. |
| Huawei | No |  |
| China Unicom | Yes | The overload situation should be send to MCE to avoid the unnecessary QoE deactivation and to avoid new QoE configuration. Anyway, liaise SA5 is needed. |
| CATT | Yes |  |
| Samsung | Yes but | If it’s to avoid the unnecessary QoE deactivation, the indication should be sent to **OAM instead of MCE**, but we’re fine to liaise SA5 to check which is going to use this indication.  And before that, let’s make thing clear here,  **MCE is responsible for collecting and analysing the QoE report**  **OAM (i.e. NM) is responsible for QoE (de)activation**  Please companies correct me if my understanding is wrong. |
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## Stage-3 details of NGAP signalling

**[Hua2222]** and **[Eri2507]** propose several stage-3 details for NGAP signalling. **[Nok2107]** proposes several rapporteur corrections.

A draft TP for the QOE BL CR for TS 38.413 is uploaded in the CB folder.