

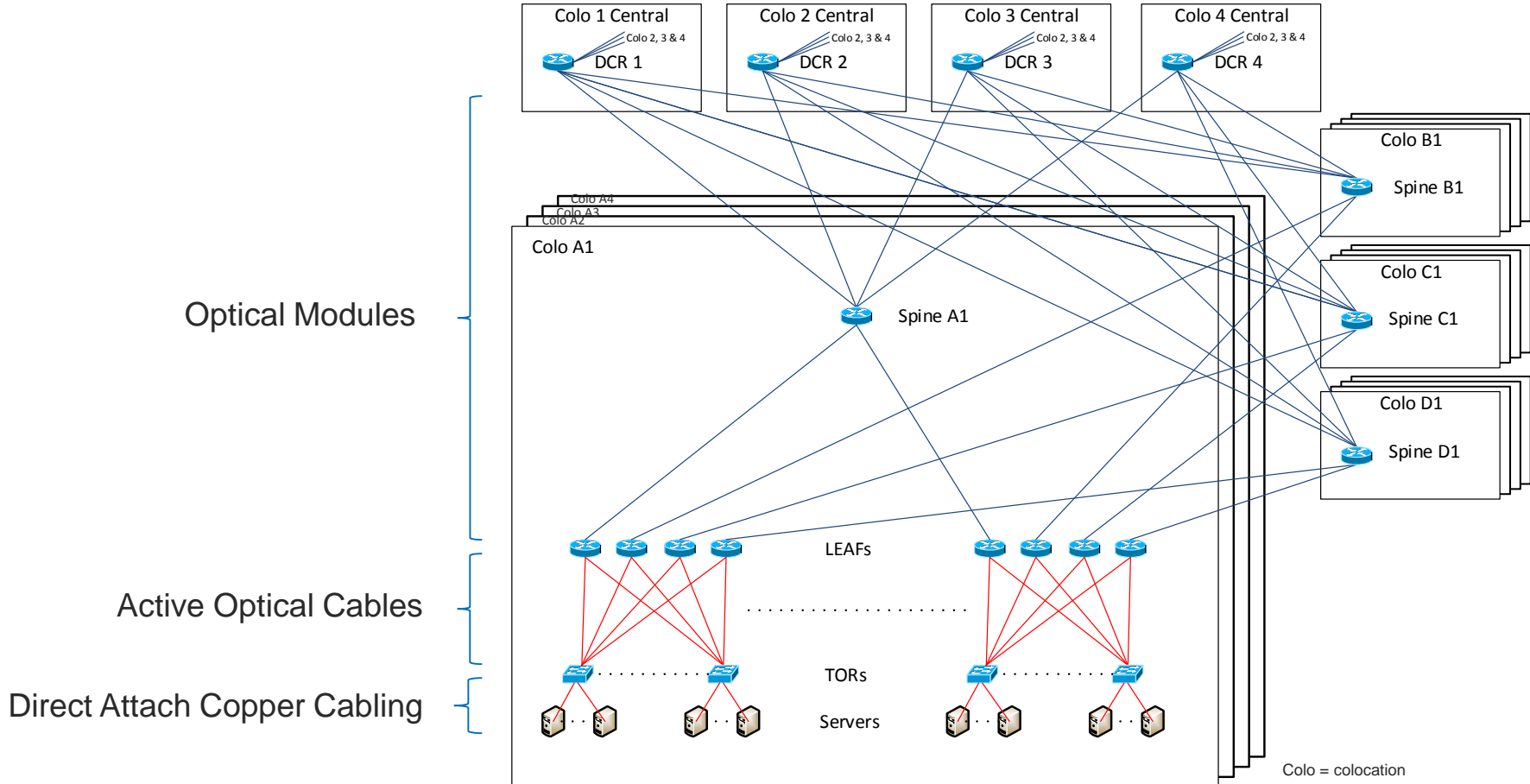
# Global Networking Services Interconnect Considerations

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IEEE 802.3bs 400Gb/s Task Force  
IEEE 802 July 2014 Plenary  
San Diego, CA

# Supporters

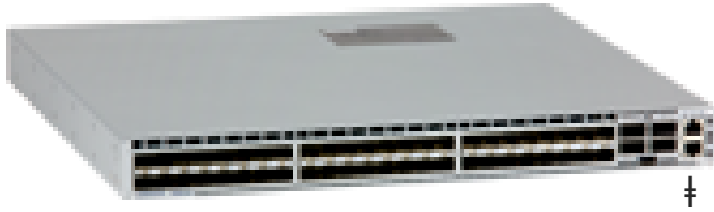
- Bill Szeto, Xtera Communications
- Ali Ghiasi, Ghiasi Quantum
- Valerie Maguire, Siemon
- Keith Conroy, MultiPHY
- Danny Morlion, FCI
- Brian Welch, Luxtera
- Wu Chengbin, ZTE
- Dave Brown, Semtech
- Tom Issenhuth, Microsoft

# Cloud Data Center Campus Interconnections

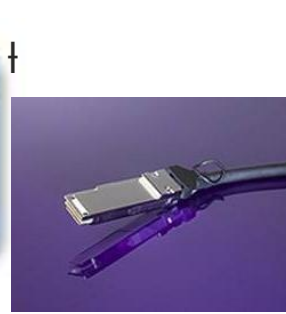
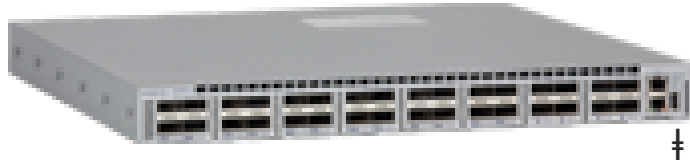


# Interconnect Usage Module

- SFP+



- QSFP+



- Commonality is a good thing

‡ Courtesy of Arista Networks  
† Courtesy of Molex  
† Courtesy of Finisar

# Minimize Complexity

- Converting from X to Y to get to Z is costly
  - Avoid gearboxes in the specification
  - Applies to speed as well as modulation
  - Gearbox is an implementation fix, treat it as such
- Examples
  - Bad: 16x25G to 4x100G-PAM4 to 4xDMT
  - Better: 8x50G-PAM4 to 4x100G-PAM4
- Every translation increases power and cost

# Obsolescence – Planned or Chaos

- 16 x 25G
  - Is this just 4 x (4 x 25G) we have today?
  - If so, do we need a specification?
- 8 x 50G
  - Modulation is under discussion in OIF
  - If PAM4, does that imply PAM4 for the optics?
- 4 x 100G
  - Would be great to have, but realistic to have a valid proposal by November this year?

# Thoughts

- Develop a common interface that permits broad usage
- Reduce the number of translations required
- Plan for interface obsolescence
  - Focus effort for the correct timeframe... standard in early 2017

Thank you!