RTCP SDES SRCNAME

draft-westerlund-avtext-rtcp-sdes-srcname-02

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IPR Disclosure

› For referred draft-westerlund-avtext-rtcp-sdes-srcname
  – http://datatracker.ietf.org/ipr/1638/

› 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
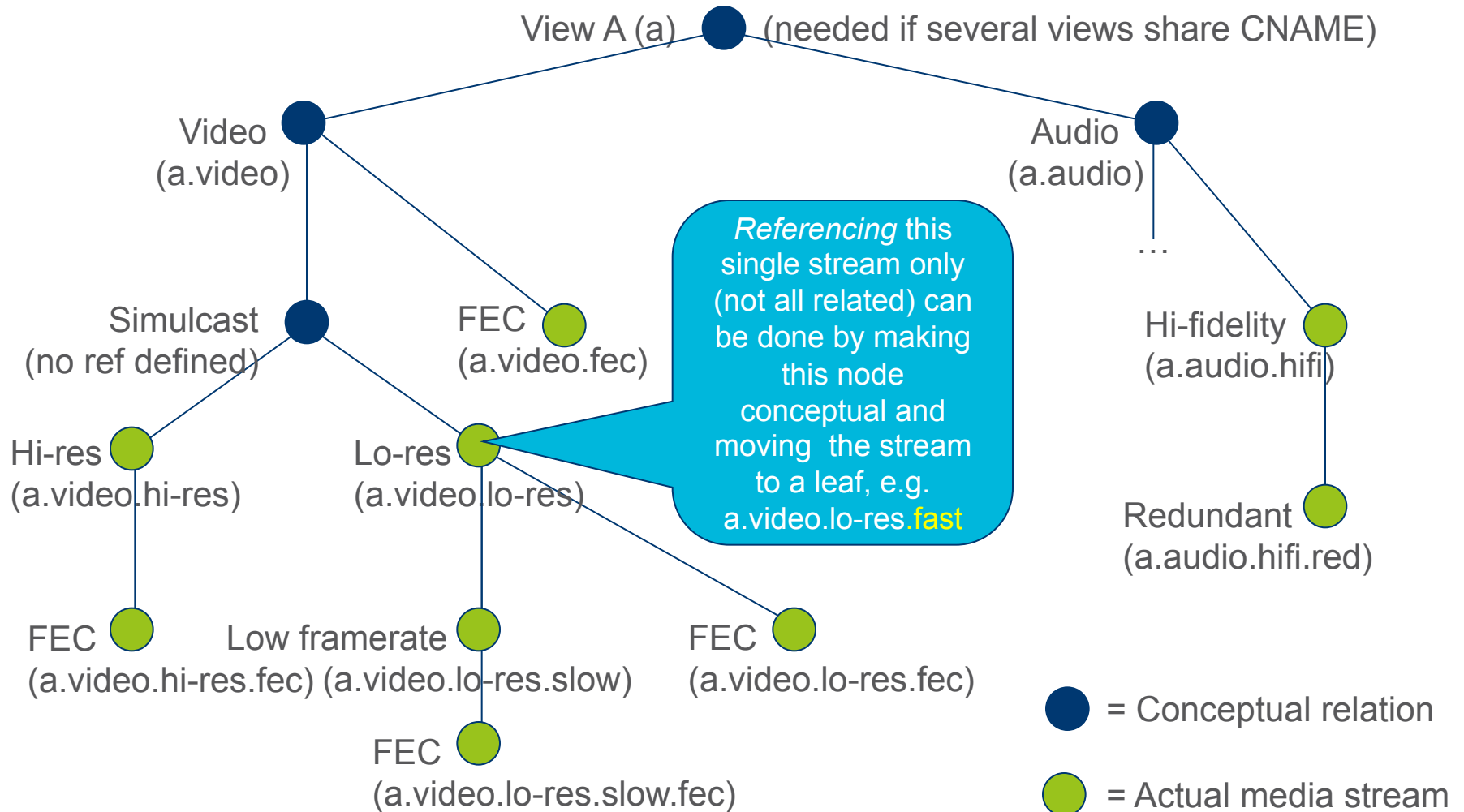- – Implicit; e.g. correlating SN between different streams, is not fail-safe

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
 – http://www.ietf.org/proceedings/82/slides/avtext-2.pdf
› No time to present at IETF 84 in Vancouver
 – http://www.ietf.org/proceedings/84/slides/slides-84-avtext-2.ppt

› 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

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

Video
(a.video)

Audio
(a.audio)

Simulcast
(no ref defined)

FEC
(a.video.fec)

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

Hi-fidelity
(a.audio.hifi)

...

Hi-res
(a.video.hi-res)

Lo-res
(a.video.lo-res)

Redundant
(a.audio.hifi.red)

FEC
(a.video.hi-res.fec)

Low framerate
(a.video.lo-res.slow)

FEC
(a.video.lo-res.fec)

FEC
(a.video.lo-res.slow.fec)

● = 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?