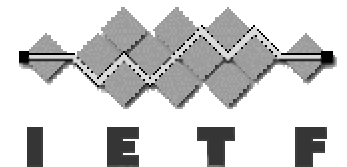# SDP Media Capability Negotiation

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draft-ietf-mmusic-sdp-media-capabilities-02.txt

Media Capabilities

- Extends the base capabilities negotiation for RTP based media
- Codec definition can be very complicated
  - Simple media codec
  - Redundancy codecs (like FEC)
  - Composite like layered codecs
- Work is not trying to cover every combination (not H.245)
- Updated from 01 to align with base capability negotiation and add new attributes.

Solution model

- Unique codec numbers at session and media level
- Configuration parameters for rtpmap and fmtp associated with one or more codec numbers
- Payload types are assigned to media codec numbers (with associated parameters) in each potential configuration (pcfg).
- Define media level bandwidth capability

Solution model

- Latent configuration specify configuration without a corresponding potential or actual media line.

  - Example offer an actual audio (m-line) and a capability to support video later.

- Latent configuration (a=lcfg) is similar in syntax to potential configuration

- There is no payload type associated with lcfg because no actual media is being offered.

Extends capability negotiation - example

- Adds media negotiation attributes

  a=creq:med-v0

  a=mcap:1 audio g729 iLBC PCMU g729

  a=ecap:2 8000

  a=fcap:1 annexb:no

  a=fcap:2 mode=20

  a=tcap:1 RTP/SAVP

  m=audio 3456 RTP/AVP 0 18

  a=acap:1 crypto:1 AES_CM_128_HMAC_SHA1_32
      inline:NzB4d1BINUAvLEw6UzF3WSJ+PSdFcGdUJShp
      X1Zj|2^20|1:32

  a=pcfg:1 m=1,3|4,3 t=1 a=1 pt=1:100,4:101,3:102

  a=pcfg:2 m=2 pt=2:103

Bandwidth capability – example

m=video 49170 RTP/AVP 99

b=TIAS:500000

a=rtpmap:99 H263-1998/90000

a=fmtp:99 CIF=4; QCIF=2

a=mcap:1 video H263-1998 H263-1998

a=fcap:1 QCIF=2

a=fcap:2 CIF=4; QCIF=2;F=1;K=1

a=bcap:1 TIAS:360000

a=pcfg:1 m=1 b=1 pt:100
a=pcfg:2 m=2 pt:101

Open issues

- Bandwidth attribute is defined for media level. Reason is that session level b-line defines maximum for the whole session and the media level can limit the actual total maximum.

- Do we need to support a= attributes in lcfg. What about keys or at least key method.

- Final format is still open to suggestion – please review

Next step

- Finish the missing sections in the document
- Go to WG last call