EXPLICIT TOPOLOGY MARKING

USING RFC 8377

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MULTI-TOPOLOGY ROUTING

Routers and inter-router links have a list associated with them of the topologies they can handle.

Multi-topology outers classify packets they receive as to which topology the packet is associated and use different per topology routing tables to assure those packets stay on link and router that handle their topology.

This topology classification of incoming packets is typically based on fields in the packet headers and/or the port on which the packet is received.
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However, there is now a method on explicitly indicating topology with a tag specified in RFC 8377. Although specified for TRILL, the RFC explicitly says this tag may be used by other protocols.

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
| MT Ethertype 0x9A22 | V | R | MT-ID |
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V = Version, currently only version 0 specified
R = 2 reserved bit that must be sent as zero and ignored on receipt.
MT-ID = 12 bit topology number.