IPR Disclosure


› Unchanged since -00
Presentation Goal

› WG consensus that it is a desired feature

› WG consensus on suitability of proposed solution

› Adoption as WG draft
Problem and Motivation

› An endpoint needs to send several related RTP media streams
  – Simulcast versions of same media source
  – Decoding Dependency (scalability)
  – Forward Error Correction and Redundancy
  – Retransmission

› Relation on RTP level needed, without involving signaling (SDP)
  – In-path addition of FEC or redundancy
  – Large number of dynamically appearing senders, e.g. multicast

› A single stream can have several relations simultaneously

› Other ways of grouping are not always sufficient
  – SSRC; cannot use as group identifier, and may collide and change
  – CNAME; identical for an entire synchronization context from an endpoint
  – SDP; m-block or SSRC grouping not always available in media path
  – Implicit; e.g. correlating SN between different streams, is not fail-safe
Wanted Functionality

› Relating RTP media streams (SSRC) on RTP level
   – Two or more streams can be related

› Possible to relate streams in different RTP sessions

› Must not require to be in signaling path

› Single media stream may have multiple relations

› Quick discovery of relations on receiving streams
Changes Since -01

› First presented at IETF 82 in Taipei
› No time to present at IETF 84 in Vancouver

› Received comments since -00:
  – Support more than a single relation per media stream
  – Possibility to distinguish which part is which in a relation
  – Quicker discovery of relations on receiving streams

› Changes:
  – Hierarchically structured SRCNAME
  – Added support for SRCNAME as optional RTP Header Extension
Relation Example

- Video (a.video)
- Audio (a.audio)
- Simulcast (no ref defined)
- Hi-res (a.video.hi-res)
- Lo-res (a.video.lo-res)
- FEC (a.video.fec)
- FEC (a.video.hi-res.fec)
- FEC (a.video.lo-res.slow.fec)
- Low framerate (a.video.lo-res.slow)
- FEC (a.video.lo-res.slow.fec)
- Hi-fidelity (a.audio.hifi)
- Redundant (a.audio.hifi.red)

Referencing this single stream only (not all related) can be done by making this node conceptual and moving the stream to a leaf, e.g. a.video.lo-res.fast

- View A (a) (needed if several views share CNAME)

= Conceptual relation
= Actual media stream
Proposed Solution

› New RTCP SDES called SRCNAME

› Hierarchical value format, enabling relations on different levels
  – “.” (period) delimiting hierarchy levels is the only content restriction
  – Compare SRCNAME for match left-to-right, per level
  – Streams relate down to the level they match
  – No defined restrictions or conventions on naming

› Allow multiple SRCNAME, each describing one relation

› Optionally also in source-specific SDP [RFC 5576]

› Optionally also as RTP Header Extension [RFC 5285]
Way Forward

› Should the problem be solved?
   – Draft currently referenced with “must” statement by
     › draft-ietf-avtext-rtp-duplication
     › draft-ietf-mmusic-duplication-grouping

› Is the proposed solution favored by the WG?

› Should the draft be adopted as a WG draft?