

# VPLS Overview

draft-lasserre-tls-mpls-00.txt

Marc Lasserre  
Nick Slabakov  
Rob Nath  
Riverstone Networks

Pascal Menezes  
Terabeam  
Loa Andersson  
Utfors

Andrew Smith  
Consultant

Shahid Akhtar  
Ciena

Tissa Sevenirathne  
Force10 Networks

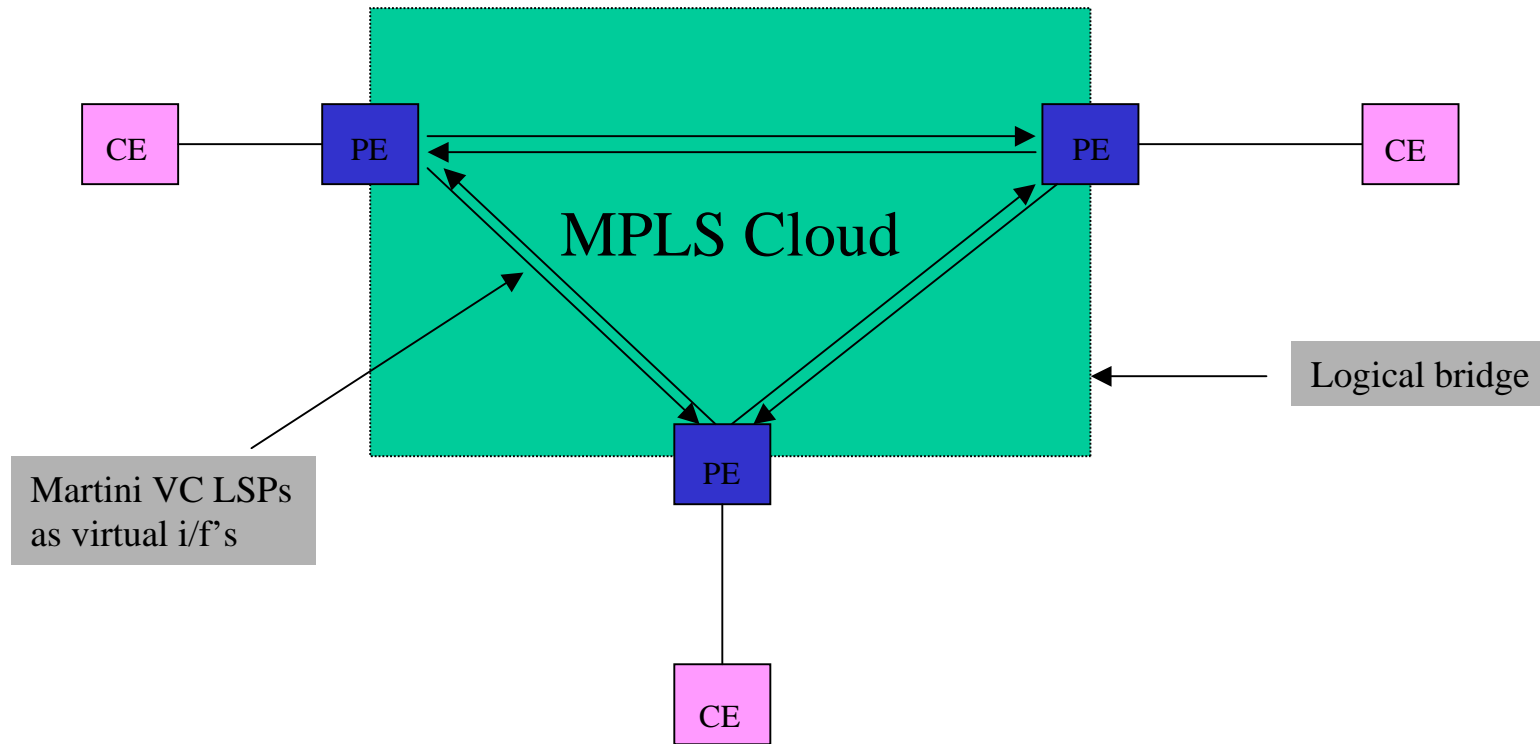
Pierre Lin  
Yipes Communication

Lewis Eatherton  
Excite@Home

Vasile Radoaca  
Nortel Networks

Ivy Hsu  
Foundry Networks

# VPLS Reference Model



# Learning Bridging Model

- Packet replication at ingress LER
  - For unknown & broadcast/multicast
  - Across all VC LSPs that are part of VPN
- Once MAC address is learned, frame is sent directly over corresponding LSP
- MAC addresses learned on inbound LSPs need to be associated with outbound LSP of corresponding pair

# VPLS Design

- Full mesh of LSPs
  - Logical full mesh of VC LSPs rooted at each PE
    - No need to act as L2 transit node
  - No STP in SP network

# VPLS Provisioning

- VPN Discovery
  - Each PE advertizes which L2 VPNs it serves to other PEs
    - Currently via LDP
    - In the future, via BGP
  - Use of RFC2685 VPN-Id
    - New interface parameter of VC FEC

# Future Work

- Combine draft-lasserre and draft-vkompella drafts
  - Minor differences (VPN-ID vs VCID)
  - MAC Withdrawal
- Auto-discovery of VPNs and TLS capable PEs
- Hub-and-spoke and hierarchical topologies