Audio/Video Transport Core Maintenance (AVTCore) Working Group meeting notes

==

CHAIRS: Magnus Westerlund (did not attend)   magnus.westerlund@ericsson.com

Roni Even   roni.even@mail01.huawei.com

Notes taker: Paul Kyzivat, Jonathan Lennox, A. Jean Mahoney

Jabber Scribe: Martin Thomson, Lorenzo Miniero

Wednesday, 31 July 2013

AVTCore Status Update - chairs

The slides are in http://tools.ietf.org/agenda/87/slides/slides-87-avtcore-0.pdf.

The draft-ietf-avt-srtp-not-mandatory-13 need a new WG last call after IESG review, depends on draft-ietf-avtcore-rtp-secure-options-04 which will also get WGLC. We need reviewers.

We are waiting for an update of the expired draft-ietf-avtcore-srtp-ekt-00 and we can probably start a WGLC when it is submitted. Dan Wing said that David McGrew has an alternate SRTP crypto suite - that would be a new proposal. This version of EKT can be finished, some minor new text to be added about where the salt is generated.

On draft-ietf-avtcore-idms-12 there were changes based on IETF LC, short WGLC after the meeting.

 Real-Time Transport Control Protocol (RTCP) in Overlay Multicast has expired and the authors are not active in progressing it. The WG chairs asked Joerg Ott if there are any plans to progress this work and it looks like we can remove this milestone from AVTcore.

The chairs need to update the milestones dates.

Guidelines for using the Multiplexing Features of RTP to Support Multiple Media Streams in draft-ietf-avtcore-multiplex-guidelines-01 were presented by Colin Perkins.

The slides are is http://tools.ietf.org/agenda/87/slides/slides-87-avtcore-1.pdf.

The 00 version is unchanged from individual draft and was submitted as WG item. Draft-01 went through significant re-write, but no significant technical changes.

Draft in need of significant editorial work, it duplicates some of the terminology draft discussed in AVText. Colin believes the technical content is good, but asks for review.

Cullen read the draft and have no comments to send. He will send to the list on QoS marking as discussed in TSV that may affect this document.

The draft should align on the terminology but should not wait for it to finish.

Support of multiple RTP streams in the following three drafts: draft-ietf-avtcore-multi-media-rtp-session-03, draft-ietf-avtcore-rtp-multi-stream-01, and draft-ietf-avtcore-rtp-multi-stream-optimisation-00 were presented by Jonathan Lennox.

The slides are in http://tools.ietf.org/agenda/87/slides/slides-87-avtcore-3.pdf.

There was editorial work after IETF86 to split the content between the three drafts. No major technical changes. Still have open issues since IETF86.

Open issue 1: RTCP Scheduling:

Roni asked if any simulation has been done.

Colin and Magnus have simulators that could be adapted to test this.

Open issue 2: avg_rtcp_size:

Jonathan said that I tmay be a bug in 3550.

Question from Martin, is widely disparate BW for the sources a problem?

Jonathan doesn't think so. Allocation among all your sources is local issue.

Martin said that talking about averaging might not make sense.

Jonathan: averaging might not be optimal, but is it bad enough to care about?

Colin: this is detail we can resolve in straightforward way. Sources that are sending at widely different rates present more problems.

Martin: Is there any interest in AVP profile?

Jonathan: most using AVPF and can add text that if you use AVP you may get weird results.

Hadriel: saw no discussion of max MTU size.

Jonathan: existing guidelines say to aggregate up to MTU size. So doesn't think this is a problem. Can imagine in a large conference a single report might be too big. **Jonathan will look into it**.

Open Issue 3: RTCP sending exception:

Does the "you can send RTCP immediately on joining" RTCP timing exception for unicast need to be weakened for sessions with lots of sources? Early synchronization is important for early active senders; less important for sources not sending yet.

This may also be important for lip synch.

Jonathan can put some guidelines for choosing which streams to report early.

Open issue 4: SDP

Need to specify how signal the reporting groups in SDP.

Going forwards, do we need to progress all three together. Proposal to move draft-ietf-avtcore-multi-media-rtp-session separately. The authors should suggest an updated timeline since this is the first time we have the text in three documents.

RTP Congestion Control: Circuit Breakers for Unicast Sessions in draft-ietf-avtcore-rtp-circuit-breakers-03 presented by Colin Perkins and Varun Singh.

The slides are in http://tools.ietf.org/agenda/87/slides/slides-87-avtcore-2.pdf.
Colin presented the technical changes in the 03 version and there are also editorial changes. Most of the time was spent on the simulation results.

Early results to present based on streaming to home ADSL connections. Tested CBR traffic at a range of bit rates. Simulated RTCP, observed when circuit breaker triggers. The traces and simulation results available from Colin if you're interested.

Overall packet loss rate a poor predictor of circuit breaker triggering. Non-bursty loss did not trigger loss; bursty loss triggered it in 12.4% of cases. Triggers also when close to advertised or negotiated link capacity.
Analysis continuing, but results are consistent with circuit breaker triggering due to congestion. Experimented with using Padhye TCP model instead of Mathis show that circuit breaker triggered twice as often with low-loss rate bursty traces.
Circuit breaker is behaving roughly as desired - more experiments are needed. Might want to

change circuit breaker so number of intervals scales inversely with reporting interval, i.e. give a constant time to trigger.

Note that congestion control should kick in before circuit breakers.

There was a question about the mature level of this document. Will it be standard track or experimental. This will be decided later based on the tests and mailing list discussion.

RTP Clock Source Signalling in draft-ietf-avtcore-clksrc-05 was presented by Aidan Williams.

The slides are in http://tools.ietf.org/agenda/87/slides/slides-87-avtcore-4.pdf.

The draft proposes a solution to explicitly signal clock information in RTP including timestamp reference clock and media clock.

There were changes in O/A behavior, IANA considerations section based on Magnus review. There was also a review from SDP Directorate and some changes are needed. Will update soon and will be ready for WGLC.

RTP Payload Format for High-Efficiency Video Coding in draft-payload-rtp-h265-00 was presented by Stephan Wenger.

Slides are in http://tools.ietf.org/agenda/87/slides/slides-87-avtcore-5.pdf.

The open issues include max-fps, improved parallel processing signaling, new FU type.

There was support to add the max-fps parameter to the payload specification.

On signaling for parallel processing there will be a new proposal from all interested parties so it will go forward.

The Fragmentation Unit support is still open. There is still disagreement and it will be discussed on the payload mailing list. **Mo to send the questions to the mailing list**. There are two issues here, the first is having a fragment inside an aggregation packet and the second is being able to provide an offset for a fragment, so you can reassemble parts of a packet.

The authors would like to have an RFC by the end of the year needed for 3GPP.