ISIS Fragment Timestamping

draft-rigatoni-lsr-isis-fragment-timestamping-00

IETF 120

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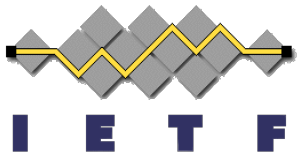
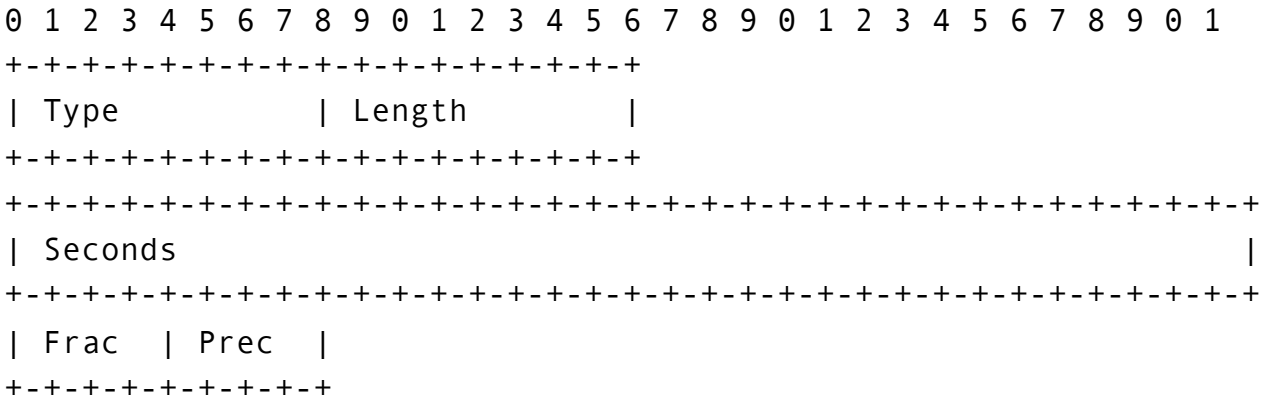


Problem and Assumptions

- It would be convienent to
  - measure flood delays across diameter, max/deviation/etc
  - measure on TED database how quickly information from nodes propagates to allow better optimization of TE under congestion
  - be able to indicate when a node issued the last fragment (stability of network)
  - And similar other stuff
- For any approach to work decently synchronized clock on all nodes is necessary
  - Timestamps carry clock precision of the node

Proposal

- Timestamp with Precision
- Optional TLV on each fragment
- Format



- Seconds roughly PTP epoch with bits offset trickery to overflow in 2078
- Frac in 1/16 of second (~60msecs)
- 0 = 1sec max. slip, 15 value is ~60msec deviation again