Extension to Provider Backbone Bridges

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☞ Layer 2 Transport, lower cost forwarding among multiple Layer 2 protocols

Layer 2 Relay function, no Layer 3 routing or switching

CE routers

CE

CE

CE

VLAN, Ethernet Layer 2

PE

IP over PPP

IP over Ethernet
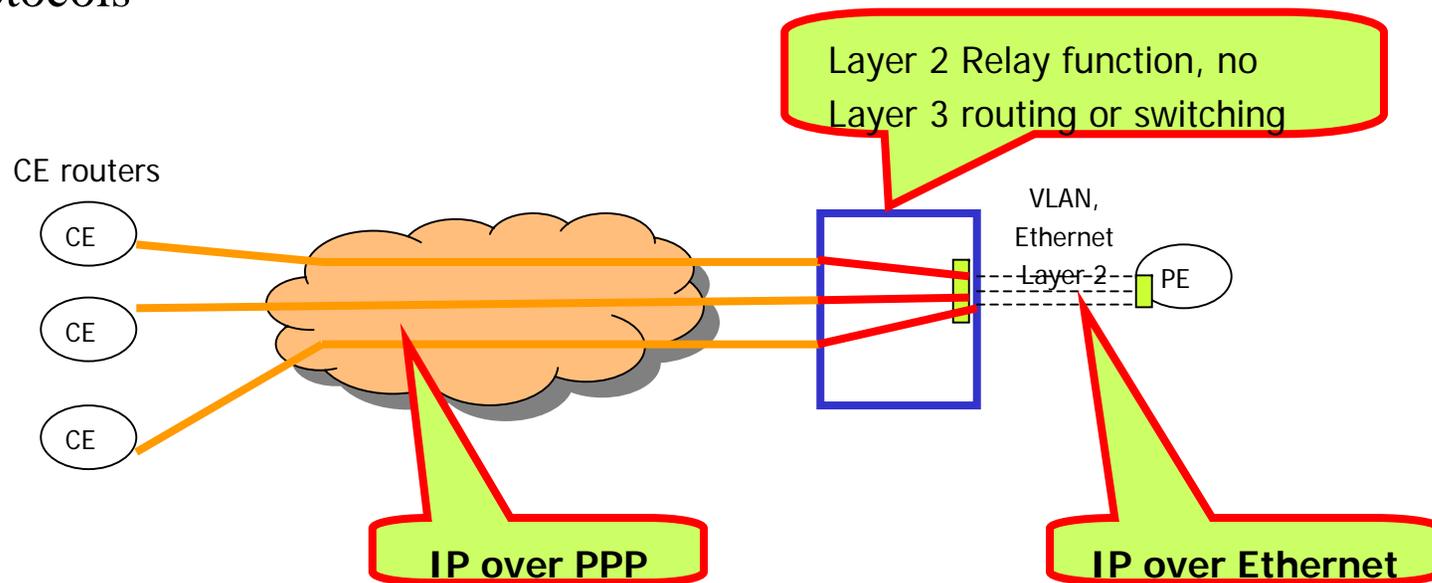
☞ **Relay between two different Layer 2**

VLAN,
Ethernet
Layer 2

Map each IP flow to a VLAN. The bridge is VLAN aware, but blind to MAC.

There is no MAC address. There is no IP address. CE sees PE as its adjacency.
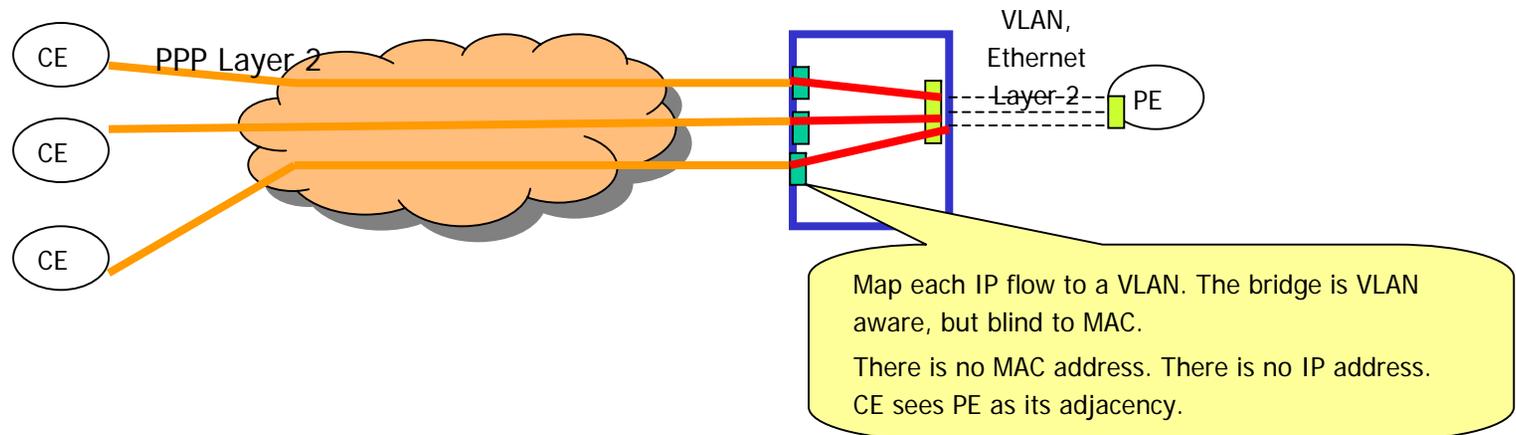
☞ **OAM issues (802.1ag)**

- ✍ Individual SONET Path failure can be transformed to AIS at each VLAN
- ✍ AIS from each VLAN can be transformed into SONET path condition, such as UNEQ, Payload mismatch, etc.

☞ **No MAC address for the bridge facing PPP**

☞ **More issues to be addressed:**

- ✍ ARP mediation
  - ■ IP address negotiation
- ✍ End to end flow control