

# **Source-Specific Media Format Parameters for H.264 and H.264 SVC**

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draft-lennox-avt-h264-source-fmtp-00.txt

# Motivation

- The media type video/H264 has several parameters (e.g. sprop-parameter-sets) that describe attributes of a source being sent, not attributes of what a recipient wants to receive.
  - Parameter sets, in particular, need to be received reliably.
  - See recent mailing list discussion.
- Interaction with usual SDP receive-side semantics is confusing.
- Problematic given multiple encoders “behind” a sender (e.g. video switching, conferencing).
  - Encoders can (will) choose different parameter sets with the same parameter set ID.

# Solution: source-specific format parameters

- draft-ietf-mmusic-sdp-source-attributes defines source-specific parameters, including source-specific `fmt` mappings.
- Define how to map (some) video/H264 and video/H264-SVC parameters as source attributes.

```
m=video 49170 RTP/AVP 96
a=rtpmap:96 H264/90000
a=fmt:96 packetization-mode=1
a=ssrc:12345 cname:stream1@example.com
a=ssrc:12345 fmt:96 sprop-parameter-sets=AAA,BBB
a=ssrc:67890 cname:stream2@example.com
a=ssrc:67890 fmt:96 sprop-parameter-sets=CCC,DDD
```

# Compatibility

- Descriptions with source parameters are still valid SDP for receivers that don't understand them.
- `sprop-parameter-sets` MUST be a superset of the parameter sets specified in the media's `fntp`.
  - Send the additional parameter sets in-band as well, unless you know all receivers understand source parameters.
- Receiver format parameters (`profile-level-id`, `packetization-mode`) MUST NOT be specified as source parameters.
- Capabilities and buffer sizes MUST be less than or equal to their media-level values.
- `sprop-scalability-info` (SVC) MUST NOT appear in both media and source `fntp`.

## **Next steps**

- Is the AVT group interested in this work?
- Is there interest in taking it on as a WG item?
- Should the H264 and H264-SVC definitions be split?