Maine Fiber

Smart Grid solution offers precise GIS capabilities and flexibility

PROJECT AT A GLANCE

Project Type
Operational fiber optic solutions

Location
Portland, Maine

Miles of Fiber Optic Network
1,100

Applications
Offering the unique ability to trace the communications network from the fiber patch panel through the fiber

Solution Implemented
ArcFM Fiber Manager

CUSTOMER BENEFITS

- Efficient communication, planning and reporting
- Quickly and accurately provide estimates on distance and cost
- More accurate and efficient network management

The Maine Fiber Company is a telecommunications provider based in Portland, Maine. The company was formed to oversee the construction, leasing and maintenance of a 1,100-mile high-capacity fiber optic network being built in the state of Maine.

Unlike most companies that operate fiber optic networks, Maine Fiber is a dark fiber provider, not a lit service provider. Its customers are telecomm service providers in the state of Maine that use the network as the backbone for the lit services they provide to individuals – who are the actual end users.

The network was launched with the backing of a group of private investors and a matching economic stimulus grant from the federal government. Maine Fiber began using ArcFM™ Fiber Manager and ArcFM Viewer in September 2011.

Challenges

With customers ranging from the New Hampshire border to Canada, and a relatively unique business model as a dark fiber provider, Maine Fiber faced a complex and challenging undertaking. “We started from scratch,” said Dewey Allison, vice president of Maine Fiber. “As we began to lay our first 5-mile segment of fiber optic cable, we quickly realized it was going to be a big task for us to keep

> "The specifications that we want out of this system and out of our network in general are very high but ArcFM Fiber Manager has more than met our expectations."
> Dewey Allison, vice president, Maine Fiber

track of who our customers were, which fibers were being used, and how to most efficiently use the fibers we had available."

For the company's first attempt at tracking the network, it utilized free, web-based, non-GIS map programs to model the routes cables. Distances could only be approximated to provide a rough estimate of what it would cost for a customer to lease cable from point A to point B. This method was time-consuming and far from precise.

"When we tried to map those fibers on our own, we almost immediately arrived at the conclusion that it was going to be nearly impossible. We needed an advanced solution that could help guide us as we grew," Allison said.

Solution

Maine Fiber needed to find a tool that would not only track the construction of the fiber network and the availability of strands for customer use, but also provide the flexibility and power to serve additional uses in the future.

After evaluating several fiber optic infrastructure management systems through a competitive bid process, Maine Fiber chose Schneider Electric's ArcFM Fiber Manager.

"Of all the options we considered, ArcFM Fiber Manager provided the most flexibility and the best out-of-the-box solutions," Allison explained. "The functionality of the software provides much more than we expected it would. It can capture greater detail and data than we even realized we'd have available to us."

Onsite support from Schneider Electric was crucial in helping Maine Fiber tailor the ArcFM Fiber Manager installation to its specific needs. Schneider Electric provided strategic guidance and preemptively addressed potential issues by meeting with Maine Fiber's managers every three weeks to review the implementation progress. "The relationship formed during those weeks was phenomenal," said Allison. "They understood what we were trying to accomplish and went above and beyond to leave things in the best possible shape."

The Bottom Line

As a dark fiber provider, Maine Fiber charges customers per leased strand mile, requiring the Maine Fiber staff to provide customers with estimates of lease costs on a monthly and yearly basis. ArcFM Fiber Manager allows the company to provide quotes much more accurately and easily.

As Allison explains, "We decided to see just how accurate ArcFM Fiber Manager's GIS data was at tracking the length and position of the cable we'd already installed. When we ran the numbers for a 75-mile segment of cable, we found that the difference between the system report and the field test was only 200 feet. Over a 75-mile segment of fiber optic cable, that's an error of less than one half of one percent, which is outstanding. Now we're able to confidently use ArcFM Fiber Manager to quickly and accurately provide estimates on distance and cost without field testing, which is critical to our business model."

Fiber Manager's intuitive visual interface and precise GIS capabilities are also assisting Maine Fiber in tracking and mapping the existing fiber optic cable already installed. Furthermore, as Maine Fiber continues to build its network, add customers and lease segments of the network, ArcFM Fiber Manager will provide a dynamic tool to model, manage and optimize the addition of thousands of different splice points and connections.

With approximately 600 miles of the 1,100 mile network already installed and about 90 percent of the finished network cables entered into the ArcFM Fiber Manager system, Maine Fiber is still in the implementation phase but the company now has a platform with the power and flexibility to grow with its business and adapt to new uses.

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