

BIER Encapsulation for IOAM Data

draft-xzlnp-bier-ioam-00

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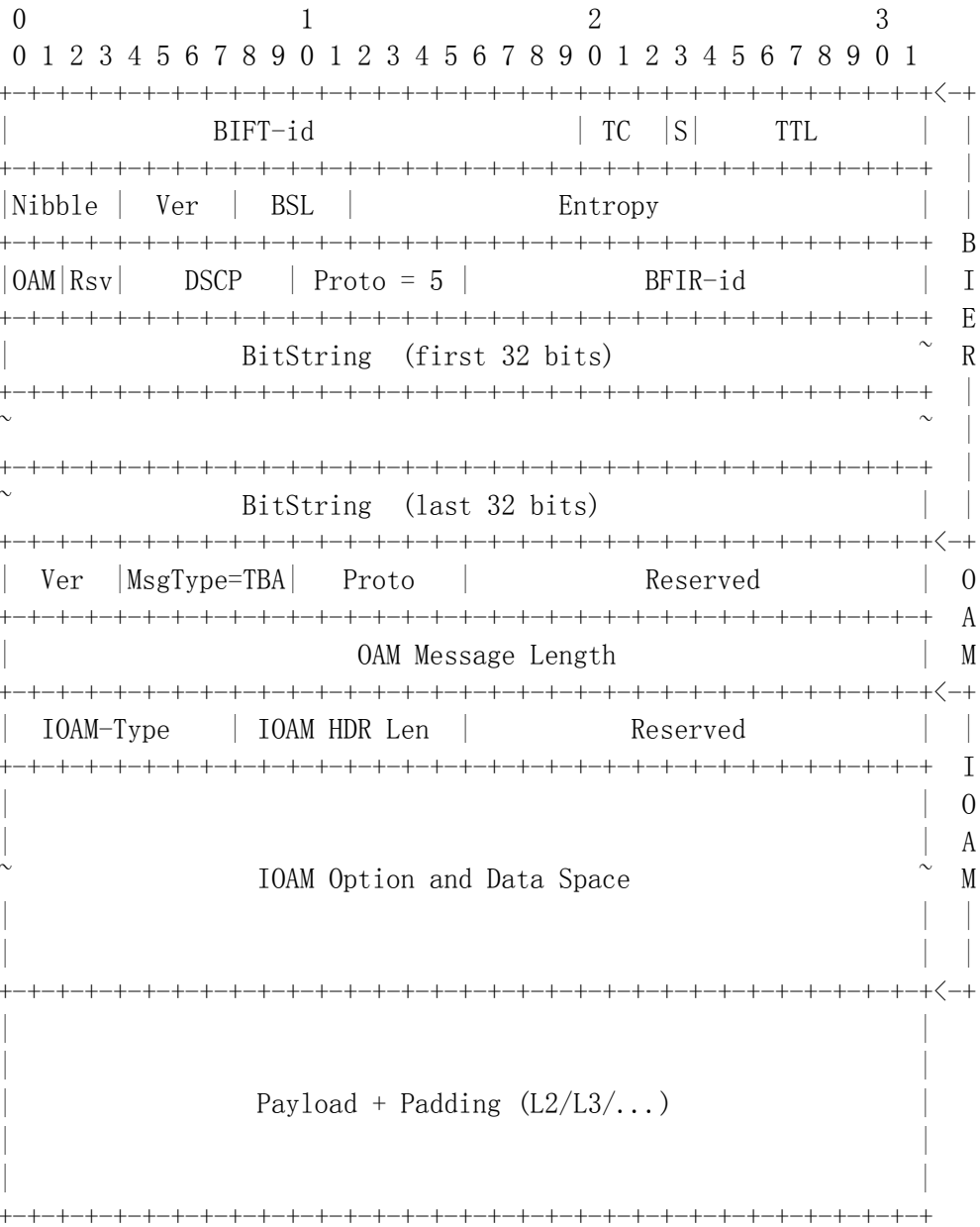
Intention of this draft

- Provides the encap for IOAM over BIER
 - Option 1 is BIER + BIER OAM + IOAM + Payload
 - Option 2 is BIER + IOAM + Payload
 - Selects Option 2 as the standardized one

Requirements on IOAM

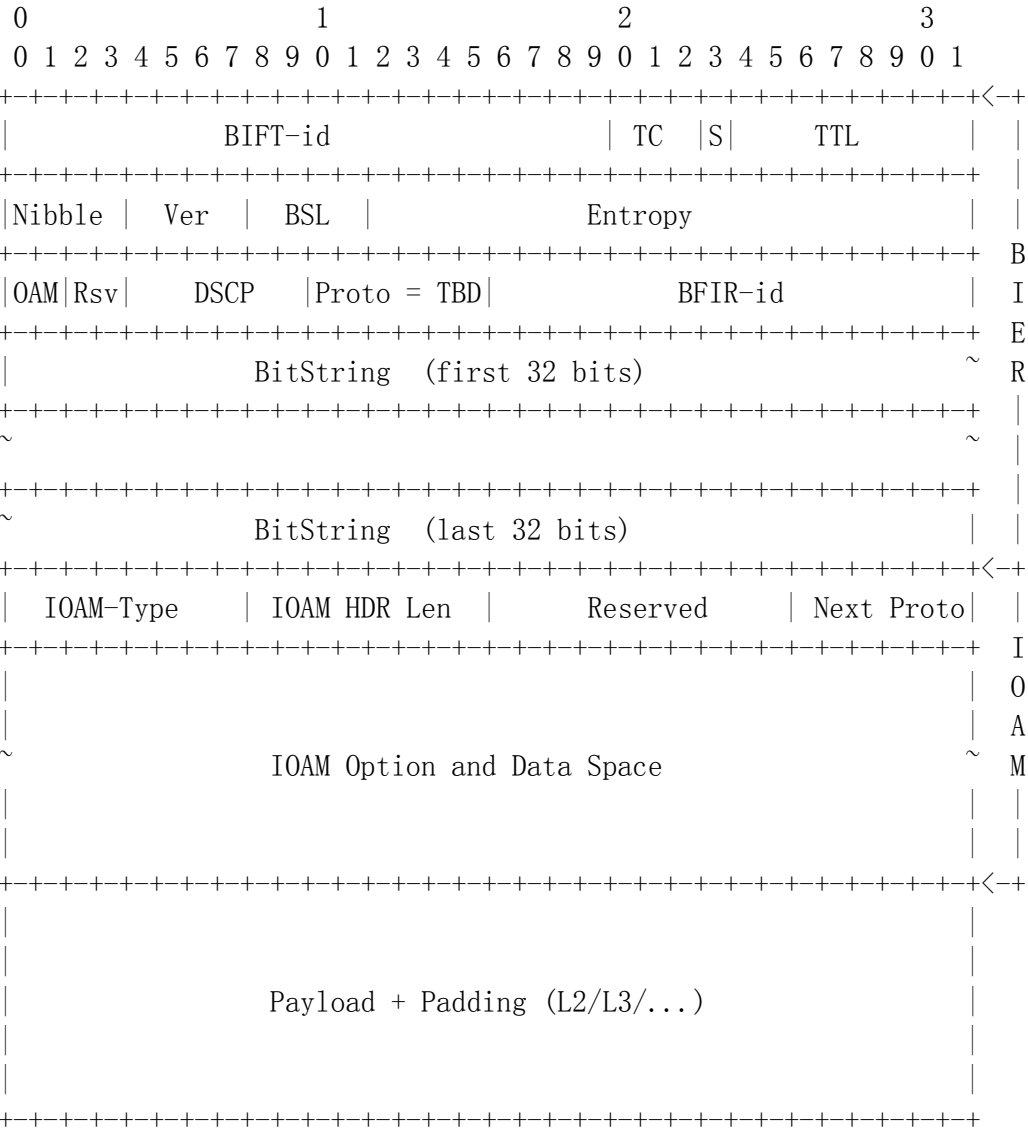
- It's deemed necessary to carry IOAM Data in BIER
 - Some multicast flows are sensitive for packet loss, delay and other factors, such as live video, real-time meeting. The operator wants to know the real-time statistics for these flows
 - In-situ OAM provides a way to achieve on-path telemetry information collection

Option 1 for IOAM over BIER Encap



- BIER Header defined in RFC 8296
 - + BIER OAM Header, defined in draft-ietf-bier-ping
 - + IOAM Header, containing IOAM Data defined in draft-ietf-ippm-ioam-data
- New BIER OAM Message Type TBA for IOAM
- OAM Message Length is used to decide the border
 - No new Proto needed

Option 2 for IOAM over BIER Encap



- BIER Header defined in RFC 8296
 - + IOAM Header, containing IOAM Data defined in draft-ietf-ippm-ioam-data
- New BIER Proto Type TBD for IOAM
- IOAM Next Proto follows the definition of BIER Proto, including the new value TBD

Some Considerations

- Encap Option 2 is selected in this document
 - Both Option 1 and Option 2 are feasible
 - Option 2 is more concise than Option 1, with less overhead
 - Option 2 is a relatively common method for IOAM over foo
- BIER PM and BIER IOAM
 - Two OAM bits within BIER header are defined as BIER PM Marking bits, it's orthogonal to BIER IOAM

Next steps

- Revise this draft based on received comments
- Ask for WG adoption