# 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

# Notable changes in -07 vs -05

3. Definitions

o **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.

o **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.

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

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

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

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

o **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