

Case Study

Marcatel Com, S.A.

“At Marcatel, we pride ourselves on delivering excellent quality service and high availability to national and international carriers as well as large enterprises. Fujitsu, as our optical partner, gives us the added technical expertise and transport solutions to realize the benefits of a more open and disaggregated network. Free from vendor lock-in, we can now design the best-fit solution for our customers while accelerating time to market and lowering costs. The result is a more competitive market position.”

- Sergio López, Engineering Manager, Marcatel Com



The Customer: Marcatel Com, S.A.

For international fiber network provider Marcatel Com (Monterrey, Mexico), the pressure to develop more agile and efficient transmission systems is intensifying. As a provider of high-capacity trunking services in Mexico, the U.S., Canada, South America, Europe and Asia, Marcatel is on the leading edge of long-haul network design, and Fujitsu Network Communications is right there with them.

Marcatel and Fujitsu recently completed a 100Gbps trans-American, open line system (OLS) link from Monterrey to McAllen (TX), a project that highlights the benefits of disaggregation and the value of a solid partnership.

The Vision

Driven in large part by advances in software-defined networking (SDN) and network functions virtualization (NFV), disaggregation has moved from the data center to telecom networks. It is quickly emerging as a key to enabling a truly open fiber systems design. In an open and disaggregated transport network, pairs of transponders from different vendors can be deployed together and operate over an open line system. Relying on open standards-based software, it also enables the uncoupling of component hardware from its proprietary software.

Marcatel was an early advocate among network providers for the switch to an open transport network. By 2016, they decided to begin their own transition by deploying a single disaggregated link from Monterrey to McAllen. The project involved an alien wavelength solution using muxponder blades on either end of a 100G (dense wavelength division multiplexing) DWDM link.

The Customer

Customer: Marcatel Com, S.A. De C.V.

Industry: International fiber networking and telecom services

Business Scope: Marcatel's strategically deployed fiber networks connect enterprise customers and wireless service providers across Mexico, Argentina, Brazil, Canada, Colombia, Chile, China, Spain, the US, Peru and Venezuela.

The Vision

A leader in long-haul fiber trunking, Marcatel was among the first to begin transitioning its networks to a more open, disaggregated design. The goal was to eliminate the constraints of vendor lock-in while providing the agility and affordability its customers needed to keep pace with increasing market demand.

The Solution

To validate its decision to disaggregate, Marcatel chose a 240-kilometer link in its DWDM network that ran from Monterrey (Mexico) to McAllen (TX). They then selected Fujitsu Network Communications as their optical transport partner and deployed Fujitsu's 1FINITY™ T310 blade transport solution in extended field trials. The T310 proved an unqualified success and a larger rollout is planned for later in 2019.

The Solution

Sergio López and his team began searching for an optical transport partner by Q2 2016—the timing was perfect. Fujitsu, a leader in the development of open and disaggregated optical transport solutions had opened their first office in Mexico in September of that year. Among the company's pioneering efforts was the development of the 1FINITY portfolio of high-efficiency optical transport blades. A few weeks after Fujitsu opened its Mexico sales office, Eduardo Elizarraras, Fujitsu Sales Manager, met with López and introduced him to the latest addition to the 1FINITY™ portfolio, the T310.

The T310 is a high-density, low-power muxponder that provides 200 Gbps coherent optical transport. The 1RU blade conserves rack space while providing an open, simple and scalable network architecture with room for growth. The T310 can be deployed together with other 1FINITY Transport or Lambda blades to extend metro network capacity or form an open reconfigurable optical add-drop multiplexer (ROADM) network.

Unlike traditional converged systems, the programmable, blade-centric design of 1FINITY offers a pay-as-you grow approach with low initial investment. As a result, it provides a highly competitive alternative for increasing revenues among the 100G private-line market.

The 1FINITY T310 had everything Marcatel was looking for. The two companies spent the next 11 months designing an extended field trial. Starting in November 2017, López and his team put the T310 through its paces.

While engineers were monitoring the T310's performance in the field, López was calculating some of its other benefits. These include a smaller footprint that would enable Marcatel to conserve rack space. The T310 is also energy efficient, operating on just 224 W. With the ability to support as many as 20 10GbE client ports, it provides the long-term density that Marcatel and its carriers require.

The Outcome

By the end of 2018, Marcatel was convinced it had found, not only a key building block to its disaggregation strategy, but a long-term partner in Fujitsu. Based on the successful deployment and flawless performance of the 1FINITY T310 transport blades, Marcatel plans to continue the relationship, expanding use of the T310 in early 2019 as part of a larger upgrade that includes transitioning their existing 100G DWDM network to 200G.

Why Fujitsu?

As an industry catalyst, Marcatel was looking to create a more creative and productive competitive environment among its suppliers. Fujitsu was the first to demonstrate how a true, optical open line system could support that vision. By investing the time and resources in an extended field trial, the Fujitsu team was able to earn Marcatel's trust and cultivate a relationship that is now blooming.

Solution Summary

- 1FINITY T310 high-density, low-power muxponder for 200 Gbps coherent optical transport



Contact

Fujitsu Network Communications, Inc.
2801 Telecom Parkway,
Richardson, TX 75082
Phone: 888.362.7763
www.us.fujitsu.com/telecom

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