

Flexible-FEC

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draft-ietf-payload-flexible-fec-scheme-00

Status

- Submitted -00 WG draft after honolulu
- Reviews: Thanks Magnus Westerlund

Open Issue 1

- Associating repair stream with source RTP Stream.
- Dynamic Association in RTP
 - (details next few slides)
- no association in SDP

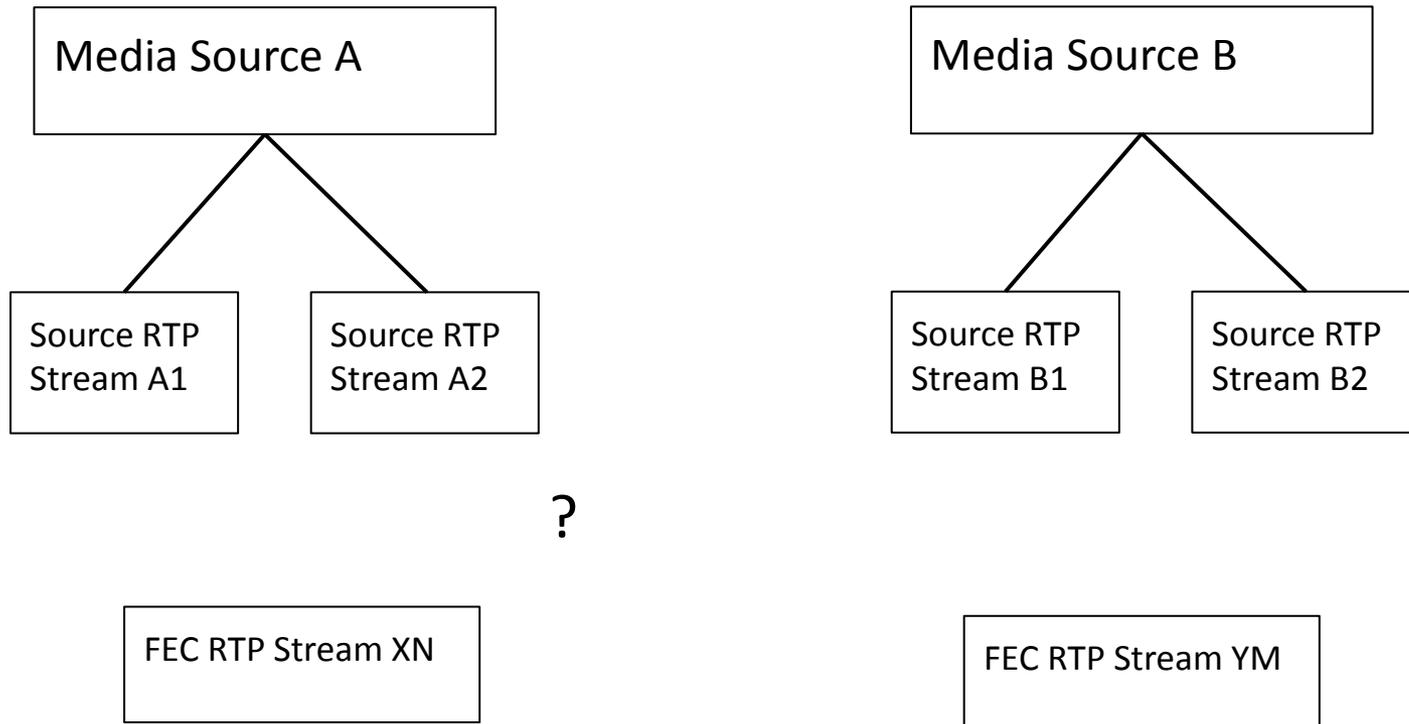
Example:

a = rtpmap:96 VP8/90000

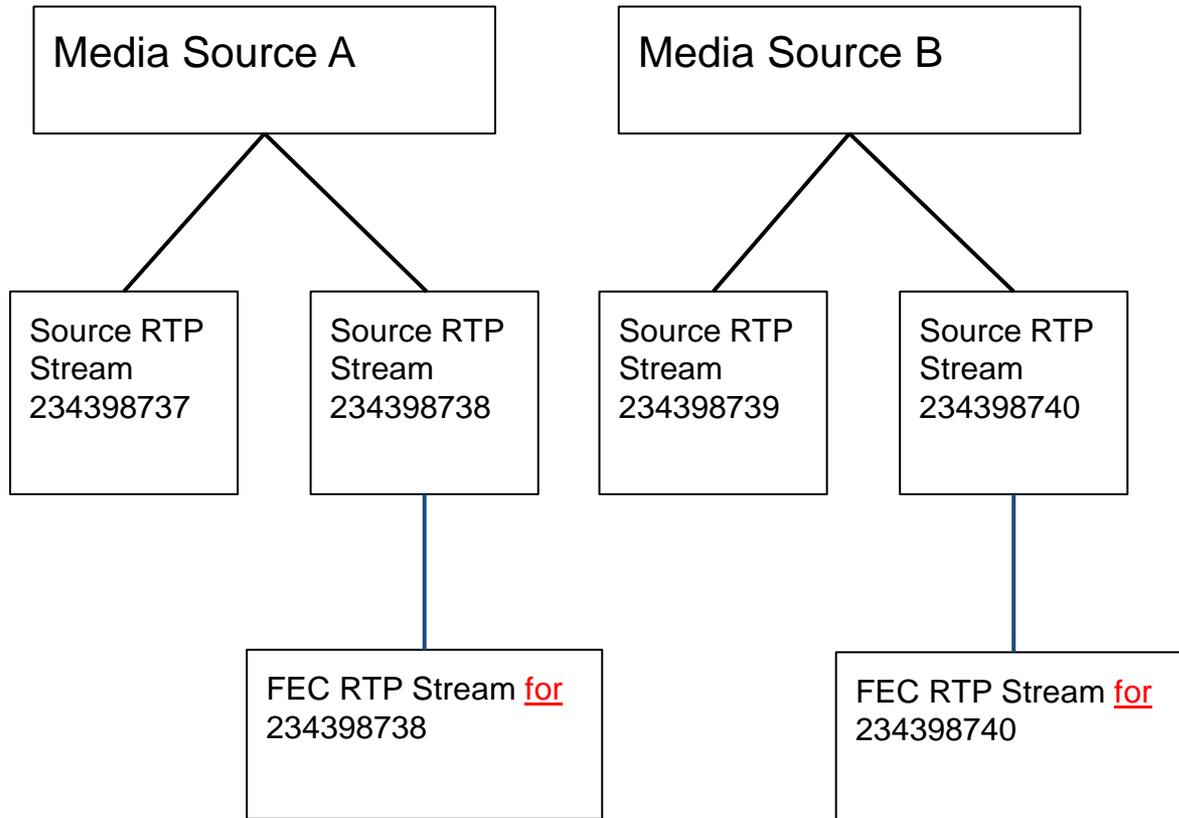
a = rtpmap:98 FLEXFEC/90000

a = fntp:98 code=xor; repair-window=200ms

Which RTP Stream(s) does the FEC refer to?



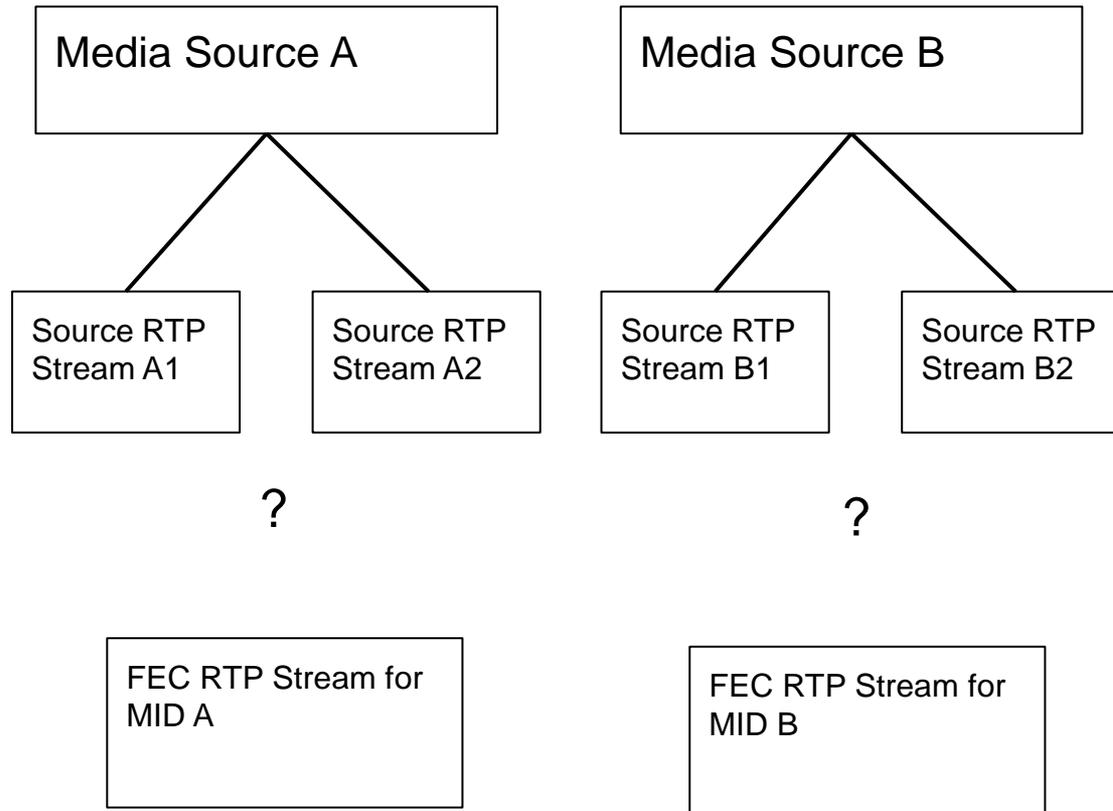
Option 1: Refer by SSRC



(Assuming one RTP session)

Problem: Must signal the protected SSRCs in RTP

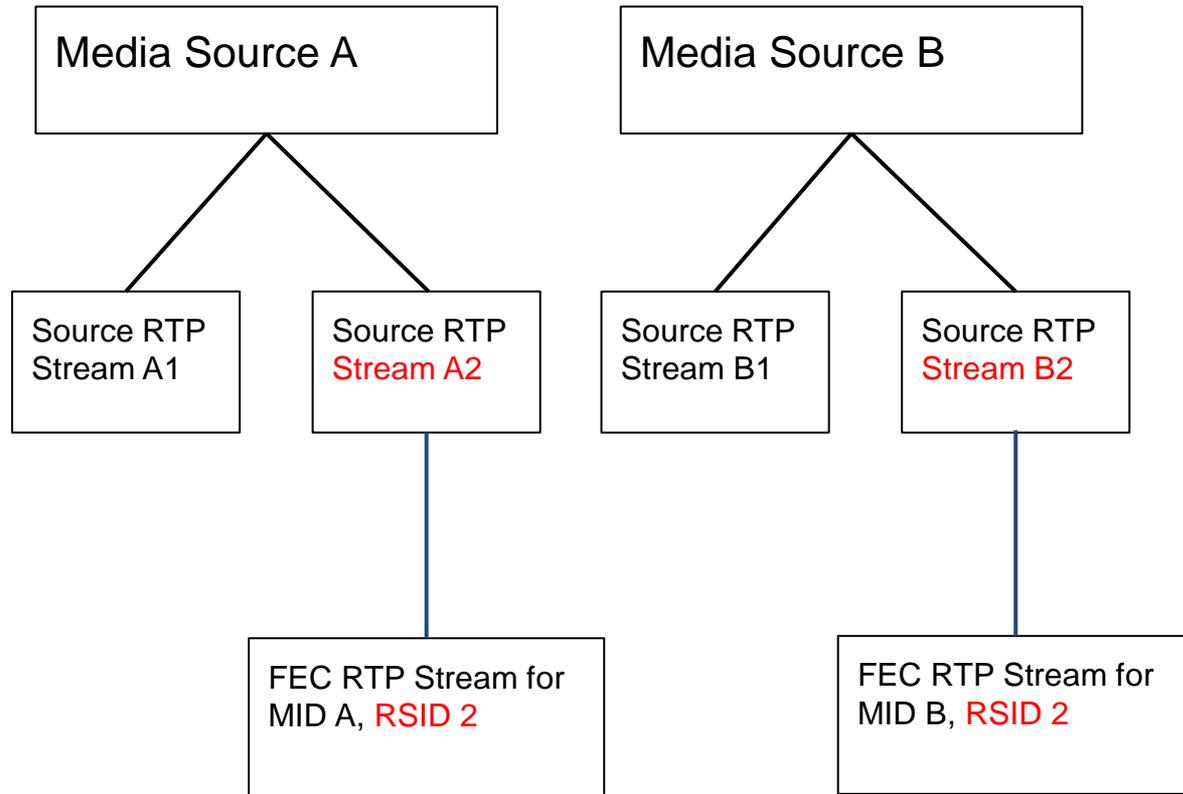
Option 2: Use MID



(Assuming one RTP session)

Problem: Does not work for multiple source RTP streams per media source.

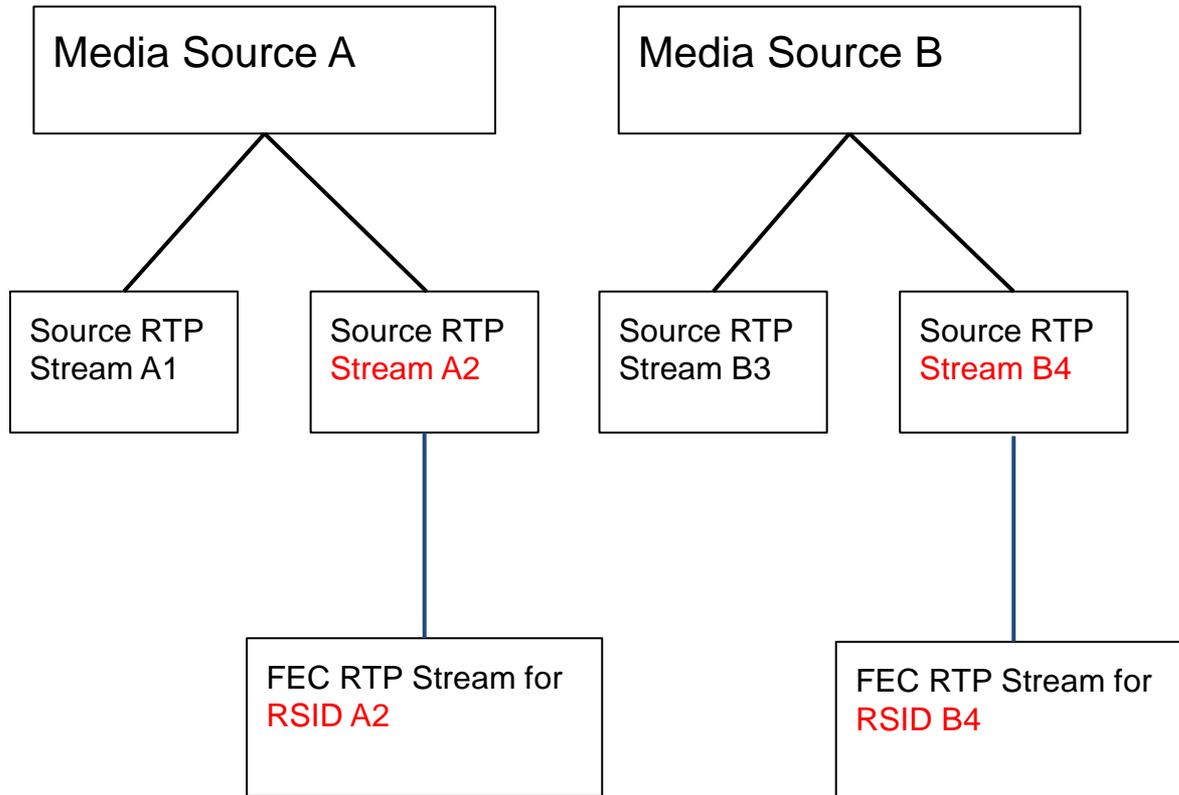
Option 3: Use MID+RSID



(Assuming one RTP session)

Solution: RSID identifies the Source RTP Stream

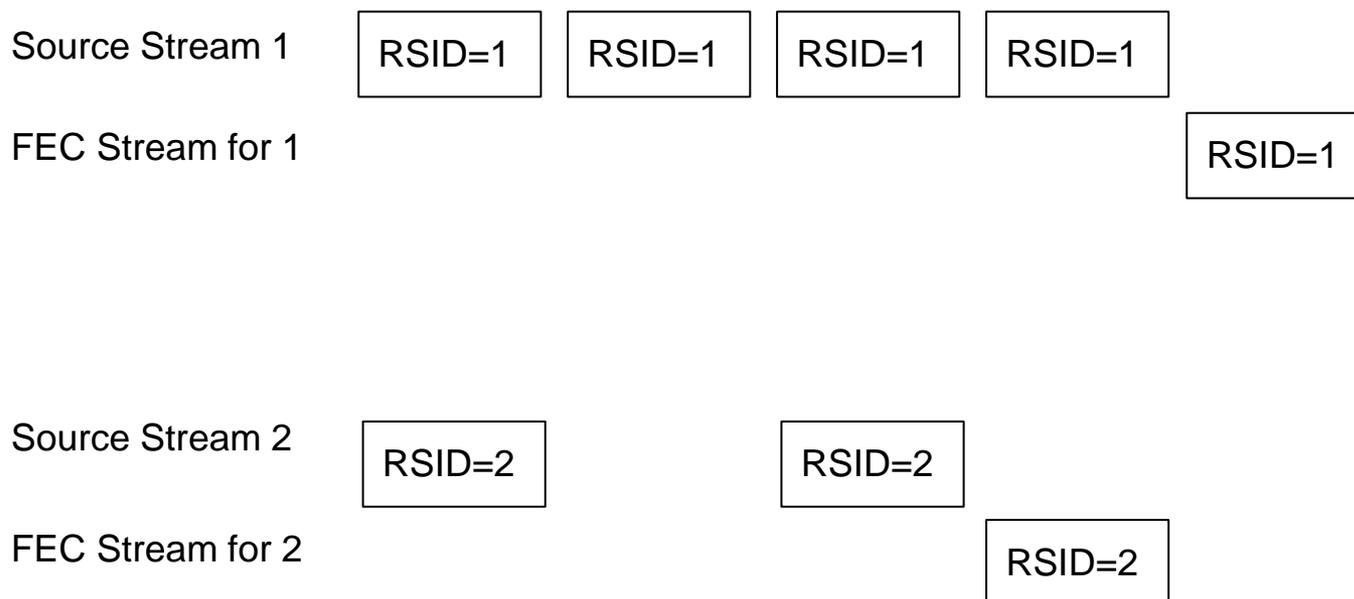
Option 3b: Use RSID alone



(Assuming one RTP session)

Solution: RSID identifies the Source RTP Stream

Use of Header Extension



Open issues 2

- M and N occur in the RTP header for row length and column depth (non-bitmask case)
- $N = 0$ and $N = 1$ currently means row FEC
- **Proposal:**
 - $N = 0$ indicates row FEC **not** followed by column FEC.
 - $N = 1$ indicates row FEC followed by column FEC.

Open issues 3

- Type of protection (ToP) in SDP
 - 0=interleaved,
 - 1=non-interleaved,
 - 2= both
 - We can do these dynamically in RTP
 - keep it or remove it from SDP?
- L and D in SDP
 - Length and depth for fixed 2-D protection
 - Only necessary for $> 256 \times 256$.
 - keep it or remove it from SDP?

Next Steps

- More reviews appreciated

Extra Slide:

M and N values

- $M > 0, N = 0 \rightarrow$ row of M non-interleaved packets starting from SN_base :

$SN, SN+1, SN+2, \dots, SN+(M-1)$

- $M > 0, N > 0 \rightarrow$ column of N packets interleaved by every M packets starting from SN_base :

$SN, SN+(1 \times M), SN+(2 \times M), \dots, SN+(N-1) \times M$