



ADC's Fiber Management Solutions Accelerate EATEL's All-Fiber Network

CASE STUDY

Background

Back in 1935, in the southern Louisiana town of Gonzales, a small, privately-owned company began to offer telephone service to local residents and businesses. As was the case with a lot of other independent telephone companies in the United States, the mission of Gonzales Telephone Exchange was to make sure that people living and working outside of big cities could get phone service too. In its first year of operations, the company served 47 subscribers.

That customer base has grown significantly larger over the years, and the company's service portfolio and network have grown right along with it. In 1950, Gonzales Telephone Exchange Co. changed its name to East Ascension Telephone Company and later organized its operations under the resulting acronym, EATEL Corp. Today EATEL is a telecommunications company which provides voice, data and video services to more than 35,000 customers in Ascension and lower Livingston Parishes, located between Baton Rouge and New Orleans.



All-Fiber Company Stands Out in a Crowd

In 2004, EATEL, which employs about 300 people, began to build what it calls "FiberEdge," one of the most advanced fiber-to-the-home (FTTH) networks in the nation. At an estimated cost of \$54 million, that network is the cornerstone of EATEL's strategy for setting itself apart in an increasingly competitive marketplace. Although many service providers around the nation are putting in fiber networks, at least to the neighborhood and some all the way to the premise, EATEL has opted for an all-fiber strategy. In other words, it is not only putting fiber in new serving areas but overbuilding its existing copper-based areas with fiber as well. Pete Rodriguez, EATEL's outside plant engineering and construction manager, says there are two reasons for that strategy. "Our main objective was to find a cost-effective way to provide triple-play services. We wanted a network that is easily expandable and yet maintenance-friendly." Secondly, EATEL operates from a long-term perspective, in terms of services, technology and competition. "We felt that fiber would put us in the position to meet the changing needs of the marketplace," Rodriguez says. "We wanted to put a network out there that is robust enough to offer the services of the future."



EATEL uses the NGF frame to terminate, route and protect fiber in their central offices.

With the majority of the construction now completed in mid-2008, EATEL delivers triple-play services to each of its residential and business subscribers over a single high-bandwidth fiber-optic link. However, the company is determined to meet the competition with more than technology; in 2004, EATEL also obtained a cable TV franchise from Ascension Parish and the following year began transmitting video services to subscribers via its new all-fiber-optic network.

How Do We Manage All That Fiber?

For any service provider of any size, transforming its infrastructure from copper facilities to fiber presents enormous cable-management challenges. The large amounts of fiber associated with an FTTH deployment make these challenges even tougher. Rodriguez says EATEL had some prior experience with cable management, primarily because the company has deployed fiber for its interoffice connections. However, the scale and complexity of the FTTH network took the cable-management issues to a whole new level.



ADC's FDH 3000 Cross-Connect Cabinet effectively manages and protects EATEL's OSP fibers.

"We had to come up with some way of terminating the fiber into the cross boxes and also on the frames in our central offices--and we had to come up with effective ways to manage it," he says. So, Rodriguez and his colleagues began their research by touring the central offices of a few service providers that already had begun to deploy FTTH infrastructures. "We were able to identify early on some of the challenges. We looked at some of the early cross boxes being deployed and the way they addressed those issues. We liked some of the things we saw, but we didn't like other aspects."

One thing that EATEL managers did not like was the fact that some solutions they saw did not have an adequate way to manage all the fibers in the field. "What they tended to do," Rodriguez says, "was to have the pigtail end of the distribution fiber just hanging loose in the cabinet. There was no way to organize them for adds, moves and changes. It was necessary to add the splitter into the box and then manage your fibers toward the splitters." EATEL wanted a solution that allowed the company to manage fiber on its distribution facilities "and then just do a plug-in from the splitters as we add service to the customer."

When researching the cable-management solutions available in the marketplace, EATEL sought products that fit not only the company's capital- and operating-expenditure (capex/opex) budgets but also technicians' hands. With so many cables, patch cords and terminations in an FTTH deployment, the possibility of erroneous cross-connections during service adds/moves/changes--the kind that disrupt customer service—is a big worry, as Rodriguez saw in other service-provider deployments. Therefore EATEL wanted equipment that is easy to use, clearly labeled and readily accessible to central-office and field technicians.

An Organized, Modular Solution

The company's research led EATEL managers to select a broad range of ADC cable-management products:

- the Next-Generation Frame (NGF) fiber-distribution frame, with mini Value-Added Modules (VAM's) that incorporate optical splitters for circuit monitoring and video distributing, along with wave division multiplexing capabilities to increase the transmission capacity over existing fiber lines;
- FPL series patch panels; for termination, storage and splice options that optimize rack space.
- the FiberGuide® optical raceway system to protect and route patch cords and multifiber cable assemblies between network elements and distribution frame areas; and
- the OmniReach® FDH 3000 cross-connect for fast connections between cables and passive optical splitters.

"We'd done studies across the board, in terms of other companies' product lines, and we felt that ADC was cost-competitive from a capex standpoint," Rodriguez says. "From an opex standpoint, we had our technicians do hands-on tests. ADC and other vendors allowed us to actually bring the items in-house to see what worked best. We liked the small form factor ADC came out with, how easily accessible it is for our technicians, both in the field and in the central offices, how ADC labels its equipment, making it easy to find just what you're looking for."

The Benefits Are Easy to Obtain

As EATEL moves into the next phase of its FiberEdge network construction, Rodriguez says the company continues to benefit from the ADC cable-management solution. He and his colleagues particularly like the modular organization of the solution, "its ability to adapt and grow as our needs grow. We also like ADC's continued willingness to adapt its products to our particular needs."

For example, Louisiana is known for its swampy areas and relatively high water tables. EATEL's technicians are understandably leery about doing splices through hand holes--doing so could mean reaching into a snake pit. So, they do their splicing inside the FDH 3000 cross boxes. Rodriguez says ADC put a panel on the outside of the cross boxes, one that "allows the cable locators to isolate the different cables without entering the box itself thus limiting access to the distribution cables and splitters and eliminating potential service interruptions."

EATEL technicians also have told Rodriguez they like the plug-and-play application of the FDH 3000. "It allows them to establish our feeder distribution upfront," he says, "and for the technicians to come in and quickly deploy new splitter facilities as growth dictates."

The fact that ADC is willing to lend some installation expertise when EATEL needs it is another benefit for EATEL as the network buildout continues. "Anytime ADC has a new product, they've been willing to bring in one of their experts and actually walk us through the installation," Rodriguez says. "We've found that once they've walked us through it, our guys were able to catch on fairly rapidly and had no problems with doing subsequent installations."



FiberGuide® Raceway securely routes and protects EATEL's valuable fibers

CASE STUDY



Website: www.adc.com

From North America, Call Toll Free: 1-800-366-3891 • Outside of North America: +1-952-938-8080

Fax: +1-952-917-3237 • For a listing of ADC's global sales office locations, please refer to our website.

ADC Telecommunications, Inc., P.O. Box 1101, Minneapolis, Minnesota USA 55440-1101

Specifications published here are current as of the date of publication of this document. Because we are continuously improving our products, ADC reserves the right to change specifications without prior notice. At any time, you may verify product specifications by contacting our headquarters office in Minneapolis. ADC Telecommunications, Inc. views its patent portfolio as an important corporate asset and vigorously enforces its patents. Products or features contained herein may be covered by one or more U.S. or foreign patents. An Equal Opportunity Employer

106514AE 6/08 Original © 2008 ADC Telecommunications, Inc. All Rights Reserved