Signaling of layered and multi description media in Session Description Protocol –

draft-schierl-mmusic-layered-codec-01.txt

Thomas Schierl, HHI
schierl@hhf.fhg.de
draft version 00: Changes

- Title changed
- Added signaling for in-media stream multiplexing:
  - Implicit SSRC multiplexing (for RTP)
- Removed media describing attributes (fgs, res...)
- Removed – ‘Equal dependency’ scenario
- Extended definition section
- Examples for Multi Description Coding (MDC), new use-case for layered transport
- Editorial improvements
Signaling 1: media stream dependency

- Extended SDP grouping (RFC3388): 
  - **DDP** – ‘Decoding Dependency’ group
- Media streams identified by mid
- Additional media level attribute: 
  - `a=depend:` … followed by type and mids
- Types: 
  - `lay` – layered decoding dependency
  - `mdc` – multi description decoding depend.
Signaling 2: in-media stream dependency

• Decision for SSRC multiplexing (IETF66).
• Implicit SSRC multiplexing - idea:
  – Operation points of layered media implicitly assigned to increasing SSRCs with increasing importance.
  – No SSRC values in SDP!
  – Works for MDC as well
  – Identification of senders by CNAME (Hari)
Signaling 2: in-media stream dependency (cont.)

- New media level attribute: 
  \( a=\text{ssrcmux} : \ldots \) followed by number of media operation points (SSRCs)

- Additionally to be used with 
  \( a=\text{depend:lay-ssrc} \) for layered decoding dependency.
Signaling 3: backward compatible base-layer

• Backward compatibility problem (e.g. O/A)
• E.g. SVC media stream contains H.264 compliant base-layer
• Base-layer offered twice in multicast scenario
• With same transport parameters, but different payload, codec specific parameters etc.
Open issues:

- Should SSRC multiplexing go into the mmusic draft or into avt SVC payload draft only or into a separate one?
- Should *implicit* SSRC multiplexing be used?
- Or preferred *explicit* mechanism including SSRC assignment?
- If it stays in mmusic draft, should it become a general mechanism? Maybe also valid for other transport protocols.
Thanks for your attention!