Controlling FLUTE sessions with RTSP

draft-lohmar-mmusic-rtsp-flute-00.txt
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TAKING YOU FORWARD

Introduction

- FLUTE – RFC 3926
    - File Delivery Protocol on top of UDP
    - Allows transmission of one or more files
    - Mainly intended for Multicast distribution
    - Developed in IETF RMT and adopted by 3GPP, OMA and DVB
    - ISO File Format extensions for FLUTE under developement (i.e. hint tracks)

- Proposal: A definition of a FLUTE establishment and control with RTSP
    - Establishing RTP and FLUTE sessions together using a single RTSP session.
    - A FLUTE enabled streaming server can then be controlled using the RTSP protocol.

Use cases for FLUTE playout control using RTSP

- **Playback using Multicast**
    - Controlling a server to forward flows to a multicast group
    - Live or Stored content
    - Example: Interactive TV
        - RTP flows for Audio/Video Feed
        - FLUTE session for related static binary objects, such as still images, scene information, etc.

- **Unicast distribution of Live and Stored content**
    - FLUTE is not restricted to Multicast
    - A server may serve multicast groups and unicast users
        - The same flows (RTP & FLUTE) may be forwarded via unicast
    - ISO file format may contain RTP and FLUTE hint tracks

RTSP extensions

- SETUP Method:
    - Control URI as defined in RTSP 2.0 is used to establish the described flute sessions.
    - RTSP transport protocol specifier for FLUTE shall be "FLUTE/UDP"
        - If "flute-ch" SDP attribute is present an according number of FLUTE channels is established.
        - One and only one UDP port is allocated for each FLUTE channel.

- PLAY Method: Tells server to start sending data including FLUTE session data

- PAUSE: Causes stream delivery including all FLUTE sessions to be halted.

- TEARDOWN: Stops stream delivery including all FLUTE data delivery for given URI.

RTSP SDP extensions

- As described in `draft-mehta-rmt-flute-sdp-05`

- A control URI (RTSP 2.0) SHALL be present for each FLUTE media description in the SDP
  - Control URI is used within RTSP SETUP

- Note, File properties (file name, MIME type etc.) are transmitted in FLUTE FDT

Thanks!

- Questions?

FLUTE data considerations

- Congestion control: Need to monitor congestion state, for further study.

- Adaptation of FLUTE data flow: It MAY be possible to adapt the flow to the known properties of the path between the server and the client.

Security

- See draft-ietf-mmusic-rfc2336bis regarding RTSP
- Some issues with FLUTE sessions, see draft-ietf-rmt-flute and draft-mehta-rmt-flute-sdp
- Confinentiality and integrity protection.