RTCP XR Blocks for Synchronization Delay and Offset Metrics Reporting

draft-asaeda-xrblock-rtcp-xr-synchronization-04

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Overview

• Separated from draft-wu-avt-rtcp-xr-quality-monitoring after split of avt.

• Missed presentation in Taipei meeting

• The XR Blocks report initial Synchronization Delay for all the medias to joins multimedia session and synchronization Offset between RTP streams belonged to the same multimedia session.
  • In compliant with rapid synchronization standard RFC6051.

• Several changes have been made compared to (-02) versions.
  – Support multiple general synchronization offset reporting
  – Add a definition for synchronization offset.
  – Clarify the difference between synchronization delay and offset.
  – Add a reference to tell how to select the reference stream.
  – Editorial Changes.
Issues1# Applicability of synchronization metrics

• Is the initial synchronization delay metric applicable to streams carried in the same RTP session? If it is, how to calculate it?
  – Yes. Based on the similar measurement method in RFC6051.

• Can the general synchronization offset metric deal with intra-media synchronization and inter-media synchronization?
  – This metric can be used to deal with both cases.
  – More focusing on dealing with inter-media synchronization when each stream are carried in the separated RTP streams in the multimedia session.
Issues2# size of synchronization offset 32bit vs 16bit ?

• Current draft support reporting multiple offset values using 32 bits.
• It was proposed to change 32bit synchronization offset to 16bit.
  – Pro:
    • Acceptable synchronization offset will be far less than 65.536 secs.
    • When the number of multiple offset reporting is larger, the large space for these offset fields can be saved.
  – Con:
    • Constraint for reporting block is multiple 32bit words long for each report block
    • Padding issue occurs when the number of offset field is odd.

• Question: Is 16bit for maximum synchronization offset( i.e.,1sec) enough for real time application?
• Recommendation:
  – If the answer is no, still using 32bit.
  – If yes, Using 16bit to replace 32bit.
    • If the measured value is more than 65.536 secs, the value 0xFFFF should be reported to indicate an over-range negative measurement.
Next Step

• Take it as a milestone and adopt it as a work item.
• Questions?