Audio/Video Transport Working Group

Keith Drage
Roni Even

http://www.ietf.org/html.charters/avt-charter.html

Jabber room: xmpp:avt@jabber.ietf.org

Audio:
Palos Verdes: http://videolab.uoregon.edu/events/ietf/ietf777.m3u
California D: http://videolab.uoregon.edu/events/ietf/ietf774.m3u
Agenda - Wednesday

13:00  Introduction and Status Update  (Chairs, 15)
13:15  AVT Restructure  (Robert Sparks, 15)
13:30  Rapid Synchronization with RTP Multicast Sessions (Begen, 25)
13:55  RTCP port for SSM Sessions (Begen, 5)
14:00  Port Mapping Between Unicast and Multicast RTP Sessions  (Begen, 20)
14:20  MPEG2-TS Preamble (Van Caenegem + Chairs, 40)
15:00  End
Note Well

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Agenda - Thursday

15:10 Introduction and Status Update (Chairs, 5)
15:15 RTCP Receiver Report for Feedback Storm Suppression (Qin Wu, 10)
15:25 Keep-alive Mechanism for RTP (Xavier Marjou, 20)
15:45 Support for multiple clock rates in an RTP session (M. Petit-Huguenin, 10)
15:55 Proxy Rapid Acquisition of Multicast RTP Sessions (Jinwei Xia, 10)
16:05 End
Document Status

• Charter updated -
  http://www.ietf.org/dyn/wg/charter/avt-charter.html

• RFC Published
  – RFC 5760  draft-ietf-avt-rtcpssm
  – RFC 5725  draft-ietf-avt-post-repair-rtcp-xr
  – RFC 5584  draft-ietf-avt-rtp-atrac-family
Document Status

• In Publication states

  – draft-ietf-avt-rtp-and-rtcp-mux – will be RFC 5761 but waiting for ICE
  – draft-ietf-avt-dtls-srtp – will be RFC 5764 (AUTH48)
  – draft-ietf-avt-seed-srtp – will be RFC 5669 (AUTH48) waiting for draft-ietf-avt-register-srtp

  – draft-ietf-avt-rtp-ipmr – waiting for AD Go-Ahead
  – draft-ietf-avt-app-rtp-keepalive – IESG processing – need to resolve comments
  – draft-ietf-avt-rtcp-guidelines-03 – Publication request
Document Status

• Waiting for proto write-up

- draft-ietf-avt-forward-shifted-red
- draft-ietf-avt-srtp-not-mandatory
- draft-ietf-avt-rapid-rtp-sync
- draft-ietf-avt-rtp-gsm-hr
- draft-ietf-avt-register-srtp
Other drafts

• draft-ietf-avt-rtp-svc– need update to follow 3984bis.
• draft-schmidt-avt-rfc3016bis-02 – adopted as WG item
• draft-ietf-avt-rtp-h264-rccd-05 – need to resolve parameters duplication with 3984bis
• draft-ietf-avt-srtp-big-aes-03 – Need a milestone then start WGLC.
RTP receivers joining a multicast session experience
  – Varying join delays
  – Pretty random acquisition delays
For quality reporting, monitoring and diagnostics purposes, it is useful to gather their “acquisition” experiences
This document
  – Defines a new RTCP XR block type for multicast acquisition
  – Defines SDP signaling and registers the new block type with IANA

This report block can be used by all RTP receivers, whether they are doing a simple multicast join, using RAMS or any other method
The document is ready for WGLC.
ECN for RTP
draft-ietf-avt-ecn-for-rtp

• No major issues encountered
• A few open issues remaining
  – Fragmentation and Reassembly in Translators
  – Generating RTCP ECN Feedback in Translators
  – Generating RTCP ECN Feedback in Mixers
  – SDP examples
• Distinction between ECN marking for RTP and congestion control
  – CC not only based on ECN
  – Treat CC related to this in a separate ID
• Standardizes changing SRTP keys in SRTP or SRTCP
  – Conferencing, speaker joins/leaves
• Authors will improve text around DTLS-SRTP

• Issue for Working Group: MIKEY
  – Authors lack experience with MIKEY
  – Proposal: not include MIKEY in this document
Milestones with candidate drafts

- draft-begen-avt-rams-scenarios
- draft-hoene-avt-rtp-sbc
- draft-legrand-rtp-isac
- draft-lennox-avt-srtp-encrypted-extension-headers
- draft-ott-avt-rtcp-overlay-multicast
- draft-trainor-avt-rtp-aptx
- draft-wang-avt-rtp-mvc
- draft-zfang-avt-rtp-evrc-nw

- draft-xu-avt-dra – did not go through AVT review

After the meeting the chairs will ask whether the drafts provide the basis for a WG solution to these items.
Other drafts for consideration

• draft-yang-avt-rtp-synced-playback-04
  – This is an extension to RAMS allowing synchronization between the primary multicast stream and the RTP_Rx view.
  – Was updated based on comments, please review and send any comment to the list.
Encrypted Header Extensions in SRTP

draft-lennox-avt-srtp-encrypted-extension-headers-01

- SRTP doesn’t encrypt RTP header extensions
  - Only authenticates
- Sometimes information in them is sensitive
  - E.g., audio levels
- Draft provides a mechanism to encrypt RFC 5285 header extensions
  - Additional SRTP keystream applied to header extension
- Current draft allows encrypting some extensions while leaving others in the clear
  - Adds some complexity, but allows third-party monitoring, easier backward compatibility
Splicing for MPEG2-TS Problem Statement in RTP Sessions

draft-xia-avt-splicing-for-mpeg2ts-ps-00

- Example adding advertisements
  - AD Server and Splicer negotiate how to insert AD content into MPEG2 output multiplexed stream in Splicer
  - In IPTV, Splicer needs to coordinate underlying RTP layer to be compatible with MPEG2-TS when perform splicing
- Using fix gap size in primary channel is not feasible since the amount of Insertion packets is variable due to different entropy coding
- Potential solution
  - Splicer is a specific RTP Translator
  - re-encode AD data packets into primary program
  - assigns new sequence numbers to the outgoing data packets
- Shortcoming
  - Additional overhead on Splicer to decoding and re-encoding even if splicing no more occurs again
  - Splicer may serve a large amount of primary programs simultaneously
Multicast-based RAMS (ERAMS)
draft-johansson-avt-mcast-based-rams

- ERAMS = Extension to RAMS framework
  - Most of the procedures in ERAMS already covered by RAMS
  - ERAMS adds the following to the RAMS protocol
    - 3xx redirect response code
    - Two new TLV field types to RAMS-R and RAMS-I
- FCC server uses RAMS unicast when request rate is low
  - Function according to RAMS specification
- FCC switches to ERAMS when request rate is high
  - The FCC server gathers a number of RAMS-R for the same channel
  - Each RAMS-R is responded with a RAMS-I that indicates the ERAMS multicast channel
  - After a waiting period (Td) the ERAMS multicast is started
  - Peak load on FCC server is scaled down in direct proportion to the number of users that share the same ERAMS multicast channel(s)
    - Unicast traffic between the FCC server and the STB across the access network is also reduced.
- Request to make draft-johansson-avt-mcast-based-rams an AVT WG item
  - Questions/Comments welcome on the AVT list or mailto:ingemar.s.johansson@ericsson.com