RTSP 2.0 Status

draft-ietf-mmusic-rfc2326bis-16
http://rtspsspec.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:
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 be 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