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.

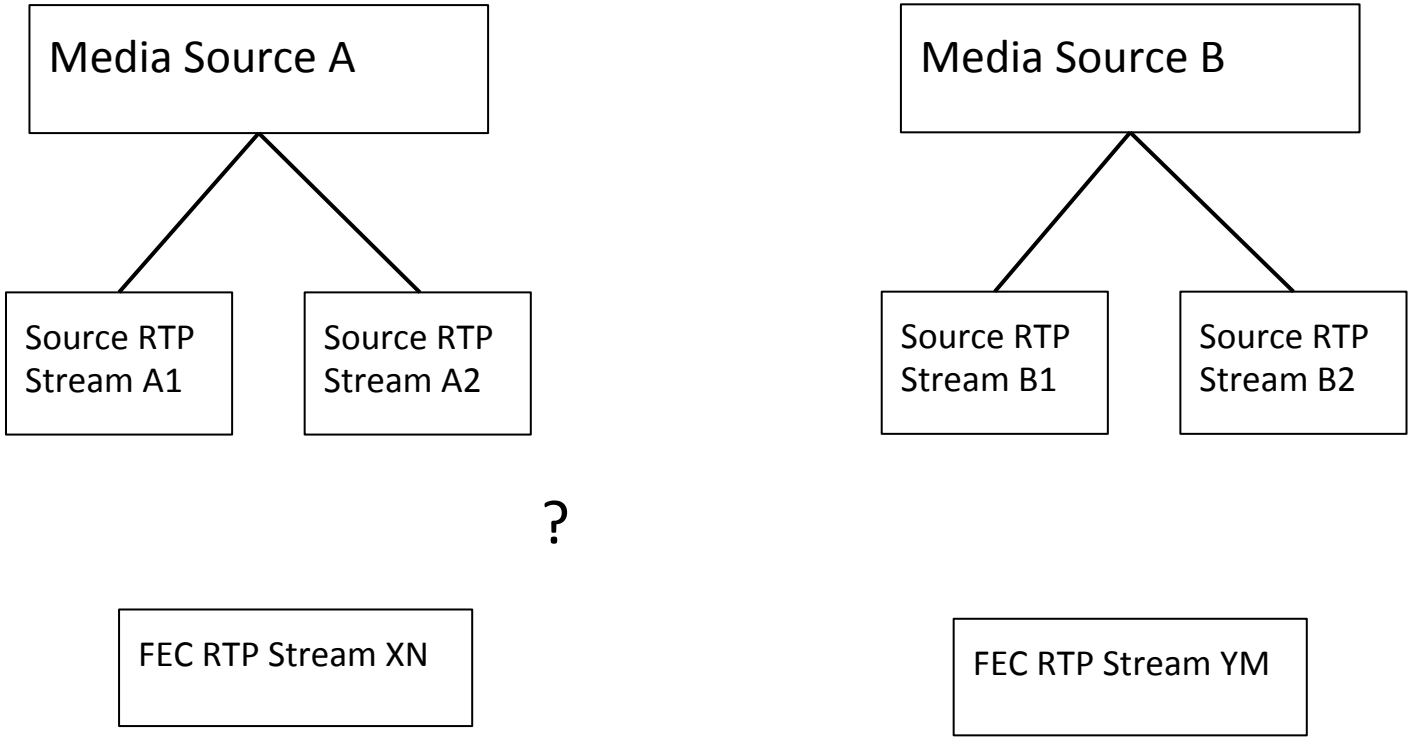
- Dynamic Association in RTP
  - (details next few slides)

- no association in SDP

Example:

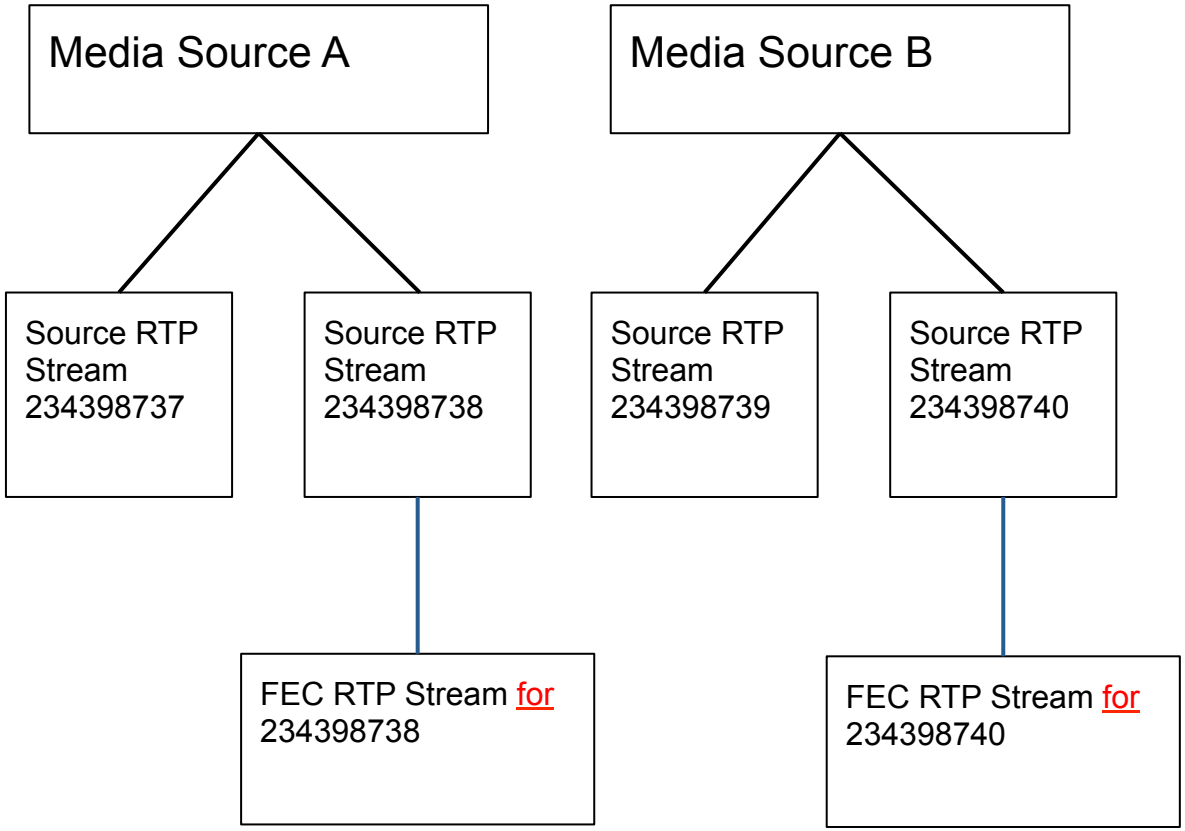
```
a = rtpmap:96 VP8/90000
a = rtpmap:98 FLEXFEC/90000
a = fmtp:98 code=xor; repair-window=200ms
```

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



Thanks Peter Thatcher ☺

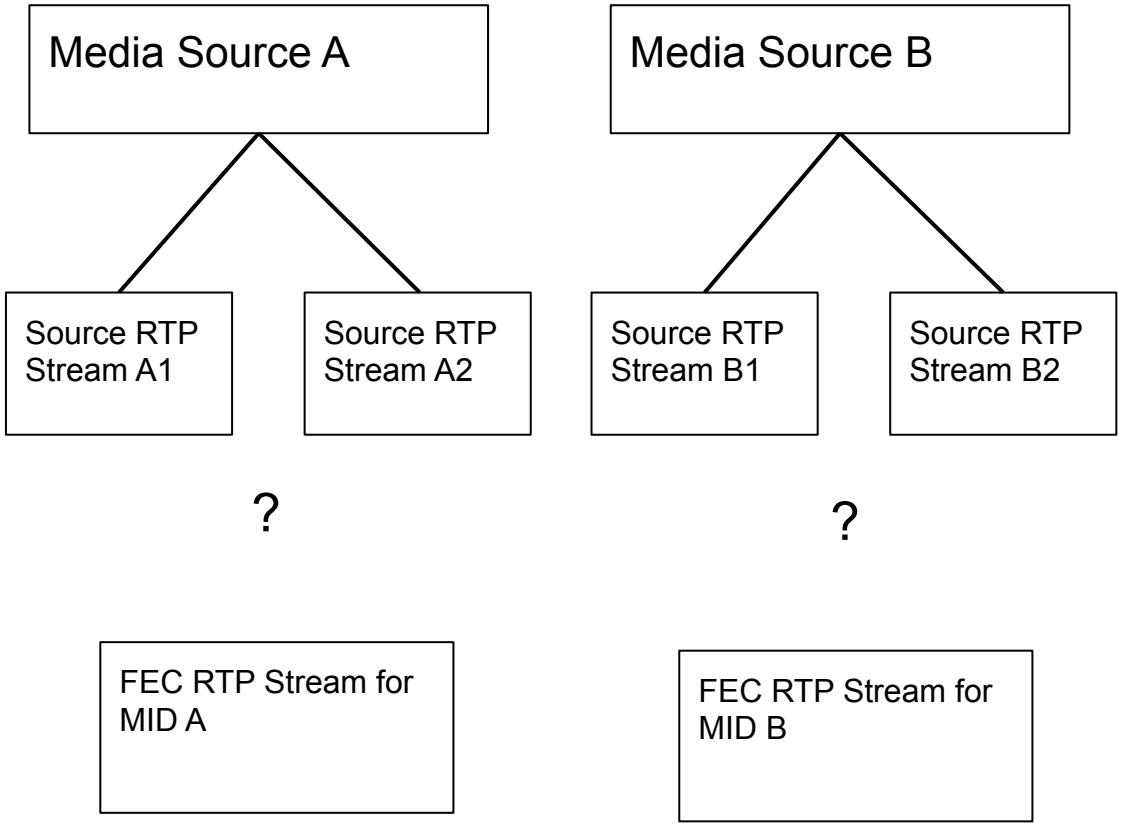
Option 1: Refer by SSRC



(Assuming one RTP session)

Problem: Must signal the protected SSRCs in RTP

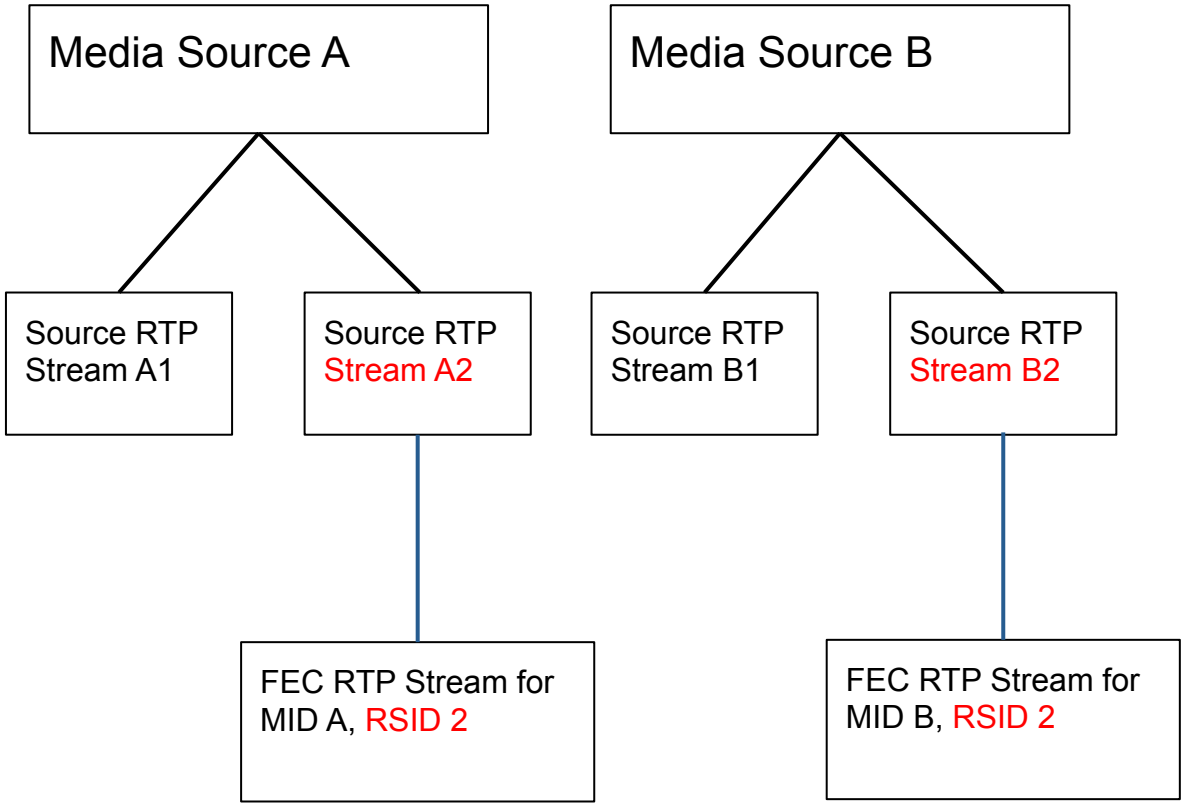
Option 2: Use MID



(Assuming one RTP session)

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

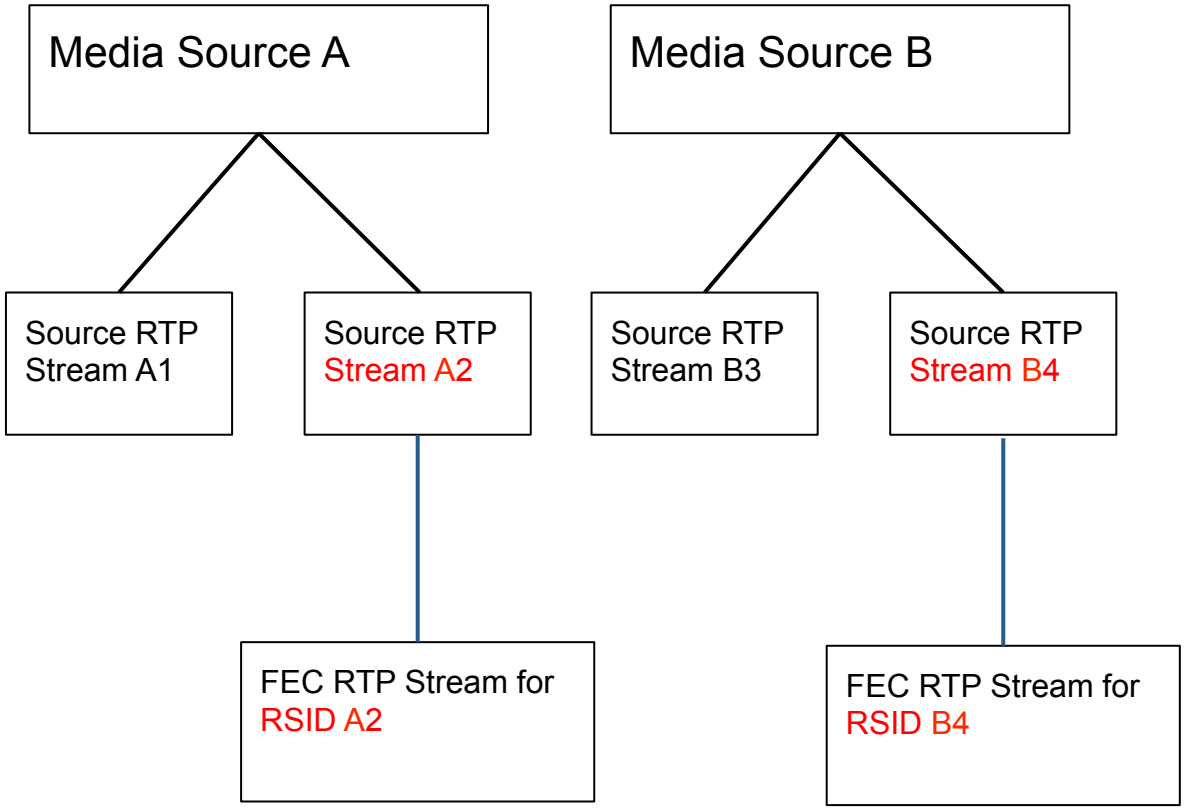
Option 3: Use MID+RSID



(Assuming one RTP session)

Solution: RSID identifies the Source RTP Stream

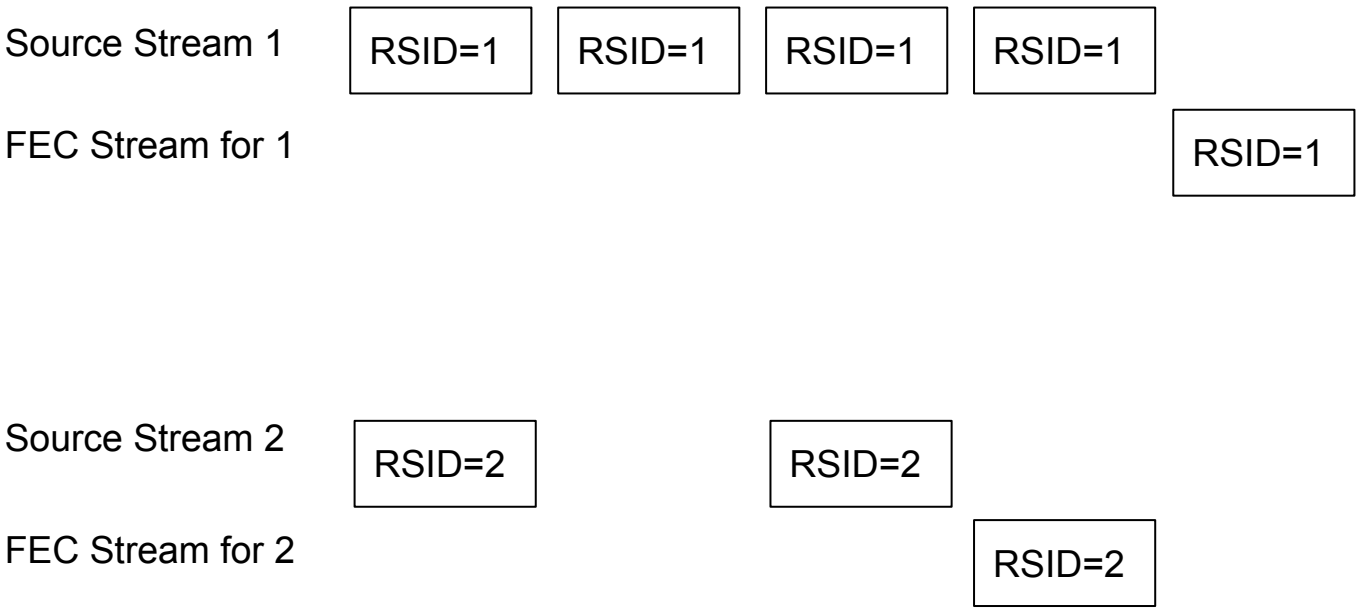
Option 3b: Use RSID alone



(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 x 256.
  - keep it or remove it from SDP?

Next Steps

- More reviews appreciated

Extra Slide: M and N values

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

  `SN, SN+1, SN+2,…, SN+(M-1)`

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

  `SN, SN+(1xM), SN+(2xM),…, SN+(N-1)xM`