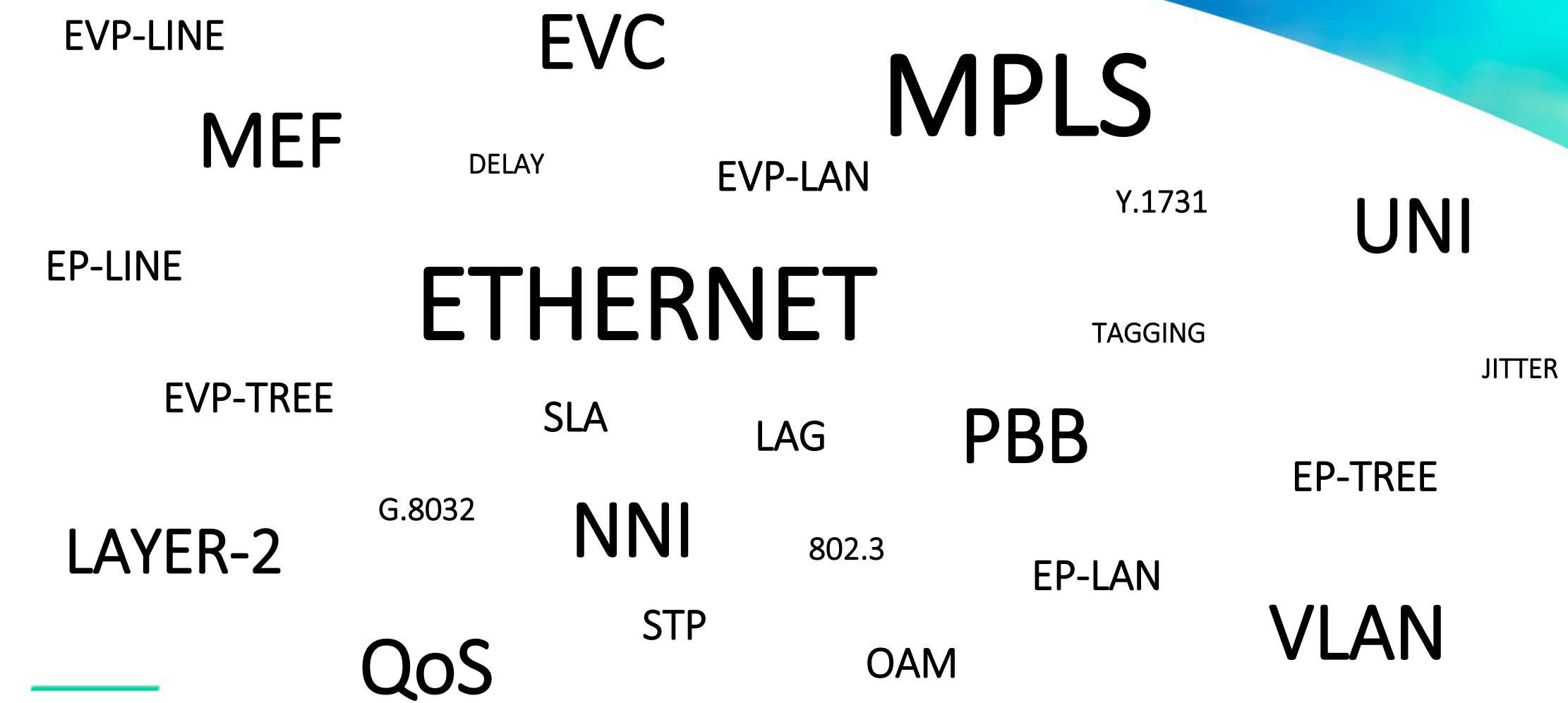
IP Transport Technologies

A very brief stroll through network growth

Technologies Discussed

- Carrier Ethernet
- DWDM – Dense Wave Division Multiplexing
- ROADM – Reconfigurable Optical Add/Drop Multiplexor
- OTN – Optical Transport Network

Packet Optical Transport System


EVP-LINE
EVC
MPLS
MEF
DELAY
EVP-LAN
Y.1731
UNI
EP-LINE
ETHERNET
TAGGING
JITTER
EVP-TREE
SLA
LAG
PBB
EP-TREE
G.8032
NNI
802.3
LAYER-2
EP-LAN
STP
VLAN
QoS
OAM

Customer Requirements (SLA)

- Bandwidth / Port Types / Layer-2 Requirements / Redundancy
- Performance & Availability Metrics
- Monitoring and Logging Requirements

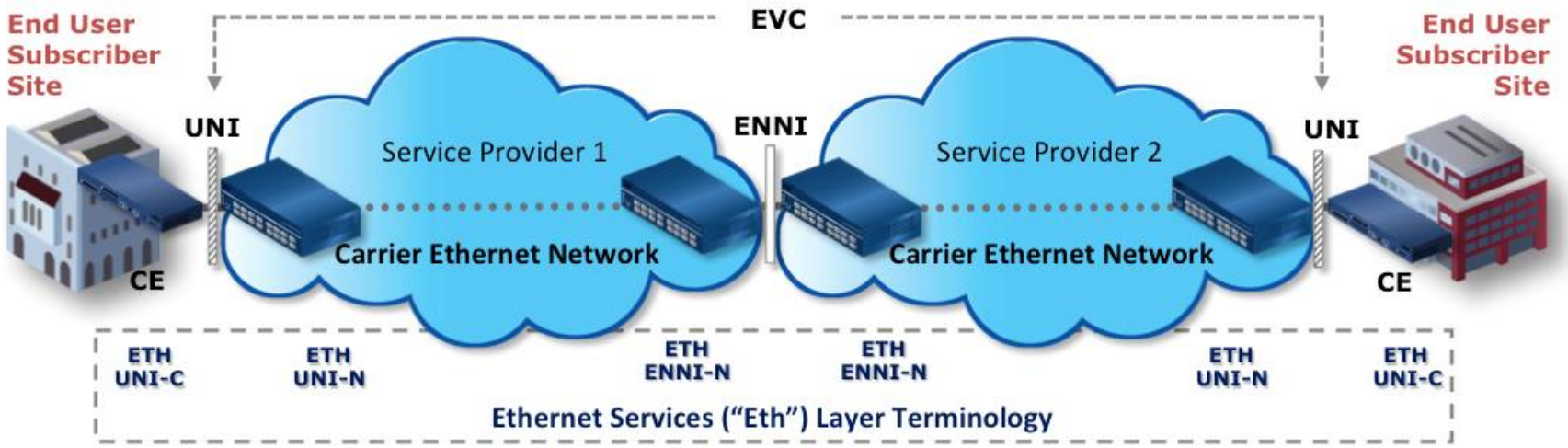
Carrier Requirements

- Reliability
- Scalability
- Flexibility
- Manageability

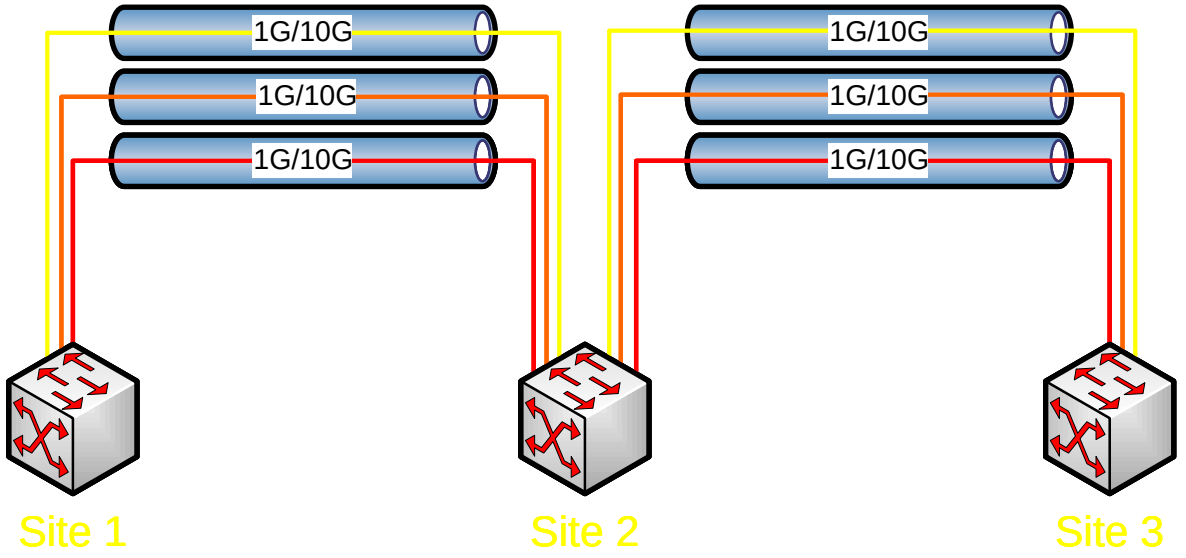
MEF – Metro Ethernet Forum

Metro Ethernet Forum

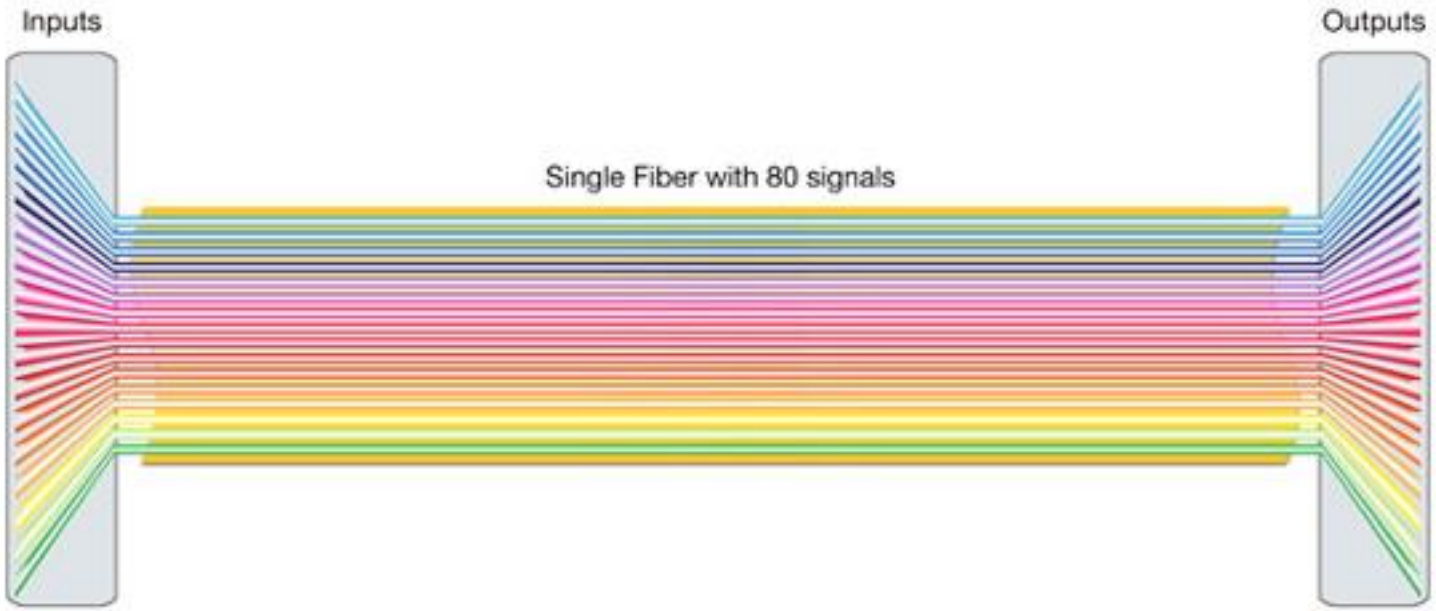
- Interface Definitions
- Connection Definitions
- Service Definitions
- Service Activation and Testing
- Service Management



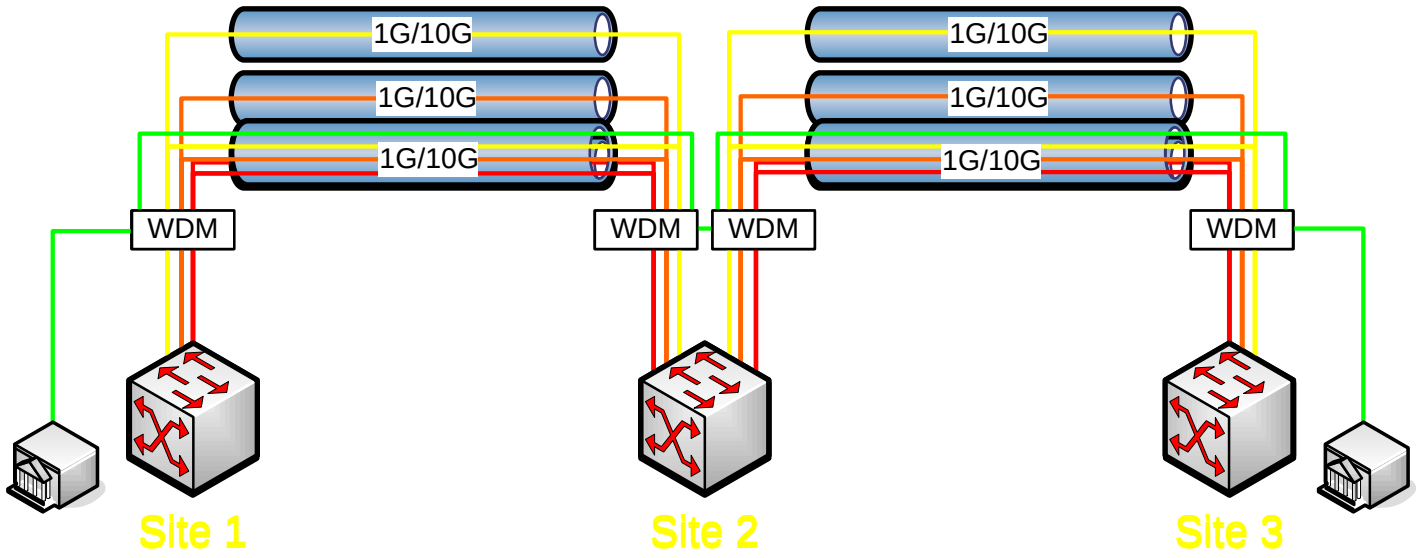
Growing with Ethernet



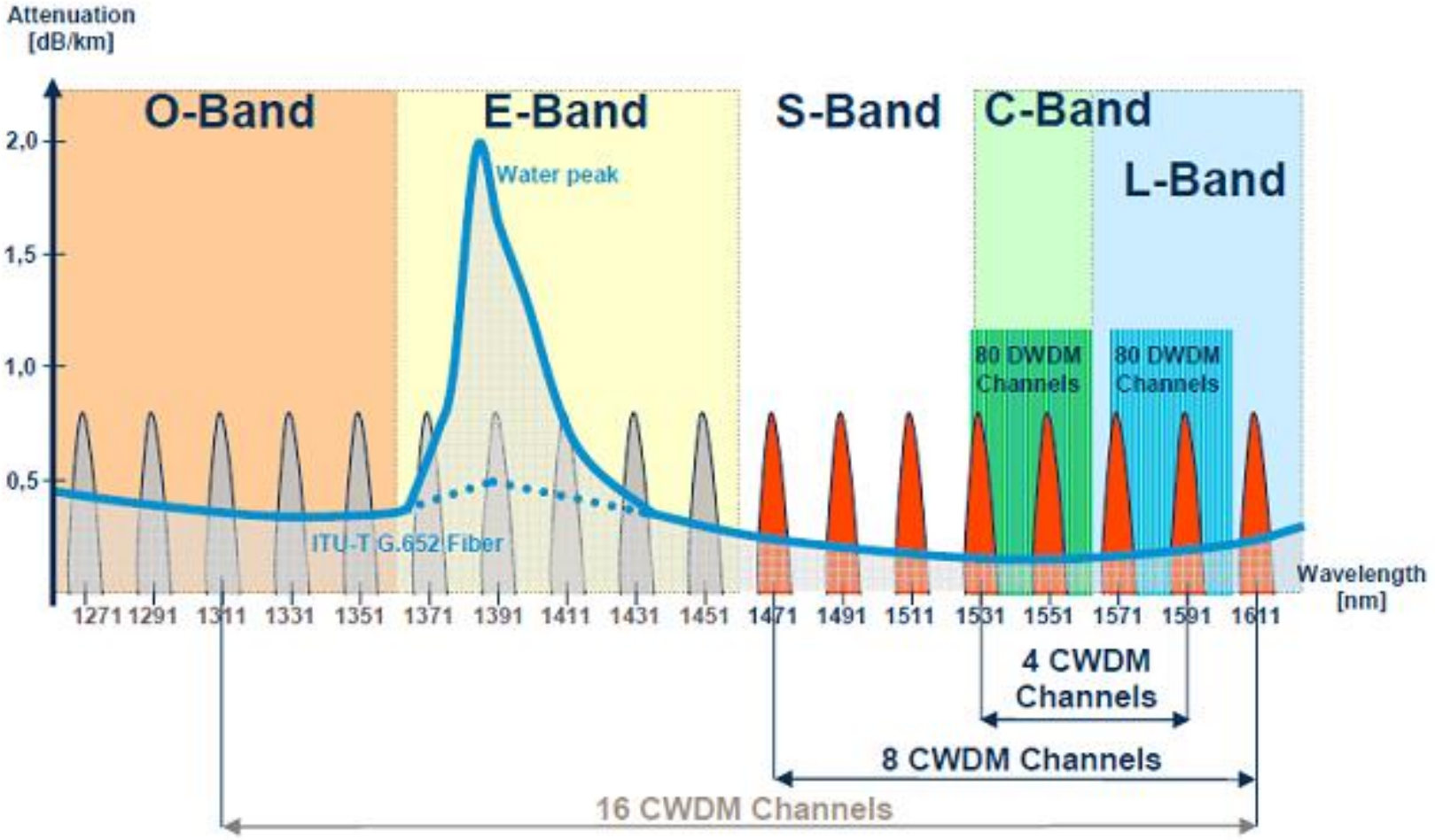
Dense Wave Division Multiplexing (DWDM)



Growing with DWDM

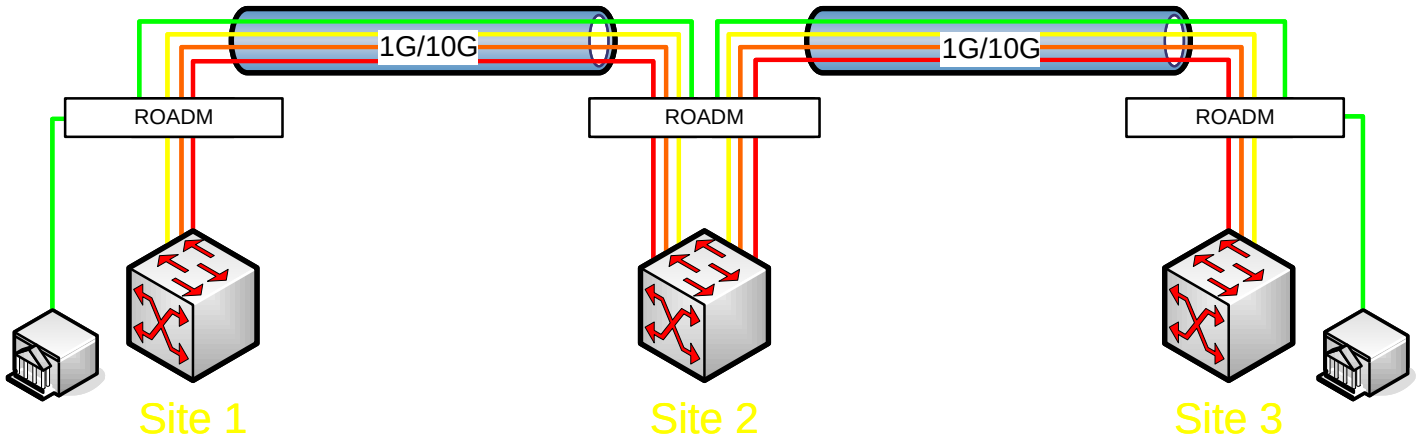


Optical Layer - DWDM



ROADM

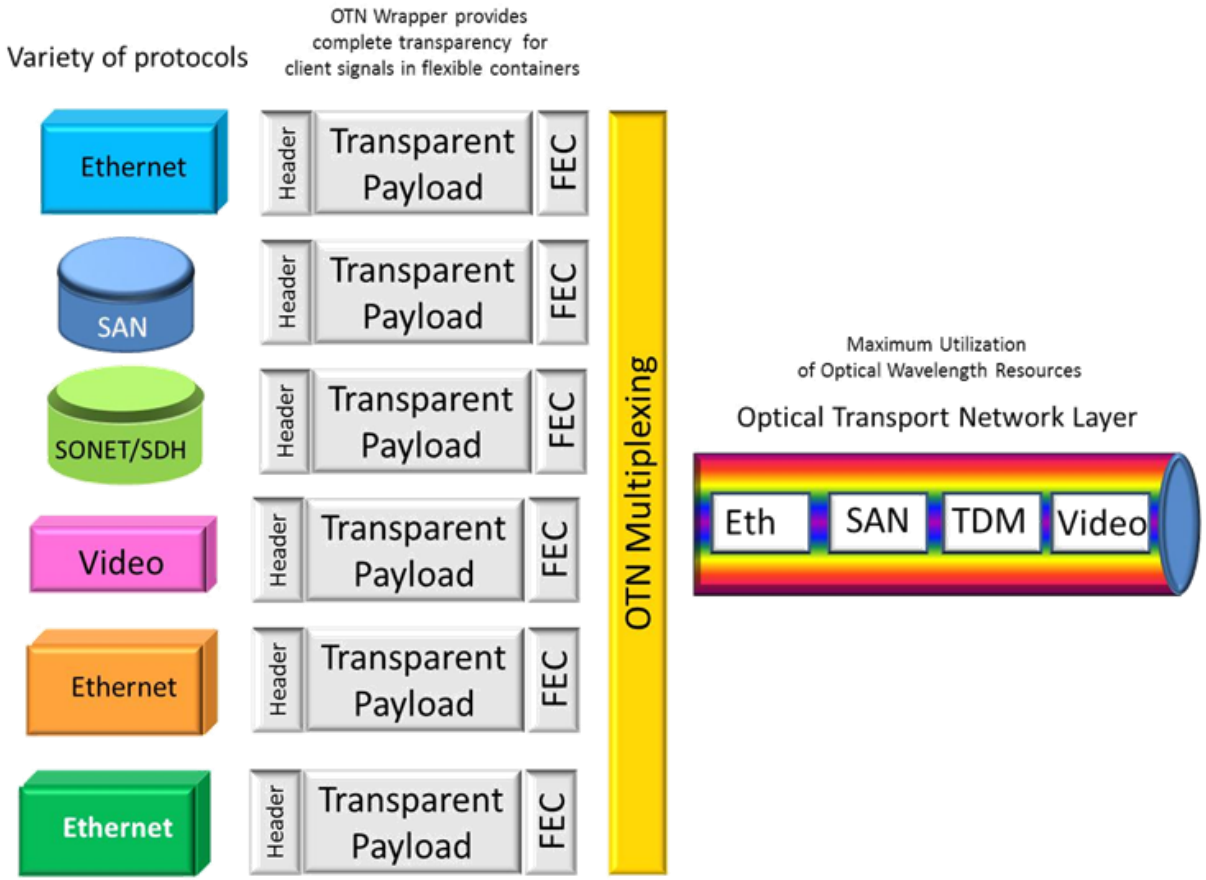
Reconfigurable Optical Add/Drop Multiplexor



Optical Transport Network (OTN)

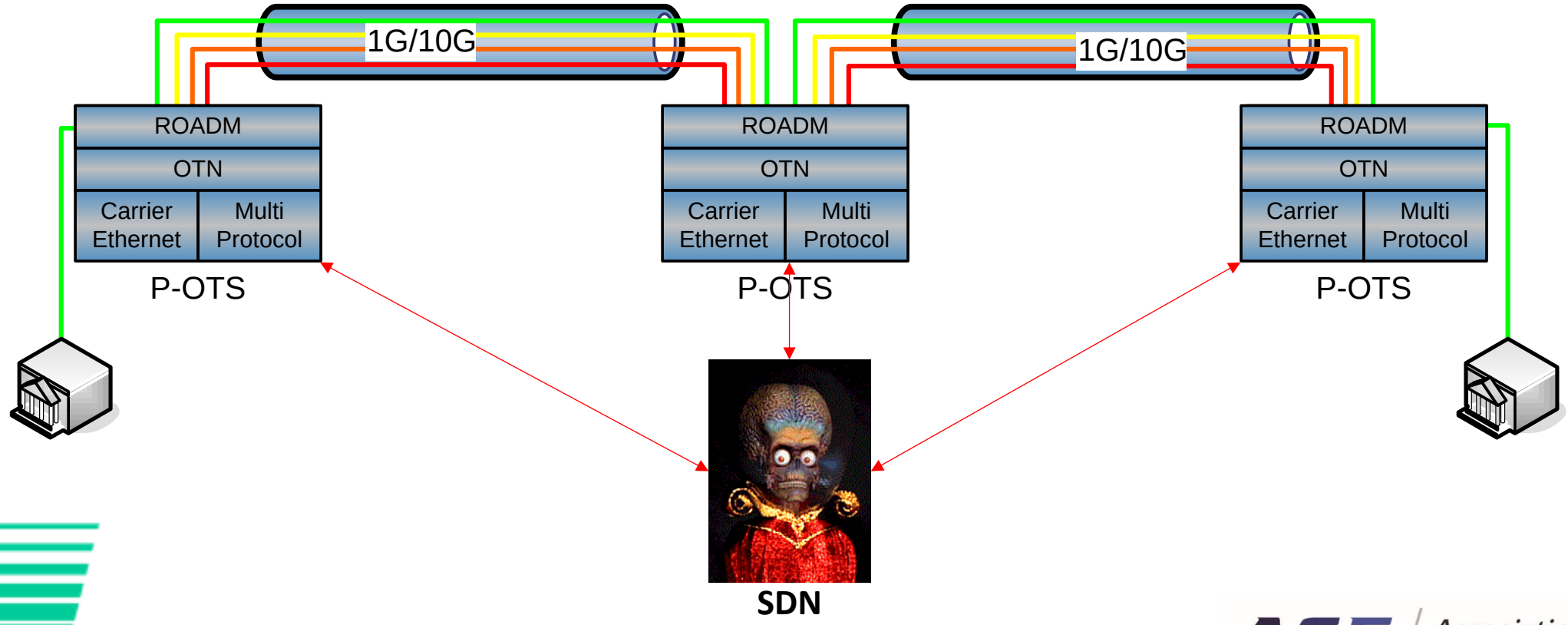
- SONET-like framing protocol
- Standardized Payload Sizes & Overhead
- Allows multiplexing of different protocols into same optical payload
- Provides FEC for signal reach enhancement
- Powerful adjunct to WDM systems

Optical Transport Network (OTN)



P-OTS

Packet-Optical Transport System



Questions?

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RVW

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