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MMUSIC Agenda (1)

0900  Agenda Bashing & update  (chairs)
0910  Revised RTSP spec  (Lanphier)
draft-ietf-mmusic-rfc2326bis-00.txt
0930  RTSP Extensions  (Lanphier/Narasinham)
draft-sergent-rtsp-mute-00.txt
draft-lanphier-radplay-00.txt
0950  Revised SDP spec  (Perkins)
draft-ietf-mmusic-sdp-new-06.txt
0950  Key Management Support in SDP  (Lindholm)
draft-ietf-mmusic-kmgmt-03.txt
1005  Connection-oriented Media in SDP  (Yon, chairs)
draft-ietf-mmusic-sdp-comedia-01.txt
MMUSIC Agenda (2)

1020  SDP for voice-band data  (Kumar)
draft-foster-mmusic-vbdformat-01.txt

1030  SDPng Transition  (chairs)
draft-ietf-mmusic-sdpng-trans-00.txt

1040  SDPng Update  (Kutscher)
draft-ietf-mmusic-sdpng-04.txt

1055  SDPng and QoS  (chairs)
draft-bos-mmusic-sdpng-qos-00.txt

1110  MMUSIC and EPGs  (Schulzrinne, chairs)
draft-ietf-mmusic-sdp-comedia-01.txt

1130  Wrap-up  (chairs)
WG Status

• Work items finished
  draf-ietf-mmusic-fid-06.txt
  draft-andreasen-mmusic-simcap-05.txt
  draft-ietf-mmusic-sdp-ipv6-03.txt
  draft-ietf-mmusic-offer-answer-02.txt
  draft-ietf-mmusic-sdp4nat-02.txt

• Charter got approved and published
  – Milestones until July
  – Review status this summer
WG Milestones

DONE      SDP simcap for PS
DONE      SDP FID for PS
DONE      IPv6 Extensions to SDP for PS
Feb 02    Revised SDP spec for PS (or Draft)
DONE      SIP's offer/answer use for Proposed
DONE      SDP4NAT for PS
Feb 02    SDPng motivations
Mar 02    SDP key management for Proposed
Apr 02    SDPng base spec for PS
Apr 02    SDPng audio profile for PS
May 02    Revised RTSP spec for PS or Draft
Jun 02    SDPng video profile spec for PS
Jul 02    RTSP MIB for PS
Issues with comedia

(currently in dormant mode?)
Comedia Issues

• Model for connection-oriented media inconsistent with SDP use for RTP streams
  – Discussion of the “reuse” attribute

• Several Differences:
  – TCP requires explicit setup/teardown
    • But state is created for RTP/UDP as well
  – TCP connections are bi-directional
    • Transport capability vs. Transport use

• Basic SDP handling not to be changed
  – Session descriptions must be self-contained
  – Resending same SDP should cause no change
Requirements

1. Convey transport address to enable media exchange
2. Put media stream on-hold
3. Take media stream off-hold
4. Redirect media stream to different address
5. Change media stream attributes / caps
6. Terminate media stream
7. Allow for multiple TCP connections as part of a single media stream?
SDP “Primitives”

a) Create a new connection to some destination
b) Close an existing connection
c) Pause media stream for a connection
d) Re-instantiate media stream

(Associate media stream with attributes)

- To be folded into a few SDP attributes that allow to meet the requirements.
  - “reuse” is only part of the solution
  - Strawman proposal from December needs further work
SDPng Transition
SDPng Transition

- Enable smooth migration from purely SDP-based applications to SDPng
- Accommodate long period of co-existence
- Backward compatibility is key
- SDPng design considers translation

Protocol-specific considerations

- Describe session in both SDP & SDPng
  - At the same time (different address, msg body)
  - Try one after the other
Protocol Specifics

• SAPv0
  – No Content-Type: available

• SAPv1
  – Use specific MIME type
  – Same or different announcement address?

• RTSP
  – Content-Type: available
  – multipart/alternative
    • Does anybody implement this?
  – Accept: header
Protocol Specifics

- **SIP**
  - Accept: header, OPTIONS
  - multipart/alternative
    - Does anybody implement this?
  - 155 + UPDATE

- **MEGACO**
  - Uses different ports for text vs. Binary
  - No Content-Type:-style field available
    - Check the first line?
    - Special v= line?
    - Yet another port number?
  - What to do about binary encoding
SDP(ng) & QoS
Current QoS activities

• Manyfolks
  – Synchronize SIP signaling with resource reserv.
  – Just signal need for and success of reservation
  – Do not convey reservation parameters
    • Implied from media descriptions

• Media auth
  – Authorize lower layer reservations

• Reservation parameters derived from codec
  – Possibly using other parameters as well (b=)

• Dynamic Mapping to RSVP

• (Static?) different classes
Two types of end-to-end QoS information

• **TI: Traffic Information**
  • Traffic type (peak bandwidth, packet size, ...) associated with the media component

• **SI: Sensitivity Information**
  • Specifies the QoS level for a certain media/(TI)
  • Possibility to provide an ordered list of SIs per media component
  • Three representation forms
    – Parameter format (delay, jitter, packet loss ratio)
    – Standardised QoS class
    – QoS flavour (e.g. gold, silver, brons, …)
What is the problem – RSVP?

Control

RSVP parameters

Media + RSVP

Control+SDP

Control

RSVP parameters

Media + RSVP

Media
What is the problem – diffserv?

Control

diffserv class

Media

Control+SDP

Control

diffserv class

Marked Media

Media

Media Control

Media Control+SDP
What is the problem - centralized?

- Media + RSVP
- Control
- Control + SDP
- Controller
- Reservation
- Media
- Media + RSVP
What is the problem – local RSVP?

Control

QoS parameters

Media + RSVP

Control+SDP

Marked Media

QoS parameters

Media + RSVP
What is the problem - others?

Control

SIP+SDP

Media

Control

Media
Some Questions to Ask?

Given what we have available now…

• What have we missed so far?
• Do we need QoS information beyond what can be derived from the current SDP?
• Where would this information come from?
• Is there a need to signal this inband?
• Session vs. Application layer?
• Do we need to synchronize endpoints on (changes in) QoS (profiles)?
• How much complexity is acceptable?
Beyond just QoS…

- QoS yet another dimension of a potential / actual configuration
- “A tag” attached to a media stream description
  - a=qos: ...
- Similar approaches for other dimensions
  - Security
  - ...
- Generalize to framework in SDPng
  - solution for QoS just as a specific instantiation
MMUSIC and EPGs
Background

• IP-based broadcasting
  – DVB-IPI (Internet Protocol Infrastructure)
  – Set-Top-Boxes using IP communications

• Interest in
  – SDPng for EPGs
  – SAP and other mechanisms for distributing EPGs
    • Describing sessions and meta-data
  – Minimal RTSP for retrieval