

SDP Media Capability Negotiation

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Media Capabilities

- Extends the base capabilities negotiation for RTP based media
- Why do we need it
 - Codec definition can be very complicated
 - Redundancy codecs (like FEC)
 - Composite like layered codecs
 - Alternative offering
 - More than one m-line with same media type
- Enable easy parsing

Changes from version 03

- A new session capability attribute (sescap) has been added to permit specification of acceptable media stream combinations (alternatives).
- Capability attribute definitions corresponding to the i, c, b, and k SDP line types have been added for completeness and easier parsing.
- Use of the pcfg: attribute in SDP answers has been included in order to conveniently return information in the answer about acceptable configurations in the media stream offer.

Changes from version 03

- The use of the lcfg: attribute(s) in SDP answers has been restricted to indicate just which latent configuration offers would be acceptable to the answerer.
- The description of the mscap attribute has been modified to make it clear that it should not be used to generate undefined SDP attributes, or to "extend" existing attributes.
- <ms-parameters> are made optional in the mscap attribute definition.
- Update security section

Extends capability negotiation - example

Offer single H.264 video stream or two H.263 video streams

```
a=creq:med-v0
a=sescap:1 1,2
a=sescap:2 1,3,4

a= mcap:2 H263-1998/90000
a= mfcap:2 CIF=4;QCIF=2;F=1;K=1
a=mscap:2 content:slides
lcfg:3 mt=video m=2 pt=2:103

m=audio 54322 RTP/AVP 0
a=rtpmap:0 PCMU/8000
a=pcfg:1

m=video 22344 RTP/AVP 102
a=rtpmap:102 H264/90000
a=fmtp:102 profile-level-id=42A01E; packetization-mode=2
a=content:main
a=pcfg:2
a=mcap:1 H263-1998/90000
a=mfcap:1 CIF=4;QCIF=2;F=1;K=1
a=pcfg:4 m=1 pt=1:104
```

Extends capability negotiation - example

- MSCAP usage with rtcp-fb and the replacement rules

```
m=video 51372 RTP/AVP 98
a=rtpmap:98 H263-1998/90000
a=tcap:1 RTP/AVPF
a=mcap:1 H263-1998/90000
a=mscap:1 rtcp-fb ccm tstr
a=mscap:1 rtcp-fb ccm fir
a=mscap:* rtcp-fb ccm tmbr smaxpr=120
a=pcfg:1 t=1 m=1 pt=1:98
```

the potential configuration, if chosen, is equivalent to:

```
m=video 51372 RTP/AVP 98
a=rtpmap:98 H263-1998/90000
a=rtcp-fb:98 ccm tstr
a=rtcp-fb:98 ccm fir
a=rtcp-fb:* ccm tmbr smaxpr=120
```

Next step

- The draft has changed from 03 we need reviewers for the draft.
- Need examples for challenging cases.
- Are we on the right track?
 - Current content covers requirements we got so far
- Open issues:
 - do we need to support grouping in this draft.
- Last call after next revisions
 - May have a BCP draft that uses this work