
Rationalizing Core Transport Network Evolution

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Evolving Applications, Bandwidth and Cost

Increase in bandwidth intensive applications

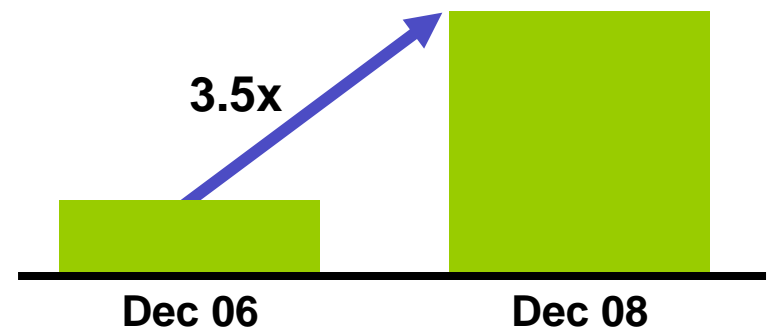
- Video
- Virtual Worlds
- Cloud Computing

- Increase in delay sensitive applications

- VoIP
- Video Conferencing
- Financial Transactions

- Growth in capacity demands does not lead to similar growth in revenue
- Need to reduce total system cost
- Core network expectations: Stable, reliable and cost effective
- Combining stable and emerging technologies in core network

Verizon Broadband Bandwidth Usage

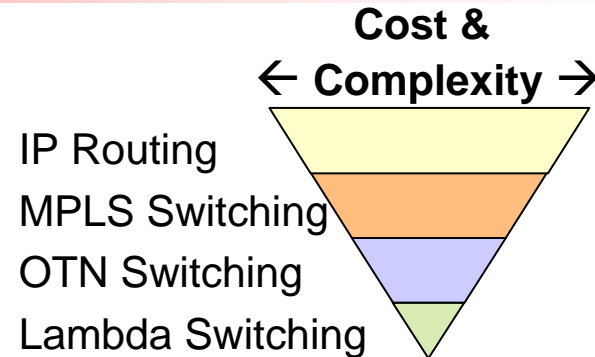


Reducing Network Cost

- Improve network cost and scalability by bypassing higher layers
 - Reduce higher layer processing by switching transit traffic at lower layers
 - Reducing higher layer processing equates to lower cost
 - Optimize protection functions between layers
 - Maximize port utilization and transport efficiency

♦ **Integrate multiple OTN & G/MPLS functions**

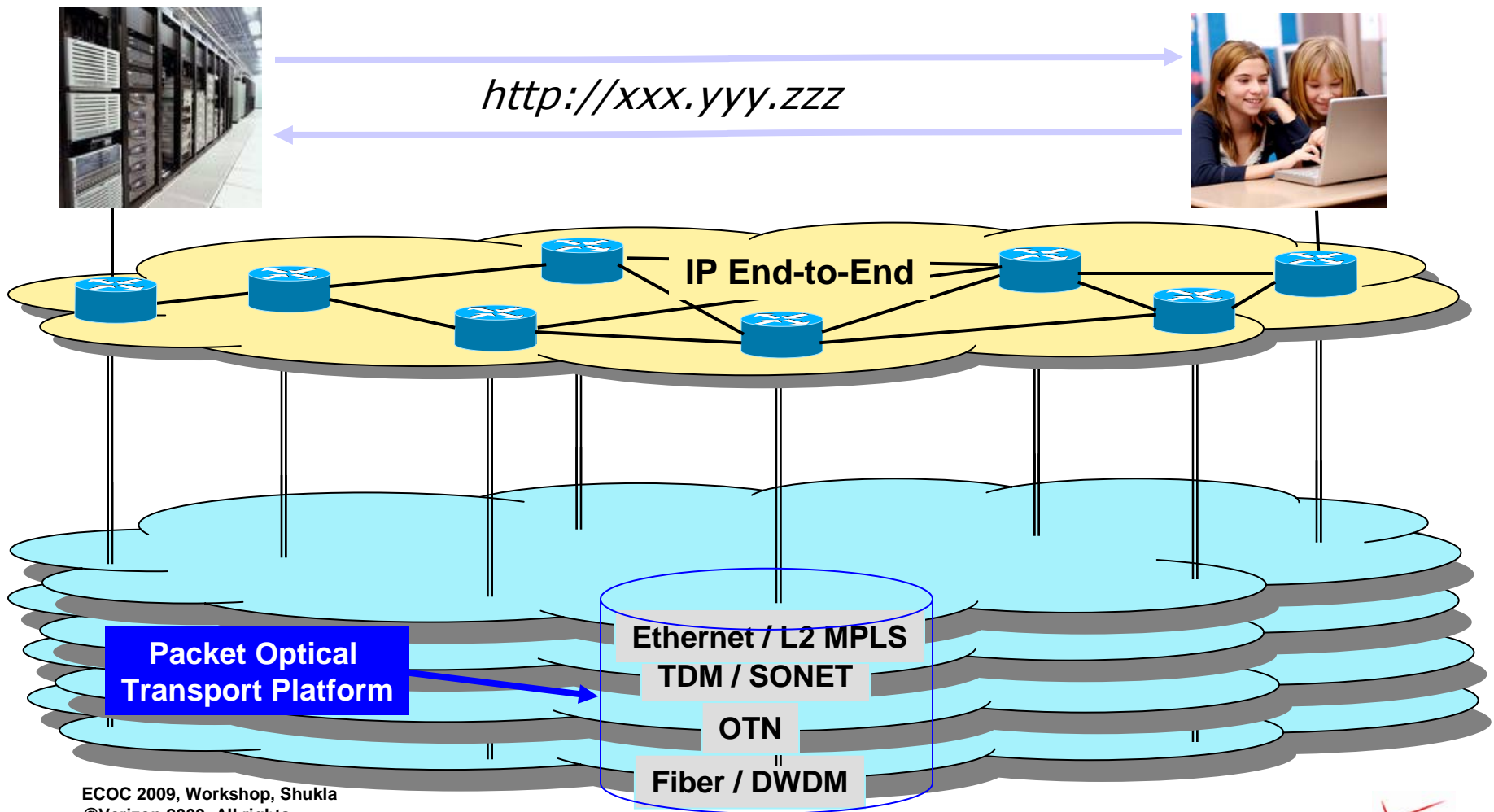
- Optimize cost, space, and power
- Improve efficiency through control plane integration



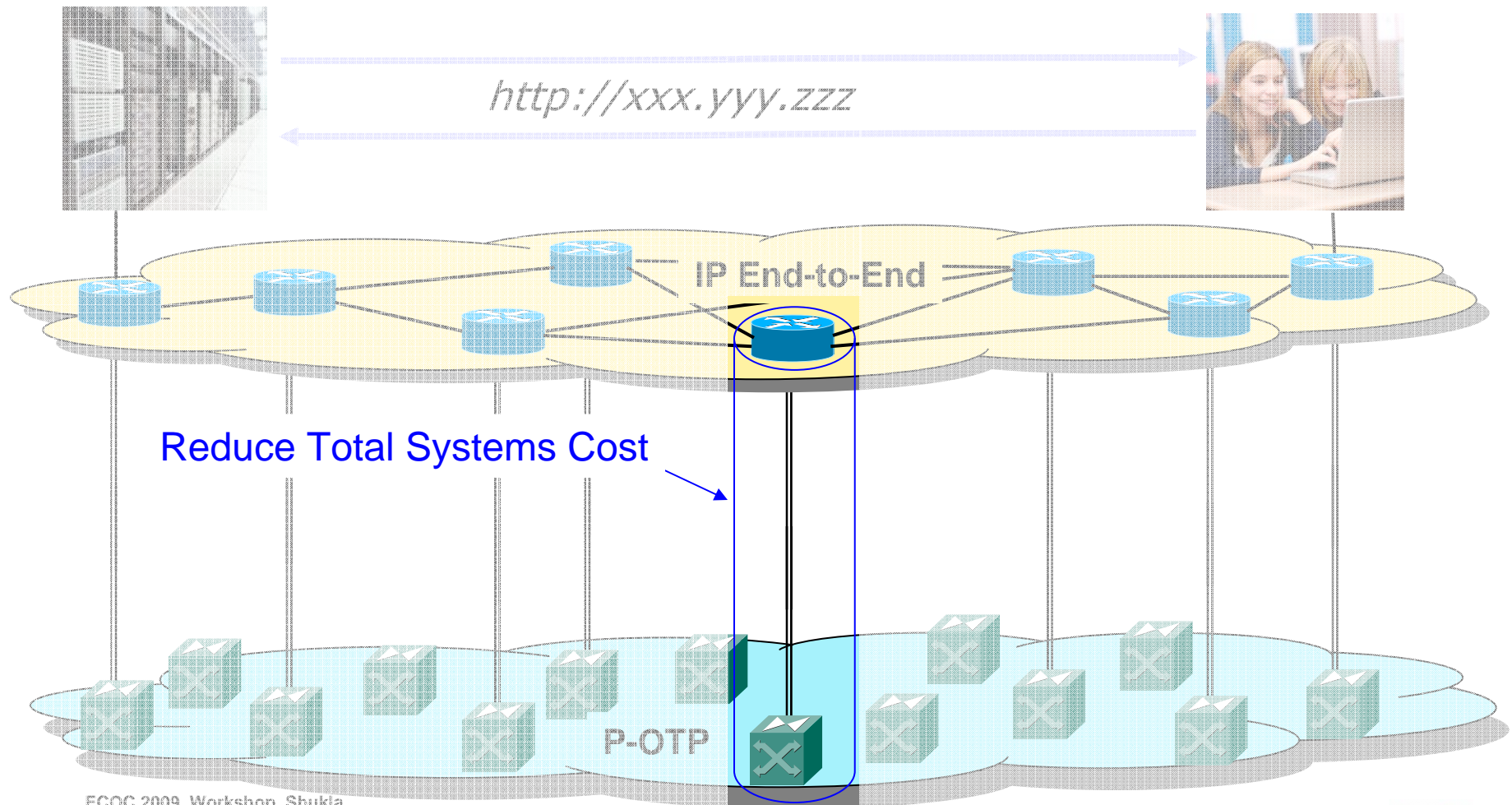
Core Transport

- Router ports are expensive, a major cost in the core network
- Need to reduce cost by optimizing wavelength utilization and minimizing use of router ports for transit traffic (placing switching in transport elements creates a competitive cost environment)

Multilayer Transport

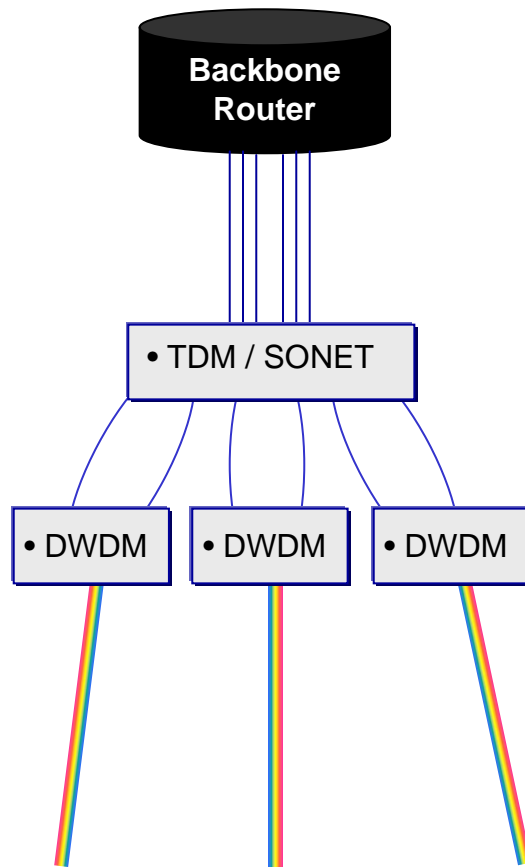


Transport Cost Optimization

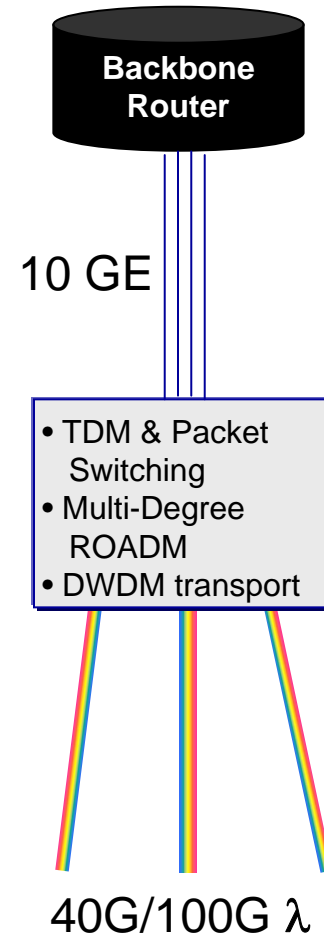


Core Network Evolution

Today



Next Gen Core Network



Evolving Network Capacity to Meet Demand

