

# MULTIPLE MEDIA TYPES IN AN RTP SESSION

[draft-westerlund-avtcore-multi-media-rtp-session](#)

Magnus Westerlund, Ericsson  
Colin Perkins, University of Glasgow  
Jonathan Lennox, Vidyo

# OUTLINE



- › Background
- › Goal
- › Proposal Overview
- › Applicability
- › Behavior specification
- › Signaling
- › Open Issues
- › Next Steps

# BACKGROUND



- › Proposal for how to in the same RTP session have both
  - Audio
  - Video
- › This individual document is the result of:
  - The desire in RTCWeb WG to have a single transport
  - Harald's draft: [draft-alvestrand-rtp-sess-neutral-01](#)
  - The discussion in the last three IETF meetings
    - › Resulting in a rough consensus that something like this should be worked on
  - The agreement among the proponents on splitting up the work from Paris

# GOALS



- › To have this document adopted as WG item
- › Get feedback on the Proposal

# PROPOSAL OVERVIEW



- › Enable RTP using applications to have media streams of multiple media types in one RTP session
- › This has limited applicability
- › It requires certain considerations, such as
  - RTCP Usage
  - Usage of SSRCs and Payload types
- › It requires an update of RFC 3550 and RFC 3551
- › Putting requirements on Signaling

# APPLICABILITY



- › Draft describes the limitations of using this Proposal
  - Equal treatment of RTP media streams independent of media type
  - Same Network QoS
  - Requires Signaled Support of session participants
  - Homogenous multiparty capabilities
  - Stricter limits on number of payload types
  - Some RTP/RTCP extensions does not function
- › Points at [draft-westerlund-avtcore-multiplex-architecture-02](#) to provide guidance regarding considerations around usage of one or more RTP session

# BEHAVIOR SPECIFICATION



- › Updates RFC 3550 regarding a SHOULD and SHOULD NOT
- › A SSRC MUST only be used for one Media Type
- › Most Payload Types have a declared media type
  - But some are generic, like FEC
- › RTCP Reporting will be independent of media type
  - Depends on bandwidth (RR, RS) and trr-int (AVPF)
  - Configure it to be suitable for all media types in use
- › Points to [draft-lennox-avtcore-rtp-multi-stream-00](#) for issues around multiple SSRCs in RTP session

# SIGNALING



- › This document provides some requirements on signaling
  1. Ensure that any participant in the RTP session is aware that this is an RTP session with multiple media types.
  2. Ensure that the payload types in use in the RTP session are using unique values, with no overlap between the media types.
  3. Configure the RTP session level parameters, such as RTCP RR and RS bandwidth, AVPF trr-int, underlying transport, the RTCP extensions in use, and security parameters, commonly for the RTP session.
  4. RTP and RTCP functions that can be bound to a particular media type should be reused when possible also for other media types, instead of having to be configured for multiple code-points.
- › The SDP based signaling is defined in:
  - [draft-ietf-mmusic-sdp-bundle-negotiation-00](#)



# OPEN ISSUES



- › Needs to update RFC 3551 also:
  - Section 6: Payload types of different media types SHALL NOT be interleaved or multiplexed within a single RTP session, but multiple RTP sessions MAY be used in parallel to send multiple media types
- › What rules apply for Generic FEC to protect multiple media types?

# NEXT STEPS



- › Intended to update the draft to address the open issues
- › Does the WG support taking [draft-westerlund-avtcore-multi-media-rtp-session](#) as WG item?