

# BIER in BABEL

draft-zhang-bier-babel-extensions-00

BABEL WG

IETF97# Seoul

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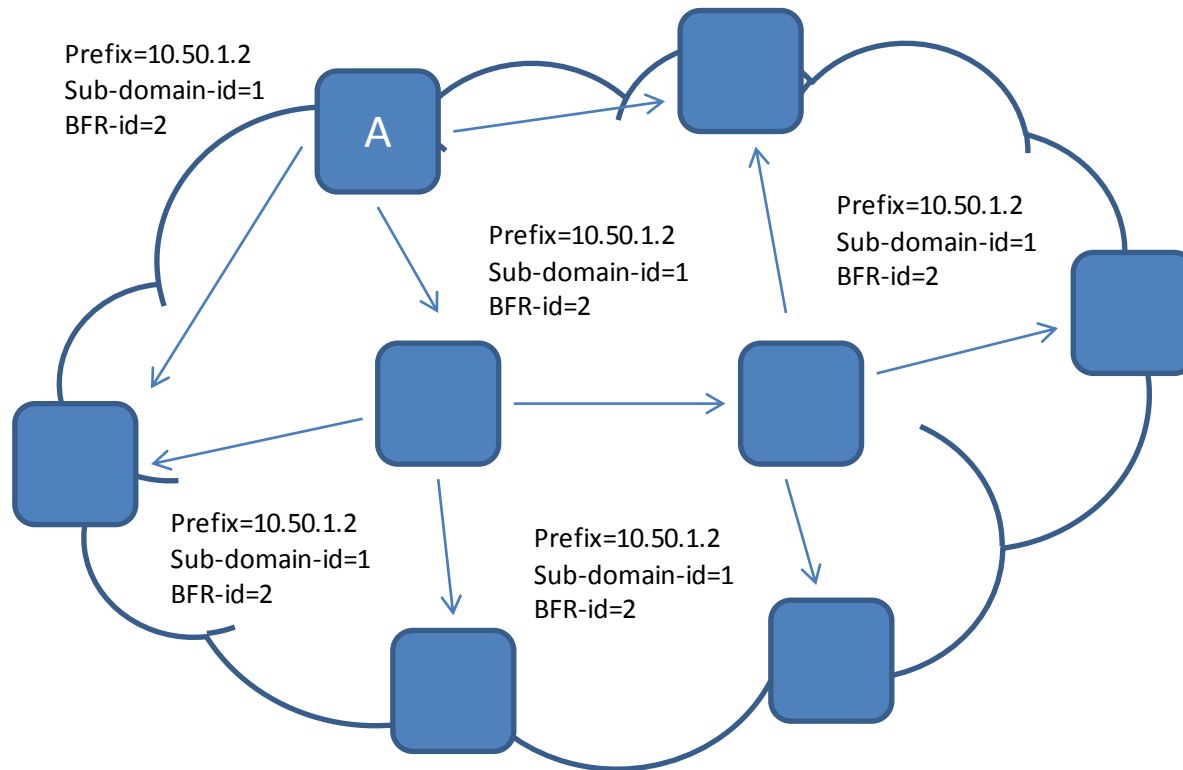
# BIER

- Bit Indexed Explicit Replication
- BIER introduces a novel architecture for multicast packet forwarding. It does not require a signaling protocol to explicitly build multicast distribution trees, nor does it require intermediate nodes to maintain any per-flow state.
- In order to forward BIER encapsulated packet, some BIER key parameters should be conveyed by the routing protocol.
- The key parameters include: Sub-domain-id, BFR-id, MPLS info, BSL, etc.

# Babel

- Babel defines a distance-vector routing protocol that operates in a robust and efficient fashion both in ordinary wired as well as in wireless mesh networks.
- Babel use several TLVs to carry the routing information. And Babel can also use new TLVs to convey BIER information. This document defines a way to convey BIER information in Babel.

# BIER in Babel



- The BIER information can be carried in Babel update message.
- The prefix **MUST NOT** be summarized and the according sub-TLV **MUST** be treated as optional and transitive.

# BIER in Babel

- BIER sub-TLV

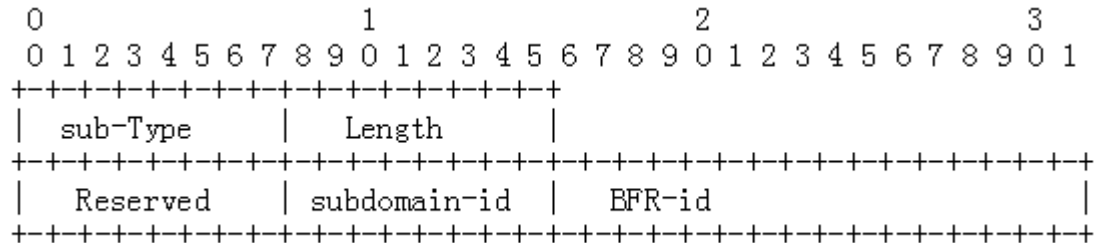


Figure 1: BIER sub-TLV

- BIER MPLS Encapsulation sub-sub-TLV

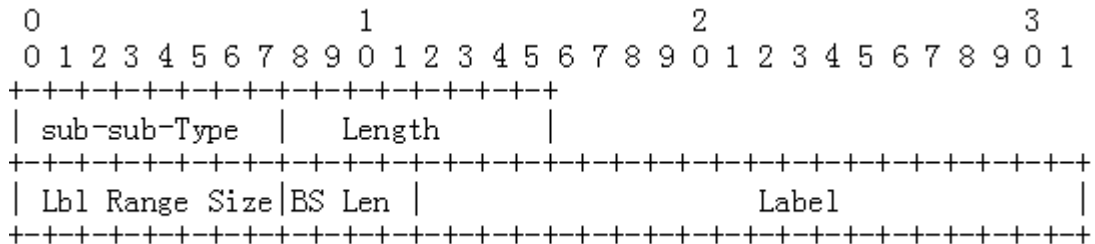


Figure 3: MPLS Encapsulation sub-sub-TLV

- Optional BIER sub-domain BSL conversion sub-sub-TLV

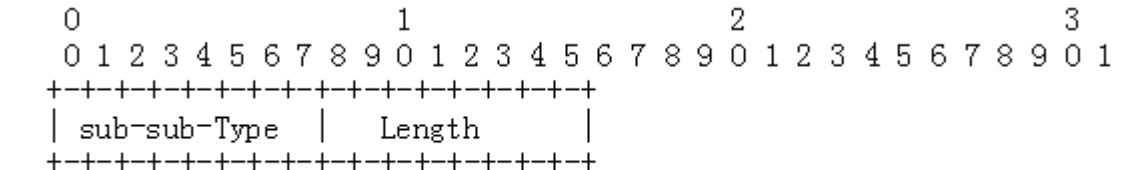


Figure 4: BSL conversion sub-sub-TLV

# Existed IGP/BGP extensions for BIER

- BIER support via ISIS  
draft-ietf-bier-isis-extensions
- OSPF Extensions for BIER  
draft-ietf-bier-ospf-bier-extensions
- BGP Extensions for BIER  
draft-ietf-bier-idr-extensions

# BIER in BABEL

- Any comments are welcome 😊

Thanks!