**3GPP TSG-RAN WG2 Meeting #120 R2-221xxxx**

**Toulouse, France, 14 – 18 November 2022**

**Title: LS on QoE measurements in RRC IDLE/INACTIVE states**

**Response to:**

**Release: Release 18**

**Work Item: NR\_QoE\_enh-Core**

**Source: RAN2**

**To: SA4, SA5**

**Cc: RAN3**

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**Attachments:** **-**

1 Overall description

As part of the WI on QoE enhancements in Rel-18, RAN2 is discussing how to enable QoE measurements in RRC IDLE and RRC INACTIVE states for MBS broadcast services. One of the aspects that RAN2 discussed was related to QoE measurement area scope handling. According to the RAN3 agreement, in case QoE measurements are collected by the UE in RRC IDLE/INACTIVE state, area scope is checked by the UE. However, RAN2 needs to decide whether the gNB shall provide the QoE area scope information to the UE via RRC signalling or whether it can be contained in the application layer QoE configuration container (i.e. transparent to AS signalling). Due to this RAN2 has the following questions to SA4:

**Question 1:** Can information about the applicable area scope of a QoE configuration be provided to the application layer in the UE as part of the QoE configuration container? If it can, how is this information defined at the application layer, e.g. does it indicate applicable tracking area, applicable cells etc.?

**Question 2:** Can the application layer know the UE location on the proper level (e.g. tracking area, cell) and use this information to decide whether to start QoE measurements when triggering conditions are met?

Another aspect that RAN2 discussed was related to the buffering of QoE reports generated in RRC IDLE/INACTIVE state. RAN2 assumes that a minimal memory size requirement will be specified for the UE for buffering QoE reports generated in RRC IDLE/INACTIVE state and that the AS or application layer buffers the QoE reports.

**Question 3**: Do SA4/SA5 have any view or feedback on those RAN2 assumptions for 1) minimal memory size requirement and 2) the buffering layer realistic?

In this context RAN2 agreed that, as a baseline, UE does not trigger RRC connection setup or resume just for the sake of reporting QoE measurement results. This means the reports are stored in the UE while the UE is in RRC IDLE or in RRC INACTIVE and can be reported only when the UE establishes a connection with the network for another reason. As a consequence, the UE may then stay longer time in RRC IDLE/INACTIVE while buffering QoE reports unsent and related to this, there was a discussion in RAN2 on whether there is a time after which the collected QoE reports are no longer useful for the OAM and can be discarded. RAN2 wonders whether the OAM handles the reports differently depending on when they were collected, e.g. are latest reports more useful to the OAM than the reports collected earlier, in case the UE is forced to discard part of QoE reports when the supported memory storage size is exceeded. Therefore, RAN2 would like to ask the following questions to SA4 and SA5:

**Question 4:** Is there a time after which the QoE reports collected by the UE are no longer useful for the OAM?

**Question 5:** In case of limited storage space for QoE reports at the UE, is there any preference from the OAM side on which QoE reports should be reported and which should be discarded, e.g. is there a principle that newer or older reports are more useful for the network?

2 Actions

**To SA4:**

**ACTION: RAN2 respectfully asks SA4 to answer questions 1, 2, 3, 4 and 5 above.**

**To SA5:**

**ACTION: RAN2 respectfully asks SA5 to answer questions 3, 4 and 5 above.**

3 Dates of next RAN2 meetings

RAN2#121 27 February – 3 March 2023 Athens, Greece

RAN2#121-bis-e 17 – 26 April 2023 Electronic