**3GPP TSG-S4 Meeting #129*****S4-241603***

**Electronic Meeting, 19th – 23rd August 2024**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **26.113** | **CR** | **0002** | **rev** |  | **Current version:** | **18.0.0** |  |
|  | | | | | | | | |
| *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 |  | Core Network | **X** |

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| ***Title:*** | [iRTCW] Clarification on Metrics collection | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | InterDigital Comunications, BBC | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | iRTCW | | | | |  | ***Date:*** | | | 2024-08-19 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | TS 26.113 describes the QoE metrics that can be reported by a Media Session Handler pertaining to an RTC session. But this clause does not specify whether these QoE metrics apply to downlink aspects of an RTC session, uplink aspects or both. *https://github.com/5G-MAG/Standards/issues/137* | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Clarify that the proposed QoE metrics shall be reported by a Media Session Handler for the down-link media in clause 15.1 of TS 26.113. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Ambiguity on QoE metrics applicability for downlink media, uplink media or for both is not resolved. | | | | | | | | |
| ***Q*** | |  | | | | | | | | |
| ***Clauses affected:*** | | 15.1, 15.2.5, 15.2.6 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

First change

# 15 RTC QoE metrics reporting protocol

## 15.1 General

The Metrics Reporting API specified in clause 10.5 allows the RTC Media Session Handler to send QoE metrics reports to the RTC AF.

An RTC Client shall report QoE metrics specified in clause 15.2 for the real-time media it has received using the protocol specified in clause 15.3 and the API specified in clause 10.5 according to the QoE metrics reporting configuration obtained in Service Access Information (see clause 10.2).

Next change

### 15.2.5 Jitter duration

This metric describes the average playback latency of an RTC session in a particular sampling period.

Playback jitter happens when the absolute difference between the actual playback time and the expected playback time is larger than *Jitterthreshold* in milliseconds. The expected time of a frame is equal to the actual playback time of the last played frame plus the difference between the Normal Play Time (NPT) time of the frame and the NPT time of the last played frame.

The *Jitterthreshold* values are set using the positive‌Crossing‌thresholds configuration property in the ServiceAccessInformation resource specified in clause 9.2.3.1 of TS 26.510 [3] to control the threshold(s) for reporting high jitter. If this property is not present in the Service Access Information, it shall default to 100 ms. The *Jitterthreshold* parameter is specified in milliseconds and is used with the "Jitter\_Duration" parameter. All the jitter durations are summed within each sampling period and stored in the vector *@totalJitterDuration*. The unit of this metric is expressed in seconds and can be a fractional value. The number of individual events within the sampling period is summed and stored in the vector *@numberOfJitterEvents.* These two vectors are reported by the RTC UE as part of the QoE report.

The syntax for the metric "Jitter\_Duration" is as defined in Table 15.2.5-1.

Table 15.2.5-1: Jitter duration metric information for Quality Reporting

|  |  |  |  |
| --- | --- | --- | --- |
| Key | | Type | Description |
| Jitter\_Duration | | Object |  |
|  | @totalJitterDuration | doubleVectorType | All the jitter durations are added up within each sampling period and stored in the vector. Provides an unordered list of total jitter durations (occurred within each sampling period) measured during a metrics reporting interval. |
|  | @numberOfJitterEvents | unsignedLongVectorType | The number of individual events within the measurement resolution period are summed up and stored in the vector. Provides an unordered list of jitter events (occurred within each sampling period) measured during a metrics reporting interval. |

Next change

### 15.2.6 Sync loss duration

Loss of synchronisation between two RTC media components happens when the absolute difference between value A and value B is larger than *SyncThreshold* in milliseconds, where:

- Value A is the difference between the actual presentation time of the last played frame of the video stream and the playback time of the last played frame of the speech/audio stream.

- Value B is the difference between the expected presentation time of the last played frame of the video stream and the expected playback time of the last played frame of the speech/audio stream.

The *SyncThreshold* values are set using the positive‌Crossing‌thresholds configuration property in the ServiceAccessInformation resource specified in clause 9.2.3.1 of TS 26.510 [3] to control the threshold(s) for reporting high sync mismatch. If this property is not present in the Service Access Information, it shall default to 100 ms. The s*yncthreshold* parameter is specified in milliseconds and is used with the "SyncLoss\_Duration" parameter.

All the sync loss durations are summed within each sampling period and stored in the vector *TotalSyncLossDuration*. The unit of this metric is expressed in seconds and can be a fractional value. The number of individual events within the sampling period is summed and stored in the vector *NumberOfSyncLossEvents.* These two vectors are reported by the RTC UE/endpoint as part of the QoE report.

The syntax for the metric "SyncLoss\_Duration" is as defined in Table 15.2.6-1.

Table 15.2.6-1: Syncloss duration metric information for Quality Reporting

|  |  |  |  |
| --- | --- | --- | --- |
| Key | | Type | Description |
| SyncLoss\_Duration | | Object |  |
|  | @totalSyncLossDuration | doubleVectorType | All the sync loss durations are added up within each sampling period and stored in the vector. Provides an unordered list of total sync loss durations (occurred within each sampling period) measured during a metrics reporting period. |
|  | @numberOfSyncLossEvents | unsignedLongVectorType | The number of individual sync loss events within the measurement resolution period are summed up and stored in the vector. Provides an unordered list of sync loss events (occurred within each sampling period) measured during a metrics reporting period. |

End of changes