



ERICSSON

ISIS EXTENSIONS FOR BIER

S. Aldrin/Huawei
L. Ginsberg/CSCO
T. Przygienda/E//
J. Zhang/JNPR

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”



ERICSSON