Flexible FEC

draft-ietf-payload-flexible-fec-scheme-07

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Changes in version -07 vs -05

• No changes in normative behavior or formats

• Many editorial and clarification changes from reviewers
  – Stephen Botzko
  – Magnus Westerlund
  – Rasmus Brandt
  – Brian Baldino
Notable changes in -07 vs -05

• General
  – Replace ‘flow’ with RTP streams, ‘symbols’ with packets

• Abstract
  – FEC packet protects 1 or more source RTP streams
  – Remove extensibility for alternate FEC codes
    (non-XOR codes such as Reed-Solomon, Raptor, etc.)

• 1. Introduction
  – Separate sections for
    • 1-D Non-interleaved Row FEC
    • 1-D Interleaved Column FEC
    • 2-D Row+Column FEC schemes
3. Definitions

- **1-D Non-interleaved Row FEC:** A protection scheme that operates on consecutive source packets in the source block, able to recover a single lost source packet per row of the source block.

- **1-D Interleaved Column FEC:** A protection scheme that operates on interleaved source packets in the source block, able to recover a single lost source packet per column of the source block.

- **2-D FEC:** A protection scheme that combines row and column FEC.

- **Source Block:** A set of source packets that are protected by a set of 1-D or 2-D FEC repair packets.

- **FEC Block:** A source block and its corresponding FEC repair packets.

- **Repair Window:** The time that spans a FEC block, which consists of the source packets and the corresponding FEC repair packets.

- **XOR Parity Codes:** A FEC code which uses the eXclusive OR (XOR) parity operation to encode a set of source packets to form a FEC repair packet.
Notable changes in -07 vs -05

4. Packet Formats

• Clearly separate and describe the RTP header and FEC header in FEC repair packets.
• Clearly describe X, P, CC, CSRC handling for source and repair packets.
• Clearly separate 3 variants of FEC header:
  – R=0, F=0, Mask signals source packet SN’s.
  – R=0, F=1, M/N row/col signals source SN’s.
  – R=1, F=0 or 1, retransmission format.
Next Steps

• Restart WGLC