

# 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?