draft-sodder-ppvpn-vhls-00.txt

PPVPN Working Group

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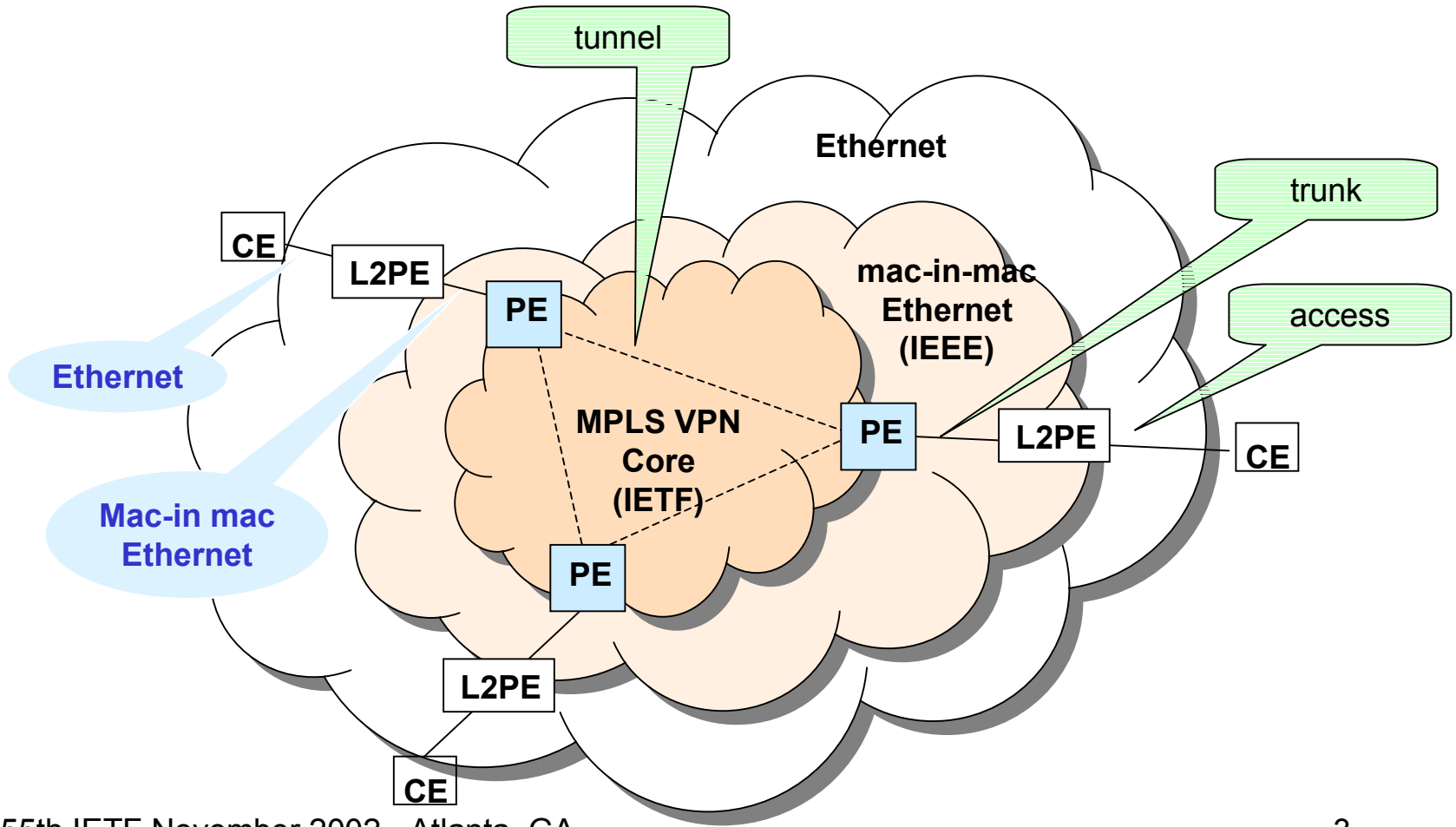
Why

- Proposes a scalable solution for building large scale networks supporting Virtual Private LAN Services
- Scalability advantages are in two dimensions:
  - MAC address tables are smaller
  - Number of pseudo wires required is lower
- Scalability is achieved at the cost of:
  - encapsulation headers

How

- Use a mac-in-mac frame encapsulation
- with a VPN Identifier and Control Word

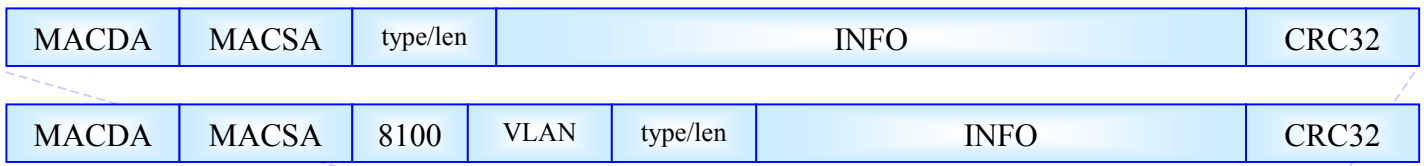


VPN Identifier and Control Word

- Data Frame includes the VPLS Instance
  - thus does not require pseudo-wire per VPLS instance per connected PE
- Allows all VPLS Instances to share the single pseudo-wire between the two PE devices
- Also used to carry QOS mappings for the frame and other control information
- Can be used to enhance the L2 Control Plane

Frame Formats

- CE / L2PE



- L2PE / PE

- PE / PE

MPLS VPN Core – Control Plane

- Extends PWE3 Control Protocol adding support for a VHLS pseudo-wire
  - Detailed in –01 version of the draft
- Auto-discovery and other features based on IETF protocols
  - could use many of the current proposals
- Other solutions also possible

Issues

- Need to support inter-operability with current VPLS draft
- Need to define use of the OAM indicator
- Need to address other issues raised on mailing list

Summary

- Addresses scalability issues for large VPLS networks
- Will continue discussion of this draft on the mailing list