

Customer

The customer is a Telecommunications company based in Mexico City, offering services such as fiber to the home (FTTH), high speed broadband connections, Interactive TV, and HD content.

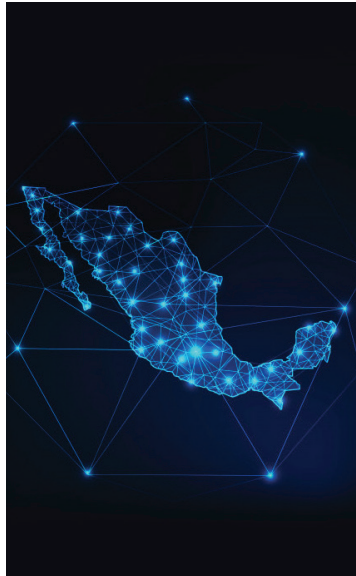
Challenge

Customer needs a cost-effective solution that can:

- Reduce Capital Expenditure
- Leverage Existing Network Assets
- Achieve Cost-effective Scaling
- Realize Best-of-Breed Networks
- Quick Time-to-Market

Solution

- TJ1600 - a multi-purpose platform which provides a robust, dense, reliable, proven and cost-effective solution to launch alien-channels over third-party transport layer is deployed.
- Tejas NMS (TJ5500) for remote management of the network from a central location
- Tejas Alien Cloud Simulator (TACS) to help customers plan and deploy alien-wave channels efficiently



A leading Mexican Telecom Company Cost-effectively Upgrades Capacity on its Long Haul and Metro Networks using Tejas Networks' Alien Wave Solution

There is rapid increase in the network traffic due to growing data and video consumption for work, learning, and entertainment. A leading service provider in Mexico wanted to capitalize on the increased demand for new broadband installations by upgrading bandwidth in their metro and long haul networks with 100G DWDM which is easily upgradeable to 100G+ in the future. Tejas proposed the Alien Wave solution which is a cost-effective method to rapidly upgrade capacities on "brownfield" DWDM networks without having to invest in a new capital-intensive network. This network covers the most important cities in Mexico, with alien lambdas of up to 1500Km.

Network Requirements

With an ambitious plan of offering over 300 TV channels plus 115 HD channels, as well as VoD including 3D content, local and long-distance telephony, and a download speed of up to 500Mbps, the service provider needed a quick capacity upgrade. The provider was also cognizant of the geopolitical issues and keen on an alternate vendor. The key network requirements required to be addressed are:

Bandwidth Scalability: Since the service provider offers a wide variety of Triple and Double Play services over a fiber optic network the primary requirement was bandwidth scalability. The existing DWDM networks required capacity augmentation with high capacity channels of 100G, easily upgradeable to 100G+ and to co-exist with native channels without any

performance impairment. Also, at intermediate locations large scale switching/grooming of wavelengths, circuit or packet traffic was required.

Technology Diversity: The client network runs on multiple technologies and interfaces with support to a wide variety of technologies such as GPON, PDH, SDH/SONET, OTN and CE. The connection speeds desired ranges from megabits to gigabits. Also the nature of network-side services could be at L0 (wavelength layer), L1 (circuit layer), L2/L3 (packet layer) depending on end-customer requirements.

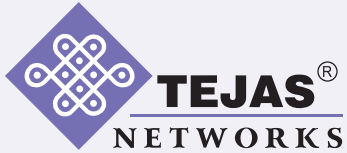
Product Flexibility: The optical platforms used should not be rigid and must have the necessary flexibility to continuously evolve and support an arbitrary mix of circuit and packet services ranging from 100% circuit

to 100% packet or anywhere in-between. The product architecture should use re-programmable hardware and software modules to ensure greater reusability in dynamic network scenarios.

Differentiated Services: Another key requirement was the ability to offer a range of "right-fit" service level agreements (SLAs) in terms of protection (e.g., unprotected, shared protection, dedicated protection), quality of service (mission-critical, real-time, non-real-time, best effort) and performance metrics (e.g., latency, jitter, packet loss).

Tejas Networks Solution

Tejas' TJ1600 - a multi-purpose platform which provides a robust, dense, reliable, proven and cost-effective solution to launch alien-channels over third-party



Results

This deployment helped the customer to cost- effectively manage traffic growth, grow revenues and deliver high quality experience to its end users.

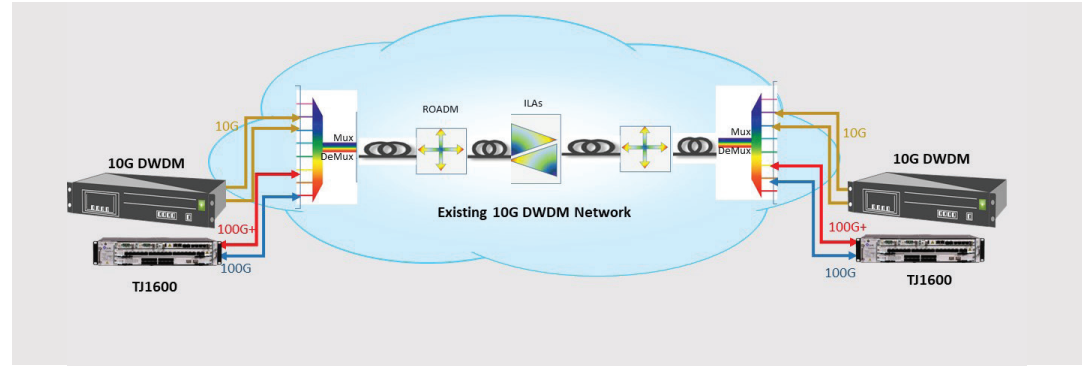
“ Alien Wavelength Solution has proved to be a cost-effective option to progressively scale bandwidth for the Mexican Telecom company. The customer reported 99.999% uptime and is very happy with the reliability offered by the product. The reduced service cost and continuous support offered by our local sales and support teams was a key factor for us to win the order for the next phase of deployment. ”

-Shirish Purohit
Head-Sales

transport layer is deployed. Our solution is a cost-effective solution in the service layer, compared with the active vendor’s solution. TJ1600 platform is capable of hosting a variety of technologies (DWDM, ROADM, OLA) and services (SONET/SDH, OTN, Ethernet).

Tejas Network Management System (TejNMS) gives the end users total control, visibility and ability to configure, operate and monitor the alien-waves end to end. All standard network management features like fault management, configuration, administration are fully supported and adhered to in the comprehensive TejNMS software suite.

Tejas Alien Cloud Simulator (TACS) is a unique and home-grown AW design toolkit which helps customers plan and deploy alien-wave channels efficiently. TACS helps operators run pre-deployment simulations and study of the existing physical layer to draw the action plan of field deployment thus reducing the downtime of the network activity, optimizing the on-field engineer’s efforts and minimizing the overall cost and time of deployment. TACS can also be used to identify and optimize the deployed networks to maximize their performance metrics by employing advanced network planning and design services.



Why Tejas Networks

Proven expertise in deploying 11000 km+ of alien-networks carrying Tejas channels across 3 continents was a key decisive factor in choosing Tejas. Other factors included:

- Successful interop with five of the top global optical vendors
- Converged solution comprising DWDM and compact OTN cross-connects with sub wavelength traffic grooming
- Adapted unique carrier phase recovery technology for addressing nonlinear noise
- Seamless integration of 100G on a third party 10G/100G DWDM network without guard bands
- Flex-ready multi-purpose transport

cards with support of 100Gbps+ line rates

- Adaptive Modulation schemes, which can tune the modulation scheme and line rate based on the Optical layer parameters
- Alien Cloud Simulator: In-house network feasibility study tool to simulate and evaluate the network prior to deployment

Results

Tejas successfully implemented the roll out of the innovative Alien Wave solution, while providing a reliable alternative considering the geopolitical issues in the region.

Tejas has won phase 2 of the expansion plan and will deploy a DWDM optical solution in three border crossing points between Mexico and the USA.



Software Enabled Transformation

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