Extensions for BIER-TE with MPLS and non-MPLS Encapsulation

draft-zwx-bier-te-isis-extensions
draft-zwx-bier-te-ospf-extensions
draft-zwx-bier-te-ospfv3-extensions

IETF114# BIER

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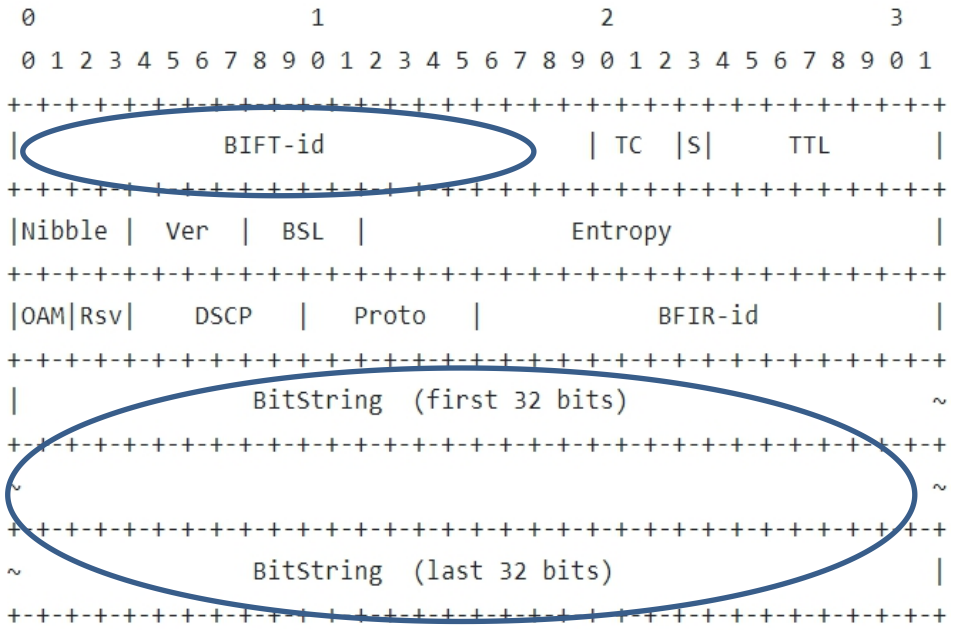
Background

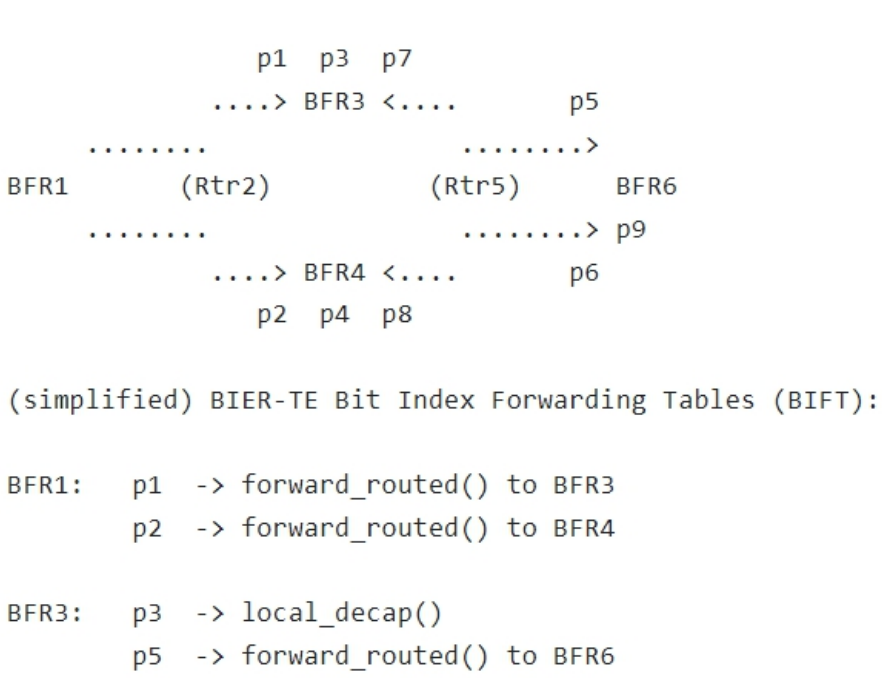
- draft-ietf-bier-te-arch:
  - BIER-TE replaces in-network autonomous path calculation by explicit paths calculated offpath by the BIER-TE controller host.
  - In BIER-TE every BitPosition of the BitString of a BIER-TE packet indicates one or more adjacencies - instead of a BFER as in BIER.
  - BIER-TE in each BFR has no routing table but only a BIER-TE Forwarding Table (BIFT) indexed by SI:BitPosition and populated with only those adjacencies to which the BFR should replicate packets to.

All the BIER encapsulation methods apply to BIER-TE:

- MPLS
- Ethernet
- BIERin6

BIER-TE (Tree Engineering for Bit Index Explicit Replication)





- The composition of BitString is the link BP.
- The forwarding table seems like BIER, but it's different.
- The BIFT-id field indicates the BIFT of the packet.

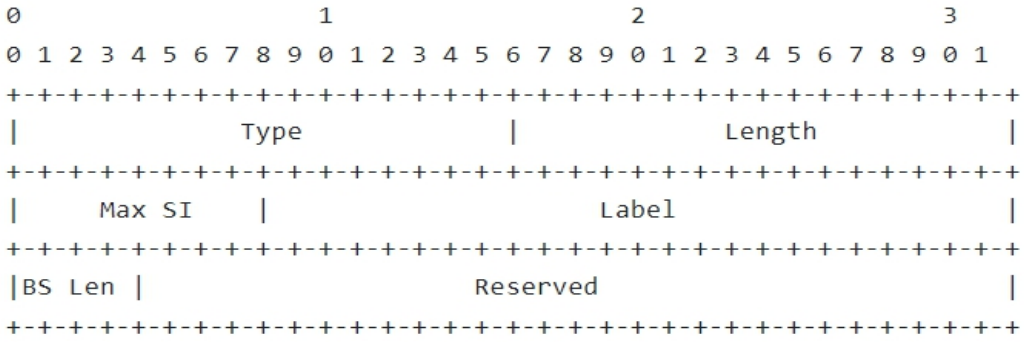
BIFT-id signaling

Take IS-IS as an example.

Follow the BIER-TE info sub-tlv defined in [ietf-bier-te-isis].

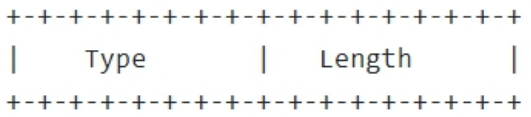
The signaling in OSPF and OSPFv3 is similar.

- MPLS Encapsulation Sub-sub-TLV



- Non-MPLS Encapsulation Sub-sub-TLV

- BIER-TE IPv6 Encapsulation Sub-sub-sub-Tlv



- Any comments ☺

Thanks!