**3GPP TSG-RAN WG3 Meeting #121R3-234629**

**Toulouse, France, August 21st – 25th 2023**

Agenda Item: 11.3

Source: Ericsson

Title: (TP for QoE BL CR TS 38.300) QoE and RVQoE Measurements and Reporting in NR-DC

Document for: Agreement

# TP for QoE BL CR TS 38.300

-------------------------------------------Start of changes-------------------------------------------

## 3.1 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1], in TS 36.300 [2] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1] and TS 36.300 [2].

5GC 5G Core Network

>>>>>>>>>>>>>Unchanged parts are skipped<<<<<<<<<<<<<

QMC QoE Measurement Collection

QoE Quality of Experience

QPSK Quadrature Phase Shift Keying

RA Random Access

RA-RNTI Random Access RNTI

RACH Random Access Channel

RANAC RAN-based Notification Area Code

REG Resource Element Group

RIM Remote Interference Management

RLM Radio Link Monitoring

RMSI Remaining Minimum SI

RNA RAN-based Notification Area

RNAU RAN-based Notification Area Update

RNTI Radio Network Temporary Identifier

RQA Reflective QoS Attribute

RQoS Reflective Quality of Service

RS Reference Signal

RSRP Reference Signal Received Power

RSRQ Reference Signal Received Quality

RSSI Received Signal Strength Indicator

RSTD Reference Signal Time Difference

RTT Round Trip Time

RVQoE RAN visible QoE

SCS SubCarrier Spacing

-----------------------------------------------Next change-----------------------------------------------

21.x1.x Support for RAN visible QoE measurements and reporting in NR-DC

Either the MN or the SN can generate and send a RAN visible QoE configuration to the UE. The gNB that has initially configured a UE in NR-DC with an RVQoE configuration can modify and release the RAN visible QoE configuration as long as this gNB serves the UE. Upon mobility, the RAN visible QoE-configuring gNB may be changed.

The UE may send RAN visible QoE reports to the network using either SRB4 or SRB5. In addition, the gNB that received a RAN visible QoE report can forward the report to the other gNB (the SN or the MN). RAN visible QoE reports can be sent over the same leg, as the QoE reports pertaining to the same QoE reference, or over the other leg.

The MN or the SN can configure RAN visible QoE measurements at a UE without a priori knowledge about which gNB(s) will provide the bearer(s) for a future application session. During the lifetime of an application session, to ensure that the RAN visible QoE reports are sent to the gNB(s) that provide the bearer(s) which carry the data flow(s) associated with the RAN visible QoE measurement result in a RAN visible QoE report, the gNB receiving the RAN visible QoE reports determines the bearer(s) used to deliver the application session data flow(s) and the associated gNB (s). The determination may be based on the PDU session ID(s) and the QoS flow ID(s) indicated in a received RAN visible QoE report.

When the RAN visible QoE-configuring gNB receives a RAN visible QoE report and determines that the non-RVQoE-configuring gNB provides at least one bearer for the application session, the RVQoE-configuring gNB indicates that to the non-RAN visible QoE-configuring gNB. The non-RVQoE-configuring gNB can then, if needed, indicate to the RAN visible QoE-configuring gNB its preference with respect to the reporting path for the subsequent RAN visible QoE reports and its preferred RAN visible QoE configuration parameters.

When the non-RAN visible QoE-configuring gNB receives a RAN visible QoE report, and, for the first time, determines that the RAN visible QoE-configuring gNB provides at least one bearer for the application session, the non-RAN visible QoE-configuring gNB indicates this to the RAN visible QoE-configuring gNB, which may then decide to modify the RAN visible QoE configuration parameters.

If a gNB receives a RAN visible QoE report from a UE in NR-DC, and determines that the bearer(s) for the application session data flow(s) is (are) also provided by the other gNB, or only provided by the other gNB, the gNB that received the RAN visible QoE report may forward the received RAN visible QoE report to the other gNB. The RAN visible QoE configuration may also be modified or released.

Editor Note: FFS on further refinements and the placement of the above text.

-------------------------------------------End of changes-------------------------------------------