Signaling media decoding dependency in SDP – draft-ietf-mmusic-decoding-dependency-01

Thomas Schierl, HHI
thomas.schierl@hhi.fraunhofer.de
Stephan Wenger, Nokia
stephan.wenger@nokia.com

Signaling: media stream dependency

- Motivation:

  RTP session multiplexing of layered / MDC media –

  Partitioning of layered / multi description coding (MDC) media bit-stream to different m-lines
- Problem:

  Session description with multiple m-lines of same type (e.g. video):

  How to express different types of dependencies between those lines ?
- First customer:
  - RTP Payload for Scalable Video Coding (SVC)
  - May also be relevant to draft-lakaniemi-avt-rtp-evbr-00 and draft-wang-avt-rtp-mvc-01

Signaling – extended by ***multiple*** payload type references:

- SDP grouping (RFC3388): ***DDP*** – ‘Decoding Dependency’
- Media streams identified by ***mid*** + ***payload type references***
- New media level attribute:

a=depend:

****1(Payload-type TYPE *1(MID”:” *1(Payload-type-dependency”,”))”;”)***

MID:	mid of referenced session
Payload-type:	Corresponding PT in session
Payload-type-dependency:	Corresponding PT in referenced session
TYPE:	***lay*** – layered decoding dependency ***mdc*** – MDC dependency

SDP example with ***multiple*** *payload type references:*

a=group:**DDP 1 2 3**

m=video 40000 RTP/AVP 94 194
a=rtpmap:**94** H264/90000
a=rtpmap:**194** H264/90000
a=mid:**1**

m=video 40004 RTP/AVP 96 196
a=rtpmap:**96** H264-SVC/90000
a=rtpmap:**196** H264-SVC/90000
a=mid:**2**
a=**depend:96 lay 1:94; 196 lay 1:94,194;**

m=video 40006 RTP/SAVP 100 200
a=rtpmap:**100** H264-SVC/90000
a=rtpmap:**200** H264-SVC/90000
a=mid:**3**
a=**depend:100 lay 1:94 2:96; 200 lay 1:94,194 2:196;**

Traffic on mailing list

- Mark:
  - Dependency signaling applicable to other protocols than RTP?
    → Clarified text: RTP only
  - IANA registration for dependency types “lay” and “mdc” ?
    → Should be enough to register “depend”
- Ali:
  - MDC: no signaling of operation points possible
    → This is out of scope of this draft, but we will improve text for “mdc”
  - Detail level: Just indicate dependencies to next media stream?
    → More text, but simpler to parse

Status

- Go for WGLC now!