

# **RID in RTCP**

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**Adam Roach**

**Tokyo, Japan**

**Thursday, November 5<sup>th</sup>, 2015**

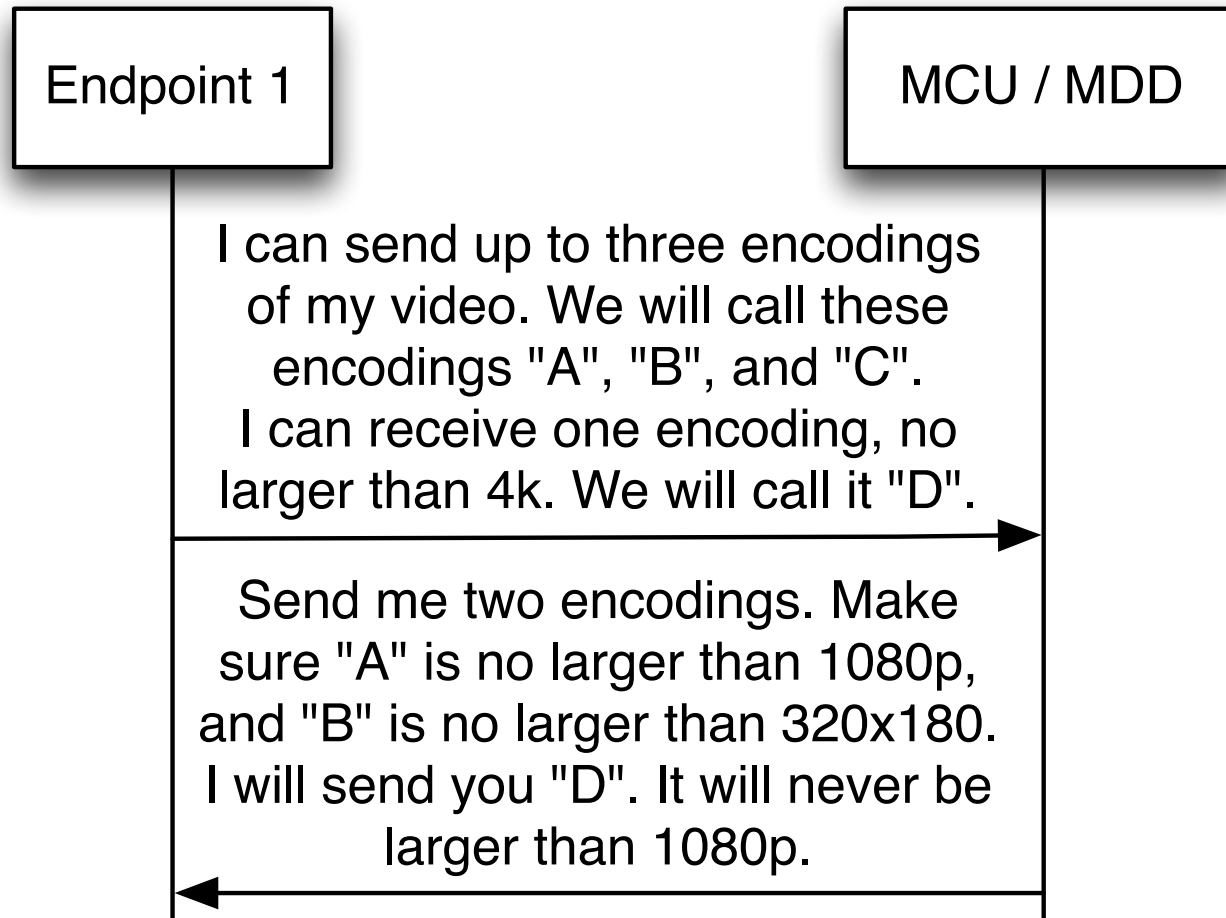
# Overview

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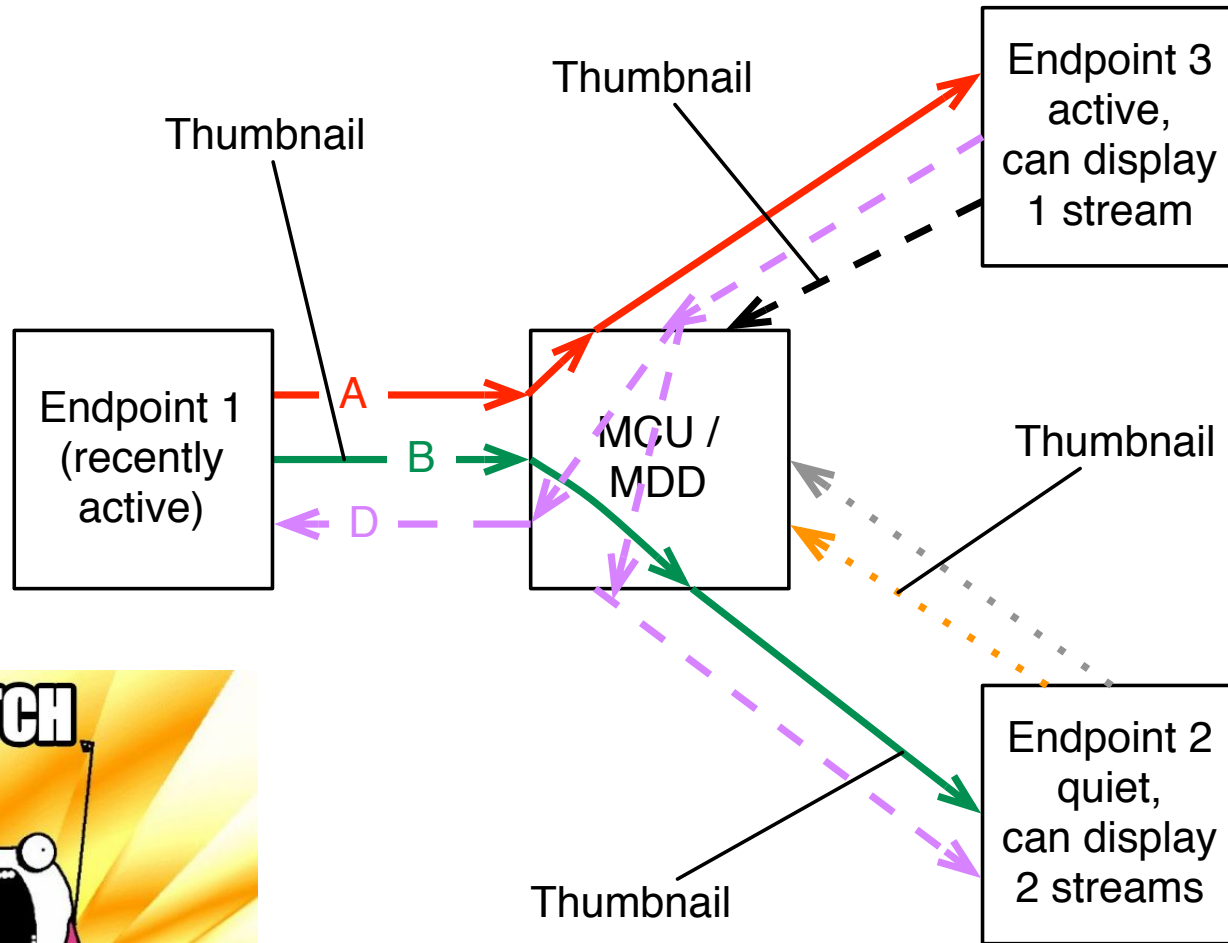
- Defining a new identifier, “RID”
- In SDP, negotiates constraints to be applied to a Source RTP Stream
- In RTCP (and RTP headers), carries an identifier to bind a Source RTP Stream to its negotiated constraints
- Key motivator is constraining and identifying multiple encodings in Simulcast

# Overview: Negotiation

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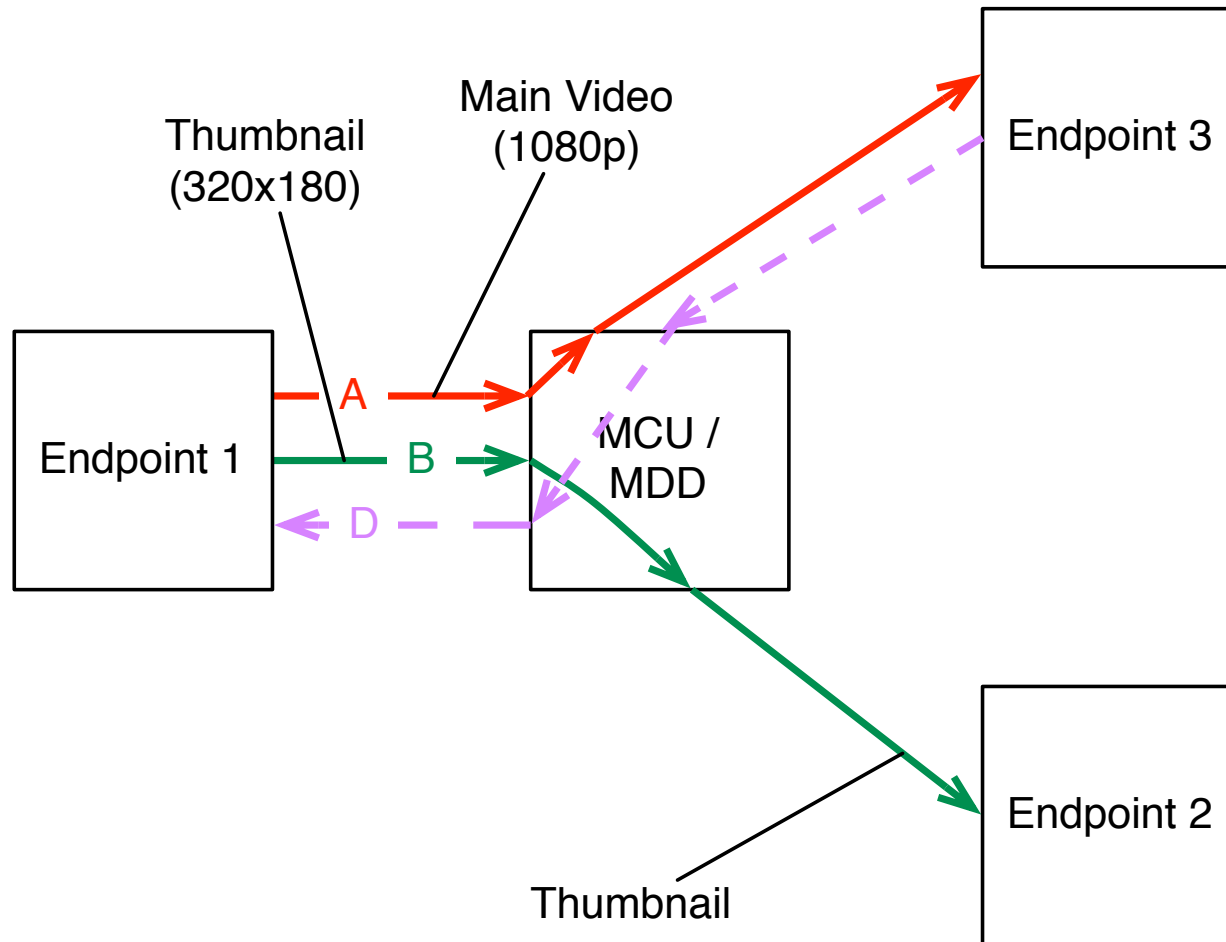


# Overview: All the Streams



# Overview: Endpoint 1's Streams

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# Why do we need an identifier?

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- When a stream arrives at the conference server, it needs to know how it is constrained so that it knows what to do with it.
  - In the previous example, it needs to know which stream is “thumbnail” and which is “main video”
- In architectures such as PERC, the server will not be able to inspect the stream to determine its characteristics.
- When FEC and RTX are used, you need RID to know which FEC and RTX RTP Stream applies to which Source RTP Stream.

# But isn't that the same as...?

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- **CNAME?** No, there will be multiple RIDs per CNAME.
- **SSRC?** No, although there will be a one-to-one mapping at any given time.
- **MSID?** No – these group media sections together. There will be multiple RIDs per MSID.
- **MID?** No – there will be multiple RIDs per MID.
- **M-line index?** No; see MID.
- **PT?** No. You can hack things together to act like that in simple cases, but if you start adding new PTs for each encoding, you can actually run out.

# RTCP and RTP Don't Require SDP

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- One key observation is that RTP and RTCP do not require SDP (e.g., Jingle, H.248, ORTC).
- Because of this, it would be nice to have the RID usage in RTCP (and RTP header extensions) defined in a document separate from the SDP.
- Finally, WebRTC needs this split
  - If MMUSIC simulcast is finished “in time” (which is a semi-subjective “really soon” on the order of a small number of months), we really, really want that.
  - If it isn't, we need a fallback that can be forward-compatible with what MMUSIC finally produces.



# Proposal

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- Split RTCP and RTP sections out of draft-pthatcher-mmusic-rid-02 into their own document
  - I'd expect this to be *very short* – order of 2 pages or so, most of which is IANA registrations
- RTCP and RTP sections are progressed in avtext
- We'd want to finish this inside a month or two.

