

# BIER Flooding

draft-zhang-bier-flooding-00

BIER WG

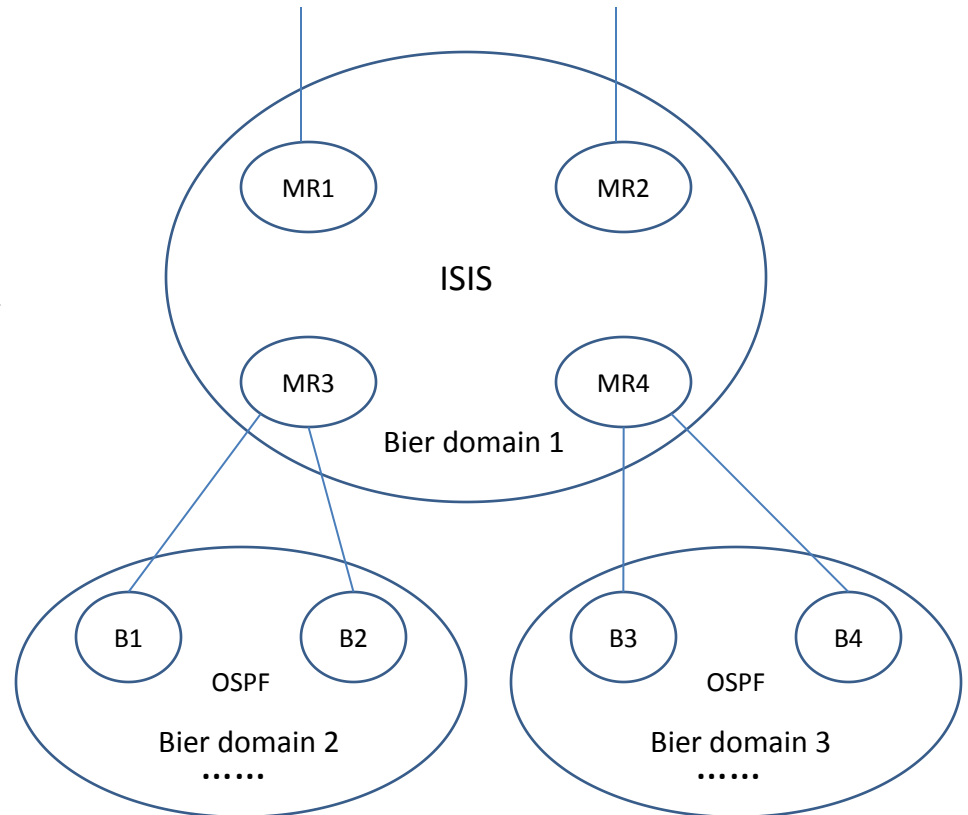
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# Problem Statement

- Hybrid Network
- Different routing protocol runs in different region. Even static routing is used.
- There are tens of routers in every region. There is only one hop forwarding in some regions.
- Border router must convert BIER encapsulation.
- Multiple BIER encap/decap functions.
- Bier forwarding runs inefficiently in this kind of network.

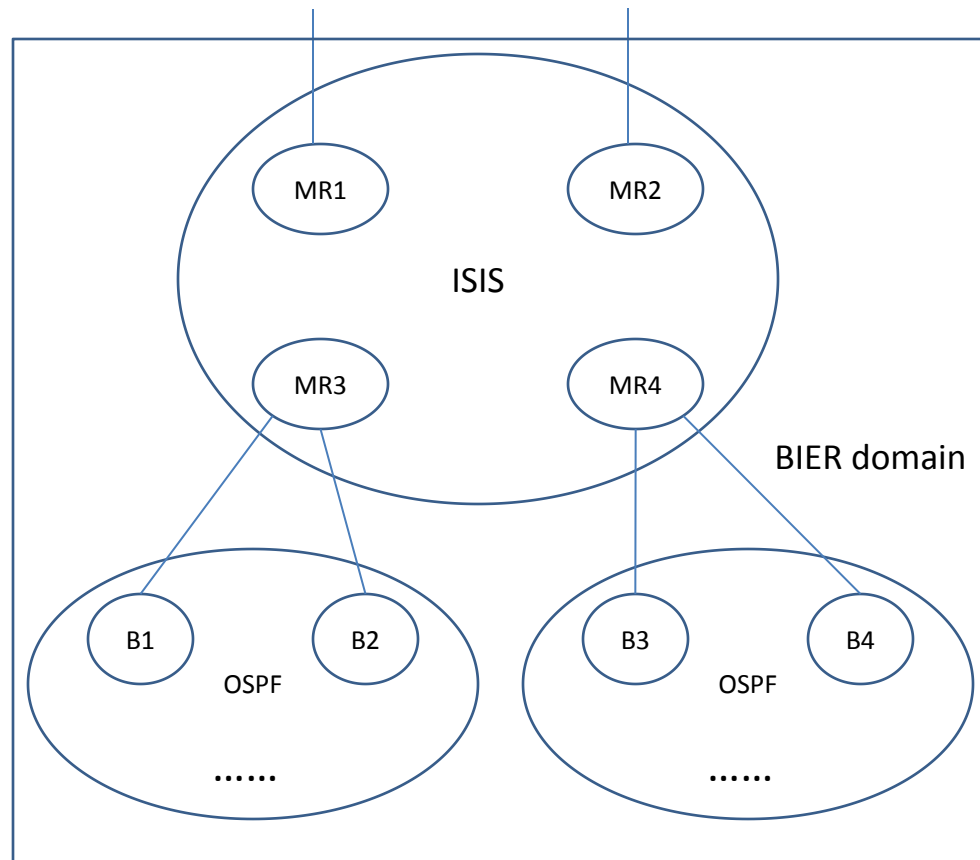


# Problem Statement

- Merge several regions into one BIER domain.
- Decrease the times of BIER encap/decap. Improve BIER forwarding efficiency.

But how to build BIER forwarding across multiple routing regions?

- Conversion in border routers add more complexity.



# Solution

- A protocol independent flooding mechanism.
- BIER node information floods in the whole BIER domain across multiple regions.
- PIM Flooding Mechanism (PFM) defined in [draft-ietf-pim-source-discovery-bsr](#) is used to flood BIER node information for building BIER forwarding plane.
- New extensions aligned with OSPF/ ISIS/ BGP are used to deliver BIER nodes information.
- Every nodes in domain build BIER forwarding plane according to the flooding BIER nodes info and it's FIB(Forwarding Information Base) without the dependent of IGP/BGP routing computing.

# Clarification

- If this draft tries to replace OSPF/ ISIS/ BGP BIER extension?  
-----No! This function is just a supplement of routing protocol extension. Especially in hybrid environment.
- BIER eliminates PIM protocol states in core domain, is this draft backward?  
-----No! We just use the flooding function to delivery BIER nodes information. We do not use PIM protocol to build multicast trees.

- Any comments are welcome 😊

Thanks!