

Pausing an RTP Media Stream

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Introduction

- Real-time multimedia communication topologies are typical point to point or multipoint. Typical Multipoint is done using a centralized MCU using unicast connections to each participant.
 - In the point to point or multipoint case the receiving endpoint can ask the sender (or MCU) to reduce the media rate to zero and later ask for a new bit rate.
 - In the multipoint case, the central mixer if not using one of the streams may ask the sender to stop sending.
- Terminology
 - Pause is a receiver request to temporary stop sending media.
 - Resume is a receiver request to resume sending media that was paused.

Using TMMBR

- TMMBR as specified in [RFC5104] is used by video conferencing systems for flow control as well as for pause and resume.
- Pause request can be done using TMMBR with bit rate “0”.
 - Works for point to point having a single receiver. This is true for an MCU/mixer that unicast the media to each receiver being a point to point case.

Using TMMBR

- RFC5104 provides guidelines on how to apply an increase in the temporary rate change when there are multiple receivers. It recommends delaying the rate increase allowing all receivers to agree with the change.
 - One reason for it is that RFC5104 allows using TMMBR to request a bandwidth that is higher than the current negotiated one using SDP "b" attribute.
- Propose changing RFC5104 allowing TMMBR to ask for a bit rate not higher than the current value specified by the SDP b= attribute.
 - In the multipoint case when receivers ask for resume using TMMBR with a value up to the current applicable b= value may receive at this rate or lower based on what the MCU can supply.