BIER Extension Headers

draft-zzhang-bier-extension-headers

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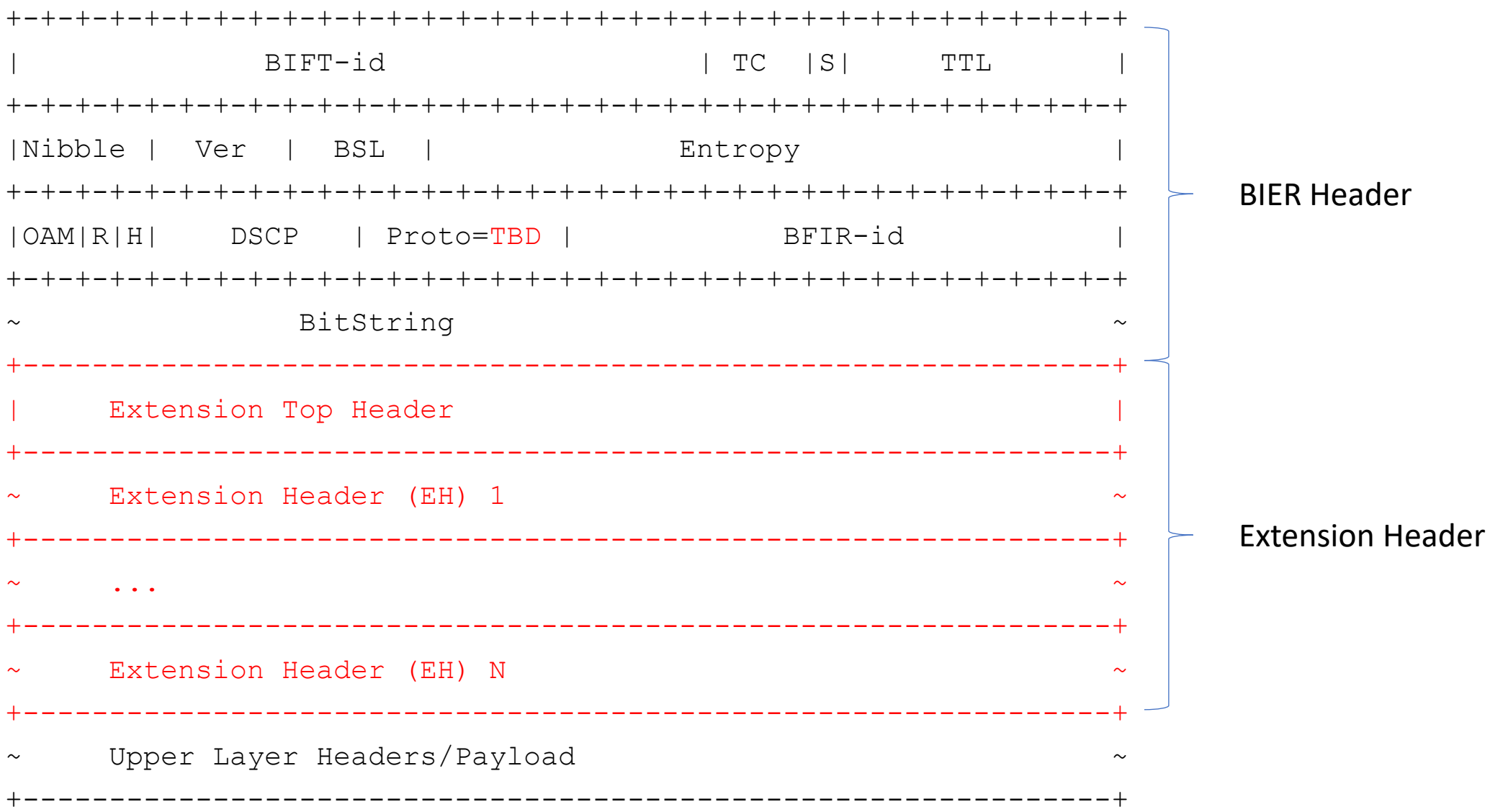
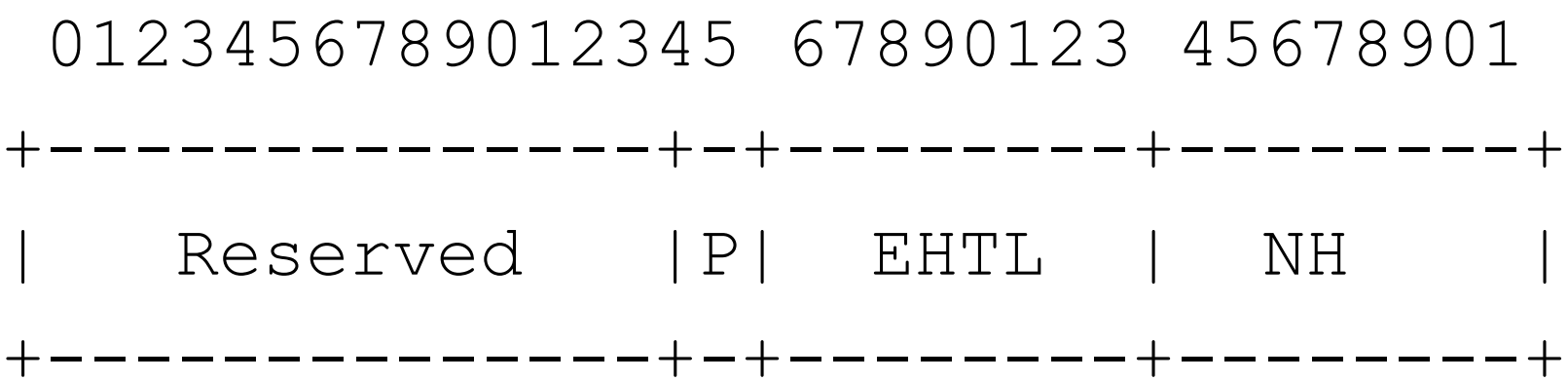
Motivation & History

- Generic header extension mechanism aligned with MPLS/IPv6
  - Support for Generic Delivery Functions with same extension headers for MPLS/BIER/IPv6
- -00 revision aligned with draft-song-mpls-extension-header
  - “Next Header” concept aligned with IPv6 so that applicable IPv6 EXT headers could be used as is
- Draft-song is not adopted in MPLS WG
  - Draft-jags-mpls-ps-mna-hdr is the new candidate solution
    - “Next Header” concept is no longer used
- -01 revision is now aligned with draft-jags-mpls-ps-mna-hdr

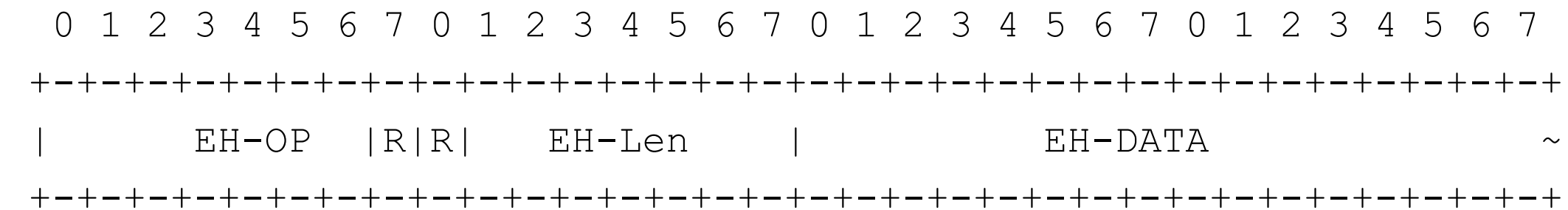

BIFT-id
TC
S
TTL
Nibble
Ver
BSL
Entropy
OAM
R
H
DSCP
Proto=TBD
BFIR-id
BitString
Extension Top Header
Extension Header (EH) 1
...
Extension Header (EH) N
Upper Layer Headers/Payload
BIER Header
Extension Header

Extension Top Header



- EHTL: total length of the extension header
- NH: Next Header (BIER payload type)
  - If P-bit is clear, 6-bit BIER Proto number
  - If P-bit is set, 8-bit Internet Protocol number

Extension Header



EH-OP: 7-bit OP Code for the extension

EH-LEN: 7-bit Extension Header Length in 4-octet units

EH-Data:Data for the extension header

For a generic IPv6/MPLS/BIER function, the EH-DATA encoding is aligned, but EH-OP is not aligned with IP Protocol or Option number or MPLS EH-OP number.

Next Steps

- Seeking comments and suggestions
- Watching the MPLS PSD development