



VSAT Runs a 10K



iDirect and Elara Comunicaciones support “10K” initiative for connecting rural populations and fueling local economies in Mexico.

More than 10,000 towns in rural Mexico are without quality voice and data services. This disadvantage not only creates a lack of real-time communication for citizens in this town, but negatively impacts the communities' economic growth and future prosperity as well. The ability to overcome the digital divide in these areas could result in better education for children, access to immediate healthcare for all citizens and more vibrant business opportunities.

In September 2012, the Ministry of Communications and Transportation (SCT), in coordination with the Information and Knowledge Society, made a public call for the Electronic National Public Tender bidding process, for contracting “Internet Satellite Connectivity Services.” The project was designed to connect 10,000 sites throughout Mexico, including schools, health centers and libraries.

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Bringing Satellite to the Table

Ultimately the project was divided into four regions and SCT conducted a competitive evaluation of service providers for the projects. Elara Comunicaciones, a leading provider of telecommunications in Mexico and Latin America, was selected for the southeastern region of the project, with an initial order to connect 2,717 sites. This region was considered the most complicated due to its orography and lack of telecommunications infrastructure in general. Therefore a robust technology needed to be deployed.

However, Elara's ability to guarantee coverage to areas such as Campeche, Chiapas, Oaxaca, Quintana Roo, Tabasco and Yucatán would be difficult given their remote locations. Leveraging its relationship with iDirect, Elara was able to bring satellite communications to the table as a cost-effective option with the capability to connect high-quality services to these remote regions in immediate fashion.



A Sustainable Network

"The importance of a project such as the 10K project is the fact that we will be helping to shape the lives of both current and future generations of the population in these villages," Jorge Villarreal, CEO of Elara, says, "And as we all realize, the needs of today will be vastly different from the ones five or ten years from now. That means we need to ensure the network is not only reliable, but has the ability to scale in any means necessary to ensure connectivity never fails."

Such criteria outlined by Villarreal sets the stage for why the iDirect platform was the ideal choice for the 10K project. The network offers multiple service levels comparable to terrestrial communications, with the ability to scale up to 2 Mbps. Elara is providing service over a two-year period with future plans to support such offerings as IPTV, virtual private network (VPN) access, hotspot Wi-Fi connectivity and fixed and mobile voice services.

Delivering connectivity to such remote regions meant that the logistics of the installations were among the most complicated tasks in setting up the networks.

Each site was identified on a shared map. Sites were also classified in accordance with the municipality, thus identifying routes for the allocation of sites. Elara had a total of 91 work groups situated throughout the region, up from the original plan of 59 work groups. An additional 13 suppliers were integrated into the project as well.

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Jorge Villarreal, CEO of Elara



Fit for All Configurations

Delivering Internet satellite connectivity services to these sites, many of which are located in remote or marginal communities across the country, is made possible by the use of two satellites (Amazonas2 and Satmex8).

Overall, the 2,717 sites were each set up by Elara using one of two different types of configurations. Type "A" configurations deliver connectivity inside a property through an indoor Wi-Fi access point and four RJ45 10/100Mbps Ethernet ports. Type "B" configurations use the same set-up, but also require outdoor Wi-Fi for the entire community, which is provided through an access point with an omni-directional antenna.

iDirect's Evolution® remote portfolio offers the ideal choice for each type of configuration that was desired by Elara. The Evolution X1 Satellite Router was used for type "A" configurations. Its reliable, high-speed IP connectivity for large, narrowband networks, coupled with DVB-S2/ACM, Adaptive TDMA, geo-redundancy, VLAN functionality and optional AES encryption, made it a cost-effective option for making the connection.

For type "B" configurations, Elara chose the Evolution X3 Satellite Router. According to Elara, the group QoS featured within the Evolution Platform helps support the advanced service-level requirements of citizens in these regions. Advanced traffic prioritization dynamically balances the demands of different applications based on need and bandwidth availability. This occurs across multiple sites, ideal for use in the type "B" configurations set up by Elara.

Terrestrial integration is made easier with the X1 and X3 remotes, as an integrated satellite modem and router with Ethernet interface, combined with a native IP architecture, ensure easy integration of satellite-delivered connectivity into almost any data network.

"iDirect group QoS capabilities assure all sites are ready to support not only internet access but other kind of services like VoIP and Video. This will benefit the communities because the infrastructure installed on every site will be ready for a seamless implementation of such services," Marvin Salas, Infrastructure Manager from Elara, says.



The Evolution X1 Satellite Router was used for type "A" configurations

Type "B" configurations used Evolution X3 Satellite Router.

The Payoff

Elara Comunicaciones discovered long ago that satellite would play a major role in delivering efficient communications to key portions of its coverage area. Knowing where the market demands were headed, the company formed critical partnerships with market-leading companies like iDirect to ensure that satellite was part of its portfolio of offerings.

During the operating phase of the 10K project, Elara Comunicaciones was awarded a 20% extension of the project, increasing the total number of areas for connection from 2,717 to 3,200. The use of VSAT in delivering a quality connection under such an accelerated timeframe was a contributing factor to the extension.

Implementation was completed in 2013 with 3,200 sites connected using VSAT. Elara Comunicaciones is in the process of renewing the contract through 2017, during which time it will continue working closely with iDirect.

And above all else, the future looks bright for citizens of the 3,200 towns in rural southeastern Mexico who now can tap into the power of a connected world.

10K project by the numbers

- ◆ Initial implementation was completed in 2013 with 2,717 sites
- ◆ Awarded a 20% extension on the project
- ◆ Increased area of connection from 2,717 to 3,200 sites
- ◆ Connecting schools, health centers, and libraries



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