

Latin American mobile service provider selects Tellabs for nationwide network upgrade and expansion

As your trusted partner, Tellabs® Global Services speeds time between deployment and operation.

Business Challenge

A large Latin American mobile service provider grew rapidly in the last decade. The nationwide operator now has close to 60 million subscribers and 71% market share. To meet the demands of millions of new customers, it introduced an array of services including messaging, email, news and information, entertainment and business services.

To support continuing growth, the service provider embarked on a substantial initiative to expand and upgrade its network, beginning the migration of its legacy TDM network to 3G and, ultimately, to an all-IP network.

Similar to many mobile providers, they were challenged by limited internal resources and expertise in large-scale network build out and migration. The carrier needed an experienced partner that could provide necessary equipment and network design, deployment and documentation.

“Speed was key for the customer,” according to Jorge Maya, the lead Tellabs network consultant working with the service provider. “Traffic was exploding with the iPhone, Blackberry and all their new services. They needed to get capacity up and running and fully integrated as fast as possible. But they had to make sure that they had a process to document everything, too.”

Documentation was particularly challenging. Amid the rapid build out, the service provider also wanted to use the project as a vehicle for improving internal skills and processes around network expansion, support and performance management. Bringing in a partner that could do the work and provide comprehensive knowledge transfer and documentation to elevate the level of internal expertise was a top priority.



Network experts help ensure you incorporate best practices and the right technologies.

Tellabs Solution

To help ensure a successful build out, the service provider chose Tellabs Global Services to provide network architecture, design, optimization and documentation services, along with essential equipment for the new network.

The scope of the project was substantial. The operator was deploying an entirely new, nationwide UMTS/3G network and preparing the shift to all-IP over a two-year period. The company's plan was to begin in the three largest regions, then move to six other regions while further expanding in the first three. This would give them a quick boost in capacity in its most congested regions first while still moving quickly on a nationwide basis.



Rely on our expertise for a fully tested and operational network.

As a first step, Tellabs provided optimization services for the existing 2G network to squeeze additional usage from current infrastructure while getting underway with the architecture and design work for the new network. The optimization services helped improve service and maintain customer satisfaction right away, thus buying some additional time for the build out.

Based on the existing transmission infrastructure, the build out plan called for three major initiatives:

- Installation of Tellabs® 8600 Managed Edge System as the platform for the new 3G network
- A dramatic expansion of network nodes from 50 to 500, with an eventual goal of more than 1,500 in subsequent years
- Upgrading and adding additional network switches to support the rapidly growing traffic

Tellabs® Network Architecture Service provided the high level design for the ambitious plan, based on detailed consideration of traffic flow patterns, capacity limits, security, redundancy and failover, network management, provisioning and future expansion and growth. The Network Architecture Service included a high-level project plan, presentation and review with the service provider's managers, and typology and design for the subsequent migration to an all-IP network.

With the high-level design in place, Tellabs could then move to providing detailed design including Engineering Design Packages (EDP) for installation at each site.

Moving to 3G is a complex operation with a high risk of errors and redesign at the site level once implementation gets underway. Tellabs' Engineering Design Package minimizes the risk by providing a comprehensive configuration plan for each site based on practical experience from past implementations and industry best practice.

Each EDP included, among other details:

- All network equipment layouts and physical connections
- Detailed configuration information for each element
- IP addressing scheme
- Application layer design
- Installation and equipment requirements
- Port listings with protocol and engineering details

The EDPs, along with a central repository that Tellabs custom-built for project management, provided the glue that made the whole project work. As noted by Jorge Maya, "The customer's engineers were used to TDM and not so familiar with IP and the new equipment. And every group had its own documentation, so new implementations were doubly hard to manage. The EDPs and the project repository gave everyone consistent, detailed information that made it much easier to deploy at the speed they required."

The Result

As the mobile operator continues to move through its multi-phase build out, Tellabs has already contributed substantially to the project success.

Most important, by following Tellabs' architecture and design work, the build out has gone smoothly. The operator added extensive new capacity to its network, is successfully providing 3G service across much of the country, and has laid the groundwork for the move to an ethernet-based all-IP network. Tellabs network consultants served as trusted partners throughout the process, providing expert advice, support and documentation every step of the way.

Within the build out, Tellabs' approach to documentation with its Engineering Design Packages has proven so effective that the customer adopted the model for work with all its partners.

The EDP approach has generated four specific benefits, according to the customer:

- **More efficient project management:** Centralized, comprehensive planning data has made it much easier and quicker to coordinate installations, manage multiple vendors and respond to necessary changes
- **Simplified migration paths:** With EDPs in place for every site, engineers have the baseline data and configurations they need for rapid upgrades and migration to new systems, including working with the Network Operations Center to integrate new nodes into the network
- **Faster and better troubleshooting:** Similarly, the existence of the EDPs makes it easier for network managers and engineers to identify and get to the source of problems with existing and new systems
- **Improved skills and processes:** Based on Tellabs support, regional engineering teams are now far more capable of installing, managing, and upgrading 3G networks by themselves, with clear and efficient processes for creating and following their own EDPs



We provide better information so you can reduce costs and churn.

In all, the service provider is now much better equipped to serve its end customers with the 3G service they demand, and also to manage ongoing growth and change. With customer demand continuing to rise at a rapid rate across the country, the company is well placed to continue its leadership role in the industry.

Tellabs Global Services

Tellabs Global Services delivers quantifiable results that help you succeed. Our deep expertise and specialized services are designed to reduce costs, optimize performance, minimize risk and speed time-to-market. We solve the complex business, technical and operational challenges you face in deploying advanced networks — anywhere in the world. Tellabs Global Services' reputation for providing a better customer experience is the result of an open and honest approach, the ability to provide an objective viewpoint, and dedication to customer satisfaction.

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