

# ISIS EXTENSIONS FOR BIER

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# WHAT IS BIER AND WHY IS ISIS INVOLVED ?



- › BIER adds to packet headers a **bitmask determining the desired group of receivers**
- › Each receiving router needs **assignment of unique BFR-ID = bit position in packet header**
- › To scale, the bitmask is partitioned into “**sets**” and a **single packet carries bitmask of a single set**
- › All routers agree on **bitmask length** used
- › All routers agree on **encapsulation** used
- › IGP's are proposed to compute the according **bit forwarding table using SPF**
- › **Multi Topology** can be used to restrict links used

# WHAT BITS DO WE NEED ?



- › We distribute (like OSPF) the necessary BIER info on router's prefixes
  - in ISIS #135, #235 implicitly takes account of MTs
  - Bitmask Length
  - BFR-id (if router has one)
  - Encapsulation(s) in sub-sub-TVLs
    - › MPLS with label range

# INTERESTING POINTS



- › Is BIER allowing encaps translation ?
- › What is “primary key” of a “BIER domain” really ?
- › What to do with routers that advertise ranges that are “too short” for all BFER-ids ?
- › Given we have MTs & different bitmask lengths (and maybe service-id ?) to play with, WHEN should a router start to advertise
  - Proposal is to start advertising the moment first valid BFER-id is seen in the “BIER domain”