

Possible WAN PHY Objectives

Iain Verigin

PMC-Sierra

iain_verigin@pmc-sierra.com

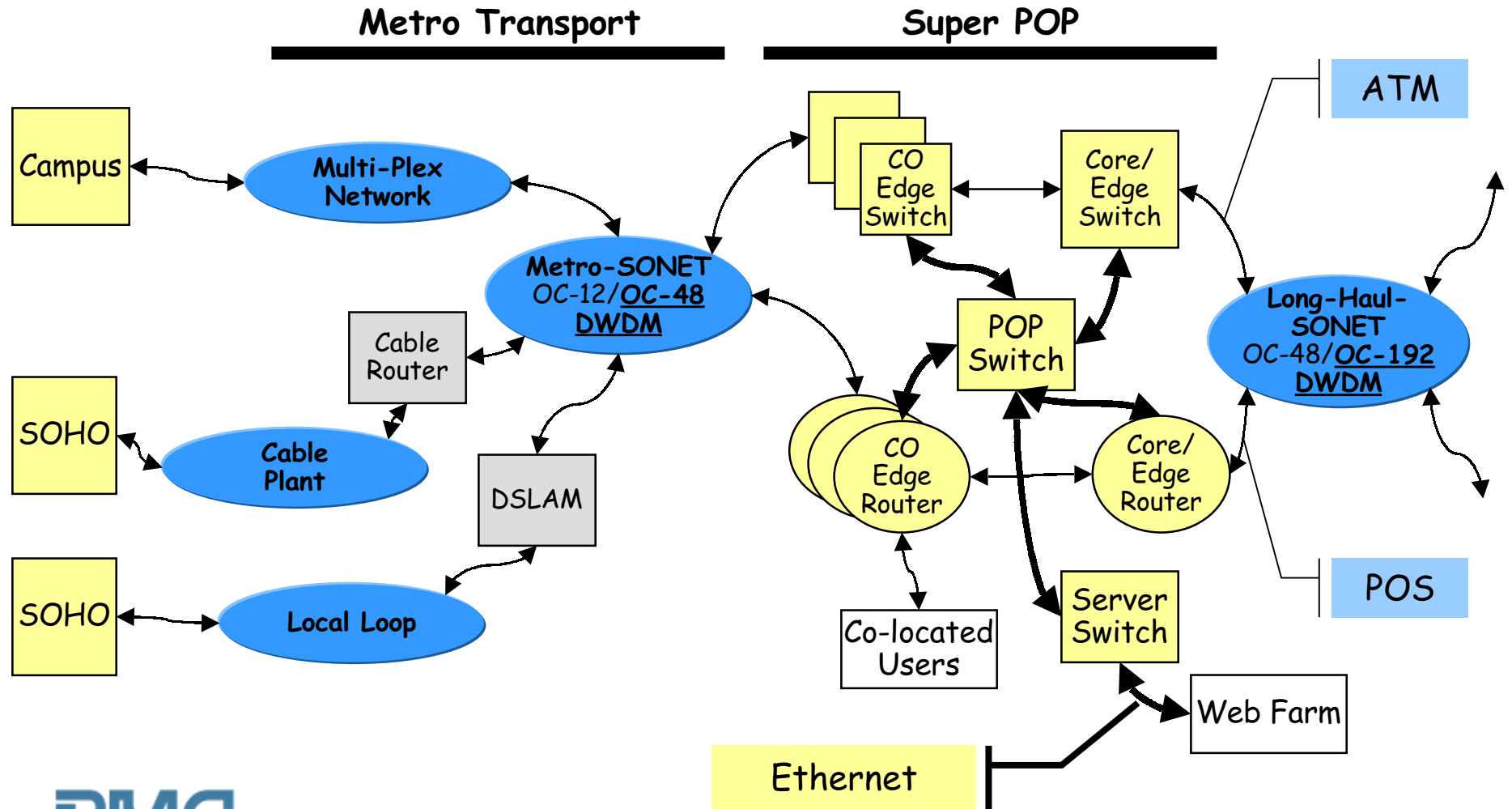
www.pmc-sierra.com

604.415.6216

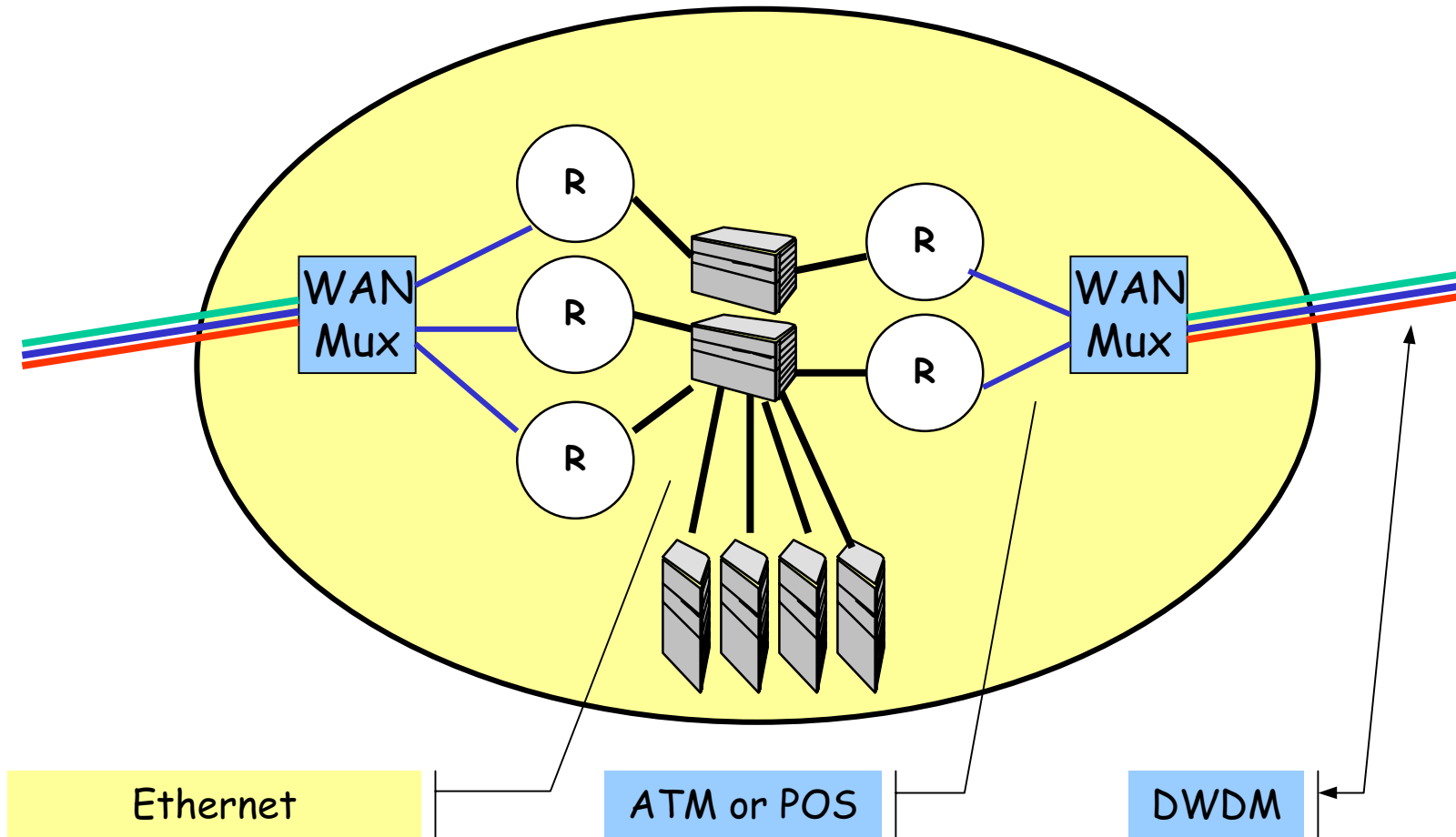
Key Points

- WAN connections are often short (~100's of meters for intra-POP/CO).
 - Distance objectives for LAN & WAN PHY are similar.
- OC-192 rates are important for WAN links.
 - Leverage installed base of DWDM gear.
- POP Equipment may deploy WAN & LAN 10GE ports.
 - POP equipment will connect to server farms and transport equipment.

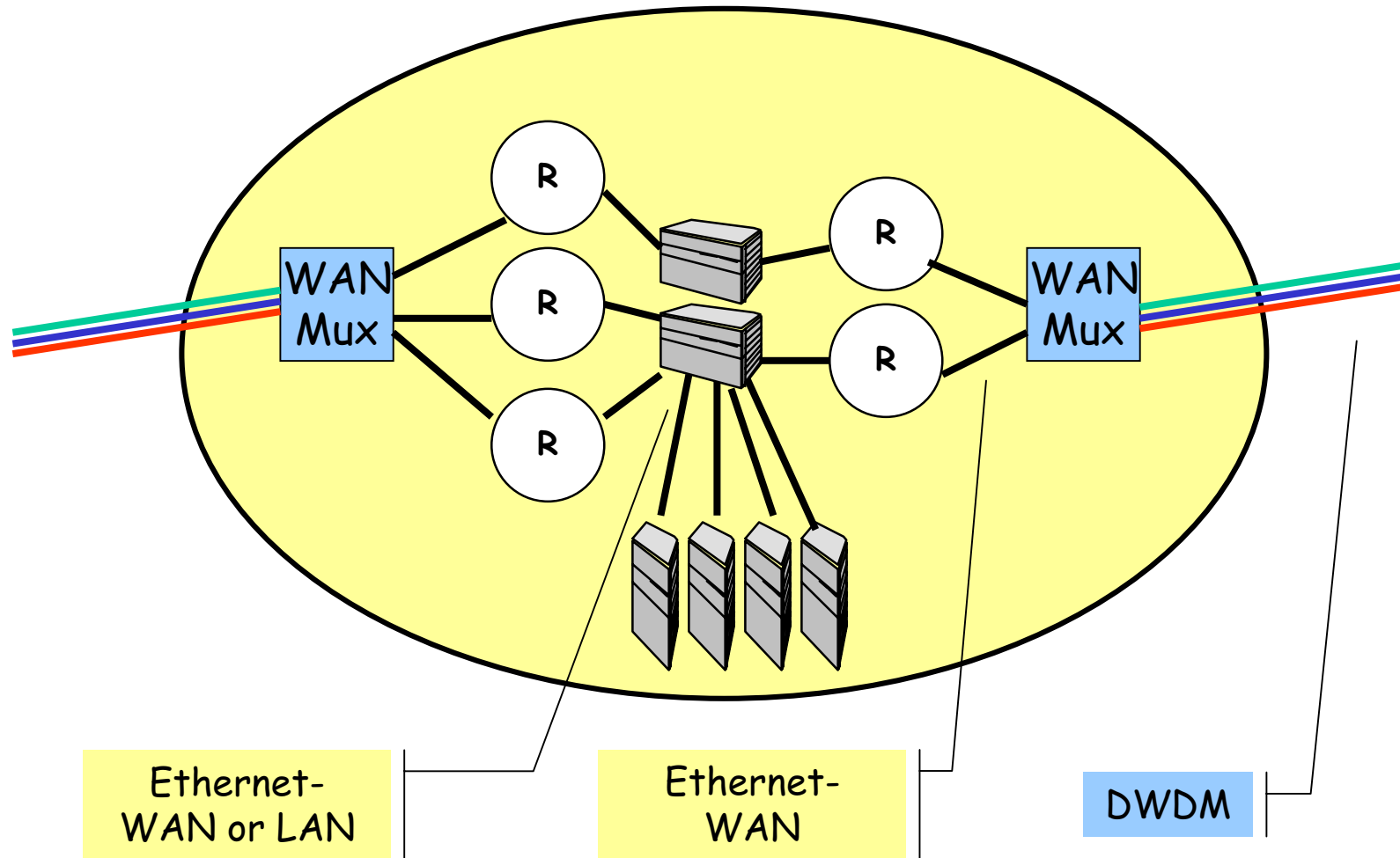
Network - Today



Super-POP Model - Today



Super-POP Model - Possible Future



Possible WAN PHY Objectives

- LAN and WAN PHYs should share distance objectives.
- WAN PHY could be used for all links in a POP/CO.
 - Should a WAN PHY negotiate to a LAN PHY?
 - Seems like a reasonable objective.
- Jitter budget of WAN PHY should reflect a single hop.
 - Let's not get into SONET/SDH's multi-hop regeneration issues. If one wants to go real long distance then they should use WAN specific gear.
- A possible WAN PHY SERDES interface is being worked on at the OIF. Refer to OIF99.102.1.
 - It is 16 bit differential LVDS @ 622Mbps.