Message Stream ID

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Presentation to MMUSIC
The Context

RTCWEB defines a media transport model

● Audio and video are both called "Media Stream Tracks"
● Tracks are bundled in "Media Streams"
● Browsers can have multiple Media Streams between them, inside a PeerConnection
● A Media Stream gets connected to a <video> tag to get shown

Defined to make Javascript easy, not to make RTP mapping simple.
The problem

Track inside Stream inside PeerConnection

How does a JS app refer to "this one"?
Solutions

● Ignore problem
  ○ Works badly with multiple streams

● Use existing identifiers
  ○ SSRC
    ■ Doesn't exist until PeerConnection connected
    ■ Fits with track, but not with stream
  ○ CNAME
    ■ Has other semantics (synchronization, source)
  ○ RTP session / SDP m-line
    ■ Unique media type breaks MediaStream concept

● Add a new identifier
  ○ Nonstandard, API only (would have to map to above)
  ○ Standard, carried in SDP blobs
The MSID proposal

- Define a stable ID for a MediaStream
- Combine with index for MediaStreamTrack
- Pass over SDP in a SSRC-specific attribute

m=video
a=ssrc:1334 msid=13F7 v2
m=audio
a=ssrc:3497 msid=13F7 a3
MMUSIC questions

- Is this the right way to do MessageStream?
- Is the extension well defined?
- Are there issues RTCWEB did not think of?
- What are the process steps we need next?
Discuss?