Message Stream ID

Harald Alvestrand
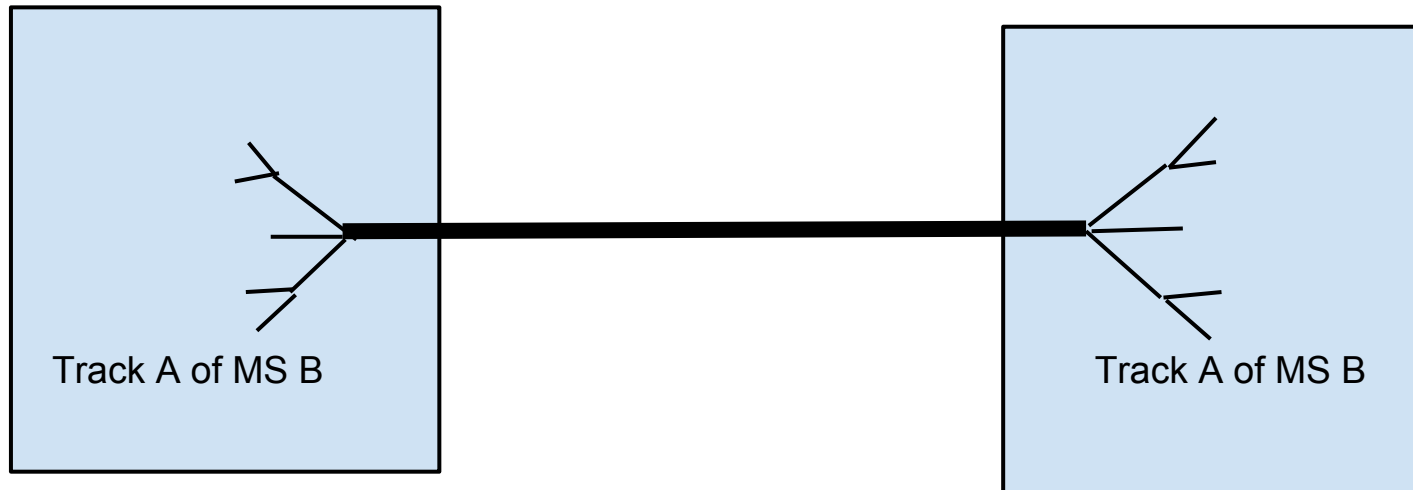Google
Presentation to MMUSIC

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

Track A of MS B

Track A of MS B

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?