

RTSP 2.0 Status

draft-ietf-mmusic-rfc2326bis-16

<http://rtspspec.sourceforge.net>

Overview

- Fixed bugs
- Remaining bugs
- Feature Requests
- Document structure changes
- Way forward
- NAT Traversal Solution

Fixed Bugs

- In the latest version there are a number of fixed bugs:
 - TLS server side certificate chain is now transported
 - Accepted-Credentials uses SHA-256 for hashing
 - CR/LF Mitigations
 - SDP directional attributes (sendrecv, sendonly, recvonly)
 - Clarify when RTCP is needed in RTSP context
 - Session ID does not provide any security
 - Selection of Session ID
 - Clarified for Section B.2.2 when TCP connection is done
 - A Number of editorial ones
- Please check the resolutions and the resulting text
- If you read previous version look at diff:
<http://tools.ietf.org/wg/mmusic/draft-ietf-mmusic-rfc2326bis/draft-ietf-mmusic-rfc2326bis-16-from-15.diff.html>

Remaining bugs

- Unfortunately there are still some open issues
 - Possibility to separate RTP and RTSP processing
 - VCR on Live content (PVR) style support
 - Media congestion control requirement
 - Explicit agreement on RTSP session keep-alive
 - Content type capability negotiation for GET_PARAMETER and SET_PARAMETER
 - The minimal core implementation appendix
 - Multicast and needed extensions
 - Pause response to live streams
 - The Speed and Scale headers
 - The GET_PARAMETER and SET_PARAMETER format
 - Document rationale behind timer values

The Scale and Speed headers

- Scale header
 - Indicates the playback time scale compared to normal, i.e. Scale=2 means double speed, Scale=0.5 means slowmotion at half speed.
 - Difficult to perform playback for some media, like audio
 - RTP TS implication, is that 20 ms frame with 8k Hz clock will only be advanced 80 ticks instead of 160 for Scale=2
- Speed Header
 - Indicates at what time scale the media timeline is to be sent, i.e. Speed=2.0 means that during 1 second of wall clock, media for 2 seconds is sent.

The Scale and Speed headers

- The combinations is what is interesting
 - Scale=2.0 + Speed=2.0: Playback media at double time scale by sending media stream at double speed. Doubles bit-rate in naive case
 - Scale=2.0 + Speed=1.0: Playback media at double time scale without increasing media stream speed, i.e. keep bit-rate at the nominal rate. Will requiring media stream changes to accomplish
 - Scale=1.0 + Speed=2.0: Playback at normal time scale, but media is delivered at the double speed. Results in buffer build up.
- Speed has relation to media bit-rate adaptation:
 - Speed=2.0 may require reduction of quality to avoid having total bit-rate from being increased to avoid congestion.

The Scale and Speed headers

- From discussion:
 - People are not agreeing with my interpretations
 - Speed seem to be the biggest confusion
- Proposal going forward
 - Scale should be used to indicate timescale advancement in media.
 - Default that media bit-rate is not affected by scale values
 - Will require media transformation
 - Drop Speed header for now
 - Any tricks by increasing bit-rate to achieve scale > 1.0 will either need to define extension or use transport feedback to determine that the bandwidth is available.

Feature Request

- The new version include one important new feature
 - Fully pipelined SETUP x N + PLAY capability.
- Other feature requests on the list:
 - Explicit media properties: live, PVR, on-demand, etc
 - Allowing for RTCP MUX
 - Private Error Codes
 - Define media mapping over DCCP
 - Capabilities exchange (multicast and other)
 - End of Stream and/or Asynchronous error indication
 - Method for changing the source media for the same RTSP session: See 3GPP TS 26.234 and "Reuse of existing transport"

Document Structure Changes

- There has been some discussion about document structure changes
- Some want to split out as much as possible
 - Agree that only the real core of the protocol needs to in the main document
 - However, splitting out functions that people anyway need to read isn't helping
- Only the following part could be split in my opinion:
 - Media protocol definition, i.e. Appendix B
- There will be some cleanup of unnecessary parts:
 - Unreliable requirements
 - Rewrite of introduction

Way Forward

- Resolve remaining open issues (before next meeting)
- Determine what necessary features should be included in the core (To be concluded by summer meeting)
 - Feature approved needs to also have text at that point
- We plan to send a Liaison statement to get feedback from RTSP using bodies and learn about extensions work they are interested in or doing
- Aim at having everything on WG level done before end of 2008:
 - Yes, this is the third time we say it should be done by the end of the next year.

NAT Traversal

- No progress since last meeting
- Good hope for some real support in writing on the solution document

- Current draft versions (no changes since Chicago):
 - draft-ietf-mmusic-rtsp-nat-evaluation-00
 - draft-ietf-mmusic-rtsp-nat-05