**3GPP TSG-RAN2 Meeting #121 *R2-230xxxx***

**Athens, Greece, 27th February – 3rd March, 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.300** | **CR** | **0619** | **rev** | **2** | **Current version:** | **17.3.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

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| ***Title:*** | Clarification of UE Behaviour upon Pause of QoE Reporting | | | | | | | | | |
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| ***Source to WG:*** | Apple, Ericsson, MediaTek, Huawei, HiSilicon, China Unicom, Nokia, Nokia Shanghai Bell, Samsung | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_QoE-Core | | | | |  | ***Date:*** | | | 2023-03-01 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | Some sentences in Clause 21.4 describes UE behaviour in cases of RAN overload. However, according to Stage-3 specification, the UE does not need to know whether RAN is overloaded or not, instea it would simply follow the pause/resume indication from the gNB (i.e. the gNB may send pause indication in cases other than RAN overload).  **Impact Analysis**  Impacted 5G architecture options: NR SA  Impacted functionality:  QoE measurement configuration and reporting  Inter-operability:  1. If the network is implemented according to the CR and the UE is not, UE behaviour may become ambigious as it does not know if RAN is overloaded or not.  2. If the UE is implemented according to the CR and the network is not, it limits gNB implementation flexibility as QoE reporting pause/resume can only be used in RAN overload situations. | | | | | | | | |
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| ***Summary of change:*** | | Clarify in Clause 21.4 the UE behaviour when QoE reporting pause indication is received, rather than having a restriction to use cases of RAN overload. | | | | | | | | |
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| ***Consequences if not approved:*** | | Stage-2 is misaligned with Stage-3 | | | | | | | | |
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| ***Clauses affected:*** | | 21.4 | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

*Start of change*

## 21.4 RAN Visible QoE Measurements

RAN visible QoE measurements are configured to the UE by the gNB, where a subset of configured QoE metrics is reported from the UE to the gNB as an explicit IE readable by the gNB. The RAN visible QoE measurements can be utilized by the gNB for network optimization. The RAN visible QoE measurements are supported for the DASH streaming and VR services. The gNB configures the RAN visible QoE measurement to collect all or some of the available RAN visible QoE metrics, where the indication of metric availability is received from the OAM or the 5GC. The set of available RAN visible QoE metrics is a subset of the metrics which are already configured as part of QoE measurement configuration encapsulated in the application layer container. The PDU session ID(s) and the QoS Flow IDs corresponding to the service that is subject to QoE measurements can also be reported by the UE along with the RAN visible QoE measurement results.

Multiple simultaneous RAN visible QoE measurement configurations and reports can be supported for RAN visible QoE measurement, and each RAN visible QoE measurement configuration and report is identified by the same RRC identifier as the QoE measurement configuration and measurement report. After receiving the RAN visible QoE measurement configuration, the UE RRC layer forwards the configuration to the application layer, indicating the service type, the RRC identifier and the periodicity. RAN visible QoE configuration can only be configured if there is a corresponding QoE measurement configuration for the same service type configured at the UE. The application layer sends the RAN visible QoE measurement report associated with the RRC identifier to the UE's AS layer. If there is no reporting periodicity defined in the RAN visible QoE configuration, the UE sends both RAN visible QoE measurement reports and the QoE measurement reports to the gNB in the same *MeasurementReportAppLayer* message, except when QoE measurement collection pause indication is received (e.g. in case of RAN overload). If there is no reporting periodicity defined in the RAN visible QoE configuration, the encapsulated QoE reports are stored at the UE’s RRC layer, but the RAN visible QoE reports continue to be reported to the gNB with the reporting periodicity configured for legacy QoE reporting,when QoE measurement collection is paused. The RAN visible QoE measurements can be reported with a reporting periodicity different from the one of the corresponding encapsulated QoE measurements, when a dedicated RAN visible QoE reporting periodicity is configured by the gNB. The UE Application layer can measure the RAN visible QoE metrics based on this reporting periodicity. The gNB can release one or multiple RAN visible QoE measurement configurations from the UE in one *RRCReconfiguration* message at any time.

*End of change*