Rapid Synchronisation of RTP flows

draft-perkins-avt-rapid-rtp-sync-03.txt

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Since last IETF ...

• Merged:
  draft-perkins-avt-rapid-rtp-sync-01.txt and
  draft-schierl-avt-rtp-ntp-for-layered-codecs-00.txt.

• Document provides:
  – New request packet for initial RTCP SR in SSM
    • for switching / late joiners
  – NTP header extensions
    • timestamp based decoding order recovery for layered codecs
    • Two versions
      – 12 byte (only NTP Seconds (bit 8-31) + full NTP fraction )
      – 16 bytes (full NTP)
NTP header extension and timestamp-based decoding order recovery

• Timestamp-based decoding order recovery
  – used by SVC payload (as one alternative)
  – and other layered codecs (MPEG surround)

• Requires:
  – Exact NTP timing for inter-session matching of samples

• Identified Problem:
  – Jitter in NTP wallclock
  – + using different NTP wallclock references (from different SRs) in layered codec sessions
  → Does not allow for exact matching of NTP timestamps

• Solution:
  – Using NTP header insertion for the same sampling time in all layered sessions
Open Issues / Questions

• More general guidance for timestamp based decoding order recovery (currently SVC specific)
• Variants of NTP header extension
  – Do we need more or can we remove one?
• Security issue?
  – If NTP Time Stamps or parts thereof may be contained in the header extensions (plain) as well as in the RTCP SRs (encrypted)?
• DVB (TM-AVC) needs solution for TS 102005 until May
  – They may consider a separate solution in their own spec.
• We like this document to be accepted as WG item
  – Got already supporters on the list
  – Can we keep the timing?