

# Breakout Discussions re TMMBR

- A group of people (Magnus Westerlund, Colin Perkins, Tom Taylor, Guido Franceschini, Stephan Wenger) met Tuesday afternoon to clarify the missing details of TMMBR
- Results were also discussed with Roni Even, who was unable to join
- We agreed a number of additions and changes to the draft to clarify TMMBR.
- Those changes will be implemented by the weekend, then there will be a language pass, then the document will be provided as an I-D, hopefully as soon as late coming week.
- Thereafter another WGLC

# Changes re TMMBR

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1. Clarify what TMMBR pertains to: **a single media stream for a single SSRC**.  
Not a link.
2. Check the **use case descriptions** (and related informative text), and clarify each time item 1)
3. Add a **TMMBR use case example with a mixer** (where it's clear that TMMBR relates to something else but a link)
4. Clarify the **TMMBR algorithm is not mandated**: "This is one example algorithm, and you can use any other one as long as you get the same results".
5. Add (in **Congestion Control** section) "You really need to do congestion control. If you don't implement it, you are out of TCP friendliness even if TMMBR suggests reducing bandwidth, simply because the CC-algorithm based bandwidth may be even lower than what TMMBR suggests. It's intuitive that you need CC when TMMBR limits are raised. "

6. Add in normative language: When a TMMBR suggest **adjusting the sending rate upward, a media sender MUST wait two RTTs** from the time the TMMBN is sent, before it starts upping the bandwidth (subject to CC constraints).

The time limit is introduced to give other participants in the multicast group enough time to send their own, more restrictive, TMMBR message in response to the raised limit."

7. Clarify what **"Overhead"** is: "the amount of information one needs to convey an RTP payload. Overhead includes, for example, IP, UDP, RTP headers, any layer 2 headers, any CCRSs, RTP-Padding, header extensions... Overhead excludes the payload header and (obviously) the payload itself.

# Roni's additional comments

- The TMMBR MUST NOT be used to raise the rate above the current b=value defined for session or stream **OK**
- "If it is likely that the new value indicated by TMMBR will be valid for the remainder of the session, the TMMBR sender **can** perform a renegotiation of the session upper limit using the session signaling protocol."
- Roni: I would like the *can perform* to be a *SHOULD perform*.
- The cited text is in the informal description. There is normative text, using RECOMMENDED for essentially the same thing. **So no action necessary.**