RTCP XR Report Block for QoE metric Reporting
draft-ietf-xrblock-rtcp-xr-qoe-06

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Document Status

• What is this draft about?
  – Dealing with two use cases
    • each media sent in separate RTP stream
    • Multi-channel audios sent in the same RTP stream
  – Reporting media quality in the form of MOS Scores

• One issue raised in the last Atlanta IETF meeting was
  – How to make IANA registry for QoE measurement algorithms and their parameter when more and more parameters are specified
    • whether packets should contain a simple numeric code that directly references a MOS type or a calculation algorithm type, rather than expanding the RTCP XR block to allow new parameters in the new fields.
    • or whether the numeric code in the packet should refer to a signalled value, which indirectly references a name in an IANA registry

• Recent update was submitted to address
  – SDP signaling update
    • Using SDP Signaling to indicate what MoS calculation algorithm is used
    • Map the name in the SDP to numeric code value “CAID” in the RTCP packet
    • Reference calg in the IANA registry via SDP signaling
  – Split P.1201 and P.1202 into P.1201.1, P.1202.2 and P.1202.1, P.1202.2 respectively.
  – Add evaluation of video stream QOE as an example.
SDP signaling update

• Using the syntax element "extmap" to map calculation name defined in the SDP to calculation ID in the RTCP QoE metric block
  – Syntax:
    a=extmap:<value> ["/"<direction>] <name> <extensionattributes>
  – Example:
    a = calg:1=G107,calg:2=P1202.1

RTCP XR QoE Metric Block

3.2.1. Single Stream per SSRC Segment

<table>
<thead>
<tr>
<th>S</th>
<th>CAID=1</th>
<th>Payload Type</th>
<th>MoS Value</th>
</tr>
</thead>
</table>

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SDP signaling update-cont.

- 8 calculation algorithm names are registered together with media type and references
  - Sub attribute “extensionname” in SDP for calg name
    ```
    extensionname = "P564";ITU-T P.564 Compliant Algorithm [P.564]
    / "G107";ITU-T G.107 [G.107]
    / "TS101_329";ETSI TS 101 329-5 Annex E [ETSI]
    / "JJ201_01";TTC JJ201.01 [TTC]
    / "P1201_01";ITU-T P.1201.2 [P.1201.1]
    / "P1201_02";ITU-T P.1201.2 [P.1201.2]
    / "P1202_01";ITU-T P.1202.1 [P.1202.1]
    / "P1202_02";ITU-T P. NBAMS-HR [P.NBAMS-HR]
    / non-ws-string
    ```
  - IANA registration
    
    Initial assignments are as follows:

    | Name       | Name Description                      | Reference | Type   |
    |------------|---------------------------------------|-----------|--------|
    | P564       | ITU-T P.564 Compliant Algorithm       | [P.564]   | Voice  |
    | G107       | ITU-T G.107                           | [G.107]   | Voice  |
    | JJ201_01   | TTC JJ201.01                          | [TTC]     | Voice  |
    | P1201_01   | ITU-T P.1201.01                       | [P.1201.1]| Multimedia |
    | P1201_02   | ITU-T P.1201.02                       | [P.1201.2]| Multimedia |
    | P1202_01   | ITU-T P.1202.01                       | [P.1202.01]| Video  |
    | P1202_02   | ITU-T P. NBAMS-HR                     | [P. NBAMS-HR]| Video  |
SDP signaling Update- Cont.

• Three Offer/Answer usages
  – Segment extensions sent in only one direction
  – Signaling mutually exclusive alternatives
    • Using 4096-4351 for negotiation identifiers for these alternatives
      – The same identifier for these alternative should be signaled
  – Signaling more segments than can be sent in a single session
    • Using 4096-4351 for negotiation identifiers for multiple segments sent in a single session
      – The different identifiers for multiple segments should be signaled.
Follow Up

• Open issue:
  – Is “direction” attribute in SDP used to indicate media stream direction or RTCP stream direction?

• One new version will be issued to address comments raised in the meeting