IETF 89

Expressing Video Resolution in Codec Agnostic Way

draft-nandakumar-payload-sdp-max-video-resolution

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Presentation Goals

Establish consensus on mechanism to signal
"Max Receive Video Resolution"
components in a Codec
agnostic way

Why ?

- Codec specific ways to express decoding capabilities
- Multiple paths to arrive at the results

  levels, macroblocks, frame-size, frame-rate

	H.264	VP8	H.265	H.263
1280 x 720 @30 FPS	Level=3.1	max-fs=3600	Level=3.1	Supported Indirectly
352 x 288 @30FPS	Level=2	max-fs=396	Level=2	Level=30
2048 x 1024 @30FPS	Level=4	max-fs=8192	Level=4	Not Supported

Macroblock Size = 16 x 16

- A Codec Agnostic representation shall :
  - Simplify the representation
  - Abstract the high-level concepts
  - Promotes interoperability

Approach 1

fmtp specific attributes to specify maximum receive image resolution that can be handled by the decoder

Example:

m=video 62537 RTP/SAVPF 96
a=rtpmap:96 VP8/90000
a=fmtp:96 max-fr=30;**max-recv-width=640;max-recv-height=480;**
a=sendrecv

Concerns:
Breaks the way fmtp parameters are currently described.

Approach 2

- Move the resolution out of fmtp representation.

Example:

m=video 62537 RTP/SAVPF 96

a=rtpmap:96 VP8/90000

a=fmtp:96 max-fr=30;

a=max-recv:96 width=640; height=480;

Approach 3

- How about using RFC6236 imageattr ?

Example:

```
m=video 62537 RTP/SAVPF 96
a=rtpmap:96 VP8/90000
a=fmtp:96 max-fr=30;
a=imageattr:96 recv [x=[0:16:640], y=[0:16:480]]
```

Ask from the WG

- Agree on a mechanism
- Ask for working group adoption

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Thank You