Case Study

Challenges faced

The main challenges that required to be addressed are:

• Due to increased demands, aggregation capacity cannot be handled by the existing 10G λ. The capacity requirement in aggregation requires upgrade to 100G λ
• The existing infrastructure has access rings which have crossed greater than 30 Gbps and requires three or more fiber pairs, resulting in inefficient access fiber usage
• Reuse of the existing PTN network and minimize traffic disruption:
  • The mobile backhaul for all operators were based on PTN transport with 700+ nodes deployed over 3 years
  • Protection of existing investment

Tejas Networks Solution

Tejas implemented an innovative Micro-OTN solution with a 2RU compact chassis. TJ1600-2 is a converged Packet Optical transport product that supports OTN/DWDM. Based on the customer requirements, the network is initially configured as a 40G aggregation ring with 4xOTU2/ OTU2E interfaces. The solution supports up to 100G Aggregated Ring with 400G cross connect capability. Salient features of the solution include:

• Scalable equipment with low form factor and low power consumption
• Sub Lambda(λ) grooming

Why Tejas Networks

After a thorough technical and commercial evaluation, the customer selected Tejas’ packet optical transport solution as the best fit for their application needs. The key features of Tejas solution are:

Low Opex: 2 RU form factor with low power consumption
Flexible and Scalable: Tejas Micro-OTN solution uses a programmable Software-defined Hardware to work across legacy, current and upcoming technologies and interfaces.

OTN Bypass: Traffic not destined for an IP Router bypassed on the OTN layer. This provides significant cost reduction in the IP backbone networks.

Comprehensive OAMP Functions: TJ1600 product supports advanced fault, alarm and performance management complemented by a powerful visual interface for alarm notifications, fault localization and SLA reporting developed using modern web technologies.

Unified, multilayered management platform: Tejas TJ5500 Network Management System is a unified, multilayered management platform with full FCAPS functionality for the complete range of Tejas products and technologies.

Environmental impact: TJ1600-2 has many power saving features to lower the carbon footprint of the product. It is designed using new generation FPGAs for reducing static power, and clock enable/gating logic to reduce dynamic power in FPGAs.

Pay as you Grow: TJ1600 products can be easily upgraded to high-capacity optics in the future.

Results
Tejas Networks successfully completed the micro-OTN implementation, effectively addressing unpredictable bandwidth demands of Enterprise customers with significantly lower TCO.