

Rapid Synchronisation of RTP flows

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

Colin Perkins, University of Glasgow
csp@csp Perkins.org

Thomas Schierl, HHI
thomas.schierl@hhi.fraunhofer.de

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?