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

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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:

  \[ a=\text{depend}: \]
  \[ *1(\text{Payload-type TYPE} \ast1(\text{MID}”:” \ast1(\text{Payload-type-dependency”,”}))”);” \]

- **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!