# 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 synchronizatioin 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?