3GPP TSG-RAN WG2 Meeting #118e Tdoc R2-22xxxxx

Electronical meeting, May 9th – May 20th, 2022

Agenda: 6.14

Source: Ericsson

Title: Summary of [AT118-e][078][QoE] RRC (Ericsson) for 6.14

Document for: Discussion, Decision

# 1 Introduction

In this document the following offline is discussed:

* [AT118-e][078][QoE] RRC (Ericsson)

 Scope: Take into account online progress, address offline FFSes non-treated proposals, and open RILs. Consider CR proposals, Review Rapporteur CR resolutions. Determine agreeable parts. Update CR to reflect agreeable part and agree CR. LS out acc to agreement

 Consider: R2-2205439, R2-2206119, R2-2206130, R2-2205442, R2-2206129, R2-2205441, R2-2204874, R2-2204875, R2-2205443, R2-2205085, R2-2205087, R2-2205088, R2-2205086

 Intended outcome: Report, LS out, Agreed CR (in the end)

 Deadline: CB W2 Wed (and/or later), CR can be finally agreed in a post-meeting disc.

Contact information:

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# 2 Discussion

This offline discussion addresses issues raised in the referenced contributions, except for issues set to propReject and not flagged, issues already discussed and agreed in online session and editorial corrections which will be merged directly into the correction CR.

[R2-2205439](file:///C%3A%5CUsers%5Cmtk65284%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_118-e%5CDocs%5CR2-2205439.zip) Correction CR for QoE measurements Ericsson CR Rel-17 38.331 17.0.0 3086 - F NR\_QoE-Core Late

* Baseline for further modifications

[R2-2206119](file:///C%3A%5CUsers%5Cmtk65284%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_118-e%5CDocs%5CR2-2206119.zip) RIL List v207 for QoE L.M. Ericsson Limited discussion NR\_QoE-Core

* RIL statuses propAgree, propReject are confirmed, except 4 RILs (id’s are lost).

The RILs that were flagged are H909, I009, N014 and S751.

## 2.1 RIL H088

RIL H088 was discussed in online session with the following agreements:

R2-2205442:

* Keep the procedure text for reporting of buffer level values in RRC specification.
* Inform SA4 that the latest values of the buffer level need to be reported to the AS layer.

R2-2206129:

* FFS if we P1: Specify buffer level measurement sample periodicity within RAN visible QoE configuration.
* FFS if we need to add something to allow receiver to know the order of / timing of measurement samples.

[R2-2205442](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205442.zip), [Discussion on RIL issues H088 and H089 related to RAN visible QoE](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205442%20Ericsson%20Discussion%20on%20RIL%20issues%20H088%20and%20H089%20related%20to%20RAN%20visible%20QoE.docx), Ericsson, RAN2#118e, e, May 2022

[R2-2206129](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2206129.zip), [Clarifications for buffer level reporting (RIL: H088)](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2206129%20Huawei%20Clarifications%20for%20buffer%20level%20reporting%20%28RIL%3A%20H088%29.docx), Huawei, HiSilicon, RAN2#118e, e, May 2022

There is some FFSs related to the sample periodicity of the buffer level values and whether the order and/or timing of the values need to be known by the receiver. One option is to specify UE internal sampling periodicity. Another option is to have the same periodicity for the UE internal sampling as the periodicity in RRC signalling. The list can be used in RRC to avoid the UE having to discard values received from the application.

Question 1: What is your view on:

* Specifying the UE internal buffer level periodicity? Specifying the order and/or timing of the samples received from the application by the AS layer (e.g. in AT command)?
* Alternatively, use the same sampling periodicity for UE internal sampling as the RRC reporting periodicity?

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## 2.2 RIL H089

RIL H089 is related to whether the PDU session ID should be mandatory or optional in RRC signalling. RAN2 agreed:

* TBD if *pdu-SessionIdList* should be mandatory in *MeasurementReportAppLayer* and application layer should always provide at least one PDU session ID in the RAN visible application layer measurement report.

[R2-2205442](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205442.zip), [Discussion on RIL issues H088 and H089 related to RAN visible QoE](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205442%20Ericsson%20Discussion%20on%20RIL%20issues%20H088%20and%20H089%20related%20to%20RAN%20visible%20QoE.docx), Ericsson, RAN2#118e, e, May 2022

[R2-2206130](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2206130.zip), [Corrections for RAN visible QoE (RIL: H089, H090, H909)](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2206130%20Huawei%20Corrections%20for%20RAN%20visible%20QoE%20%28RIL%3A%20H089%2C%20H090%2C%20H909%29.docx), Huawei, HiSilicon, RAN2#118e, e, May 2022

Question 2: Do you think *pdu*-*SessionIdList* should be mandatory in the *MeasurementReportAppLayer* message?

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## 2.3 RIL H054

RIL H054 is related to whether the handling over messages exceeding 144 000 bytes need to be specified.

[R2-2205443](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205443.zip), [Discussion on RIL issues H054 and H094](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205443%20Ericsson%20Discussion%20on%20RIL%20issues%20H054%20and%20H094.docx), Ericsson, RAN2#118e, e, May 2022

Question 3: Do you think that handling of oversized *MeasurementReportAppLayer* message needs to be specified in RRC?

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## 2.4 RIL H094

RIL H094 is related to whether the IE type for the IEs for *pauseReporting*, *transmissionOfSessionStartStop* and *reportPlayOutDelayForMediaStartup* should be BOOLEAN or ENUMERATED {true, false}.

[R2-2205443](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205443.zip), [Discussion on RIL issues H054 and H094](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205443%20Ericsson%20Discussion%20on%20RIL%20issues%20H054%20and%20H094.docx), Ericsson, RAN2#118e, e, May 2022

**[RIL]**: H094 **[Delegate]**: Huawei (Dawid) **[WI]**: QOE **[Class]**: 2 **[Status]**: ToDo **[TDoc]**: None **[Proposed Conclusion]**: v127

**[Description]**: **]**: Since this parameter is mandatory, it has to be sent whenever the QoE configuration is modified. This results in the UE forwarding it to app layer, even though the value has not changed.

**[Proposed Change]**: Make this parameter optional with NEED M.

**[Comments]**: [Ericsson]: Corrected in WI CR, and also the parameters pauseReporting and reportInitialPlayoutDelay.

The types were changed from BOOLEAN to ENUMERATED in order to have the IEs OPTIONAL, so that they do not always have to be signalled and thereby not always forwarded to the application layer.

Question 4: Do you think that the IE types for type for *pauseReporting*, *transmissionOfSessionStartStop* and *reportPlayOutDelayForMediaStartup* should be BOOLEAN or ENUMERATED OPTIONAL?

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## 2.5 RIL H909

RIL H909 is related to whether the last sentence of the field description for *ran-VisiblePeriodicity* needs to be updated.

***ran-VisiblePeriodicity***

The field indicates the periodicity of RAN visible reporting. Value ms120 indicates 120 ms, value ms240 indicates 240 ms and so on. If no value is indicated and the UE is configured with RAN visible reporting, the same periodicity as indicated in the *measConfigAppLayerContainer* is used.

[R2-2206130](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2206130.zip), [Corrections for RAN visible QoE (RIL: H089, H090, H909)](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2206130%20Huawei%20Corrections%20for%20RAN%20visible%20QoE%20%28RIL%3A%20H089%2C%20H090%2C%20H909%29.docx), Huawei, HiSilicon, RAN2#118e, e, May 2022

[R2-2204848](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2204848.zip), [Discussion on NR QoE issues](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2204848%20Lenovo%20Discussion%20on%20NR%20QoE%20issues.docx), Lenovo, RAN2#118e, e, May 2022

The issue was discussed in the online session with the following agreements:

* FFS if RAN2 to confirm that it is left to UE implementation how to send QoE and RVQoE reports to the gNB.
* FFS if RAN2 to agree to replace the RAN3 requirement in stage 2 saying “If there is no reporting periodicity defined in the RAN visible QoE configuration, RAN visible QoE reports should be sent together with the legacy QoE reports” by “If there is no reporting periodicity defined in the RAN visible QoE configuration, the reporting periodicity of the associated QoE measurement configuration shall be applied”.

The current text has some issues as the AS layer is not supposed to be required to decode the container. An option could be to remove the text with the understanding that gNB always configures the periodicity if RAN visible QoE is configured.

Question 5: Do you prefer to keep or remove the last sentence of the field description for *ran-VisiblePeriodicity*? If the text is kept, do you think it needs to be updated and to what in such case?

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## 2.6 RIL I009/N014

RIL I009/N014 is related to setup/release of *AppLayerMeasConfig* and a release mechanism for *rrc-SegAllowed*. For further information see:

 appLayerMeasConfig-r17 AppLayerMeasConfig-r17 OPTIONAL, -- Need M

**[RIL]**: I009 **[Delegate]**: Intel (Sudeep) **[WI]**: **QOE [Class]**: 2 **[Status]**: ToDo **[TDoc]**: None **[Proposed Conclusion]**: v045

**[Description]**: No mechanism to release.

**[Proposed Change]**: Suggest to use SetupRelease.

 **[RIL]**: N014 **[Delegate]**: Nokia(Tero) **[WI]**: QOE **[Class]**: 2 **[Status]**: ToDo **[TDoc]**: None **[Proposed Conclusion]**:

**[Description]**: See I009 - either need code should be Need R or SetupRelease should be added.

**[Proposed Change]**: Add SetupRelease-wrapper.

Question 6: Do you think that SetupRelease or Need R should be used for *AppLayerMeasConfig*?

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## 2.7 RIL S751

RIL S751 is related to the indentation of the text “consider itself to be configured to send application layer measurement report for the *measConfigAppLayerId* in accordance with 5.7.16” in chapter 5.3.5.13d, whether the text should be B3 or B4. The indentation was first changed to B4 in the RRC CR, but then it was commented that the current style B3 is correct. For further information see:

[R2-2205085](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205085.zip), [Correction on UE configuration for QoE (RIL#: S751)](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205085%20Samsung%20Correction%20on%20UE%20configuration%20for%20QoE%20%28RIL#: S751).docx), Samsung, RAN2#118e, e, May 2022

Question 7: Do you think the style should be B3 or B4 for the text “consider itself to be configured to send application layer measurement report for the *measConfigAppLayerId* in accordance with 5.7.16” in chapter 5.3.5.13d?

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## 2.8 Terminology

The naming of “legacy QoE” was discussed online:

* There is support to have more general names for two types of QoE measurements, e.g. OAM-QoE measurements and RAN visible QoE measurements, the exact Name FFS (addressed offline).

There is to support to define names for the two types of QoE measurements.

[R2-2205440](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205440.zip), [Discussion on naming of QoE measurements](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205440%20Ericsson%20Discussion%20on%20naming%20of%20QoE%20measurements.docx), Ericsson, RAN2#118e, e, May 2022

Question 8: What do you think the two types of QoE measurements should be called, such as e.g. OAM-QoE measurements and RAN visible QoE measurements? Do you think QMC should include both “OAM-QoE” and “RAN visible QoE” or only “OAM-QoE”?

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# 3 Conclusion

TBD

# 4 References

1. [R2-2205439](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2205439.zip), [Correction CR for QoE measurements](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.1%5CR2-2205439%20Ericsson%20Correction%20CR%20for%20QoE%20measurements.docx), Ericsson, RAN2#118e, e, May 2022
2. [R2-2206119](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs/R2-2206119.zip), [RIL List v207 for QoE](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.1%5CR2-2206119%20L.M.%20RIL%20List%20v207%20for%20QoE.docx), L.M. Ericsson Limited, RAN2#118e, e, May 2022

1. [R2-2204848](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2204848.zip), [Discussion on NR QoE issues](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2204848%20Lenovo%20Discussion%20on%20NR%20QoE%20issues.docx), Lenovo, RAN2#118e, e, May 2022

1. [R2-2204874](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2204874.zip), [[N024] Correction to storage of application layer measurements during Pause](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2204874%20Nokia%20%5BN024%5D%20Correction%20to%20storage%20of%20application%20layer%20measurements%20during%20Pause.docx), Nokia, Nokia Shanghai Bell, RAN2#118e, e, May 2022

1. [R2-2204875](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2204875.zip), [[N023] Correction to paused application layer measurements reporting](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2204875%20Nokia%20%5BN023%5D%20Correction%20to%20paused%20application%20layer%20measurements%20reporting.docx), Nokia, Nokia Shanghai Bell, RAN2#118e, e, May 2022

1. [R2-2205085](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205085.zip), [Correction on UE configuration for QoE (RIL#: S751)](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205085%20Samsung%20Correction%20on%20UE%20configuration%20for%20QoE%20%28RIL#: S751).docx), Samsung, RAN2#118e, e, May 2022

1. [R2-2205087](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205087.zip), [Further corrections on QoE configuration](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205087%20Samsung%20Further%20corrections%20on%20QoE%20configuration.docx), Samsung, RAN2#118e, e, May 2022

1. [R2-2205088](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205088.zip), [Further corrections on QoE report](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205088%20Samsung%20Further%20corrections%20on%20QoE%20report.docx), Samsung, RAN2#118e, e, May 2022

1. [R2-2205440](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205440.zip), [Discussion on naming of QoE measurements](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205440%20Ericsson%20Discussion%20on%20naming%20of%20QoE%20measurements.docx), Ericsson, RAN2#118e, e, May 2022

1. [R2-2205441](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205441.zip), [Discussion on RIL issue E138 related to handover](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205441%20Ericsson%20Discussion%20on%20RIL%20issue%20E138%20related%20to%20handover.docx), Ericsson, RAN2#118e, e, May 2022

1. [R2-2205442](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205442.zip), [Discussion on RIL issues H088 and H089 related to RAN visible QoE](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205442%20Ericsson%20Discussion%20on%20RIL%20issues%20H088%20and%20H089%20related%20to%20RAN%20visible%20QoE.docx), Ericsson, RAN2#118e, e, May 2022

1. [R2-2205443](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2205443.zip), [Discussion on RIL issues H054 and H094](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2205443%20Ericsson%20Discussion%20on%20RIL%20issues%20H054%20and%20H094.docx), Ericsson, RAN2#118e, e, May 2022

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1. [R2-2206130](https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_118-e/Docs//R2-2206130.zip), [Corrections for RAN visible QoE (RIL: H089, H090, H909)](file:///c%3A%5C3GPP_RAN1%5CRAN2_118e_e%5C6.14.3%5CR2-2206130%20Huawei%20Corrections%20for%20RAN%20visible%20QoE%20%28RIL%3A%20H089%2C%20H090%2C%20H909%29.docx), Huawei, HiSilicon, RAN2#118e, e, May 2022