CFM LBM/LTM Enhancements for PBB-TE

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CFM LBM enhancements
as proposed by Dinesh Mohan in Stockholm

- ## Requirements
  - Verify on-demand connectivity between an end point and an intermediate point of a PBB TE path
  - Determine the route of a PBB TE path

- ## Proposed solution (by Dinesh)
  - LBM will use the unicast MAC DA of the PBB-TE trunk edge (since it runs in-band):
    - LBM - instead of using the **MIP MAC DA**
    - LTM - instead of using the **LinkTrace MC addresses**
  - Enhancement to LBM/LBR: Addition of a TLV. The TLV will carry the MAC address of the destination MIP (since the frame's MAC-DA is the MAC DA of the trunk edge) and the VLAN to be used in the LBR.
  - Enhancement to LTM/LTR: Addition of a TLV. The TLV will carry the VLAN to be used in the LTR; the MIP address is "don't care"

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# Issues associated with Dinesh's proposal

1. How will a MIP send the responses (LBR/LTR messages)?
   – Which methodology (PBB, PBB-TE) is to be used?
   – What should be the source address of these response messages?

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Response messages (LBR/LTR) - option 1

- Use PBB as a return path

- Advantages:
  - Also applies to unidirectional paths

- Drawbacks:
  - Mixture of VLAN types in the same MA (PBB-TE VLAN for the request and PBB VLAN for the response)
  - PBB does not necessarily operate in parallel to PBB-TE in the network.
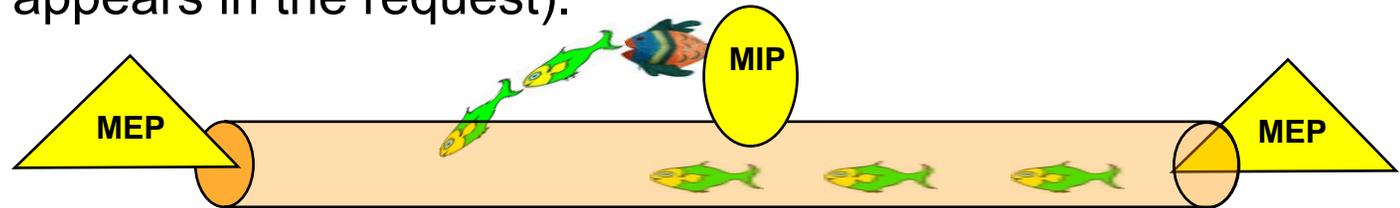
Response messages (LBR/LTR) - option 2

- Configure a trunk between each MIP and the trunk head end to enable a response path

- Drawbacks
  - Provisioning the number of trunks will require significant overhead.

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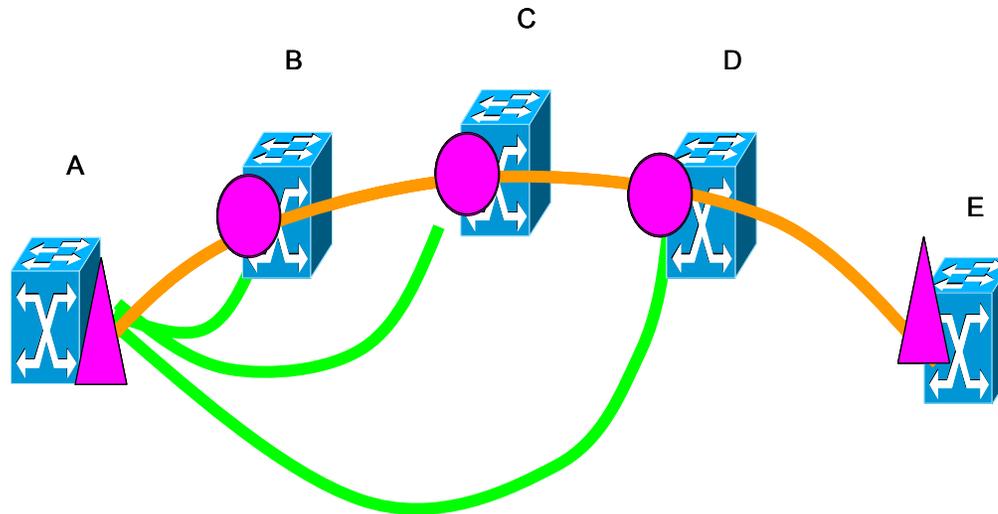
Response messages (LBR/LTR) - option 3

- Use a "fake" MAC SA in the MIP response. The MAC SA is the MAC DA of the trunk (as appears in the request).

- Advantages:
  - Utilize the same MAC addresses in the requests and the responses
- Drawbacks:
  - Enter the end-to-end trunk from intermediate points (contradicts the trunk end-to-end philosophy)
  - LBR / LTR should also be modified to carry a TLV containing the MIP MAC
  - Applies only to bidirectional trunks

- Recommendation: Use option 3

Thank You

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