

Fiber – To Ensure Healthy Connectivity

Choose your precise fiber deployment technology to fit your specific needs – and watch the details to really save money.

By Cheri Beranek Podzimek ■ APACN CEO

Just as your personal daily dose of fiber is your key to a long and healthy future, broadband service providers are finding that fiber is the foundation for the long-term health of our connectivity future. Up until now, the “dose” of fiber technology we’ve become accustomed to has taken us partway to the home but has relied on copper as a supplement. Today, the demand for all-fiber triple play products and services (telephone, broadband Internet, and television) is the driving force for developing and deploying fiber to the home (FTTH).

Fiber is a preventive measure for warding off problems one cannot foresee in the future. By taking fiber to the home and upgrading aging copper plants that have limited bandwidth carrying capacity, it’s possible to meet growing demand while eliminating the requirement for further construction in the future. This train of thought drove SureWest Communications and Alma Communications to be among the first to successfully implement FTTH.

SureWest’s Active Solution

SureWest, a recognized technology leader, provides local telephone, directory advertising, long distance, Internet, wireless, digital TV and commercial high-speed data services in the greater Sacramento region. With approximately 147,000 total access lines, SureWest is the seventh largest public Rural Local Exchange Carrier (RLEC) in the US. By contrast, Alma Commu-

nications, with 350 access lines and a single exchange in central Missouri, is one of the smallest RLECs to deploy fiber to the home. Although they differ in scope and have deployed different FTTH architectures, these two independent telephone companies have addressed many of the same obstacles and learned many of the same lessons.

In 2002, SureWest, which previously operated as Roseville Telephone, acquired Western Integrated Networks Fiber (WINFirst). WINFirst had spent over \$200 million on building out its network, deploying 300 miles of fiber to pass 48,000 homes, instantly creating the most fiber-rich LEC network in the nation.

Operating as a CLEC within the WINFirst territories, SureWest set out to deliver triple play services. Fiber was already laid, but SureWest needed to access and use the installed fiber. Because the fiber was already there, SureWest did not have to absorb all of the labor costs associated with plowing in fiber, so it immediately had an advantage. As a result, SureWest placed a high priority on future-proofing its network to accommodate future bandwidth requirements. It evaluated both a PON as well as an active network, choosing active solutions from a range of vendors including Allied Telesis, Cisco and Occam Networks.

After choosing the electronics, SureWest addressed the challenge of how to deploy and manage the fiber in the field. Because it would require fiber management in both its central office and

the active cabinets in the field, SureWest needed a fiber management supplier that could accommodate this requirement and provide a solution ensuring fiber access, fiber protection and ongoing reliability in the controlled environment of the central office as well as the sometimes harsh environment of the outside plant.

Matching Capex to Revenue

In addition, SureWest was looking for maximum scalability and flexibility at a cost per customer that made sense. Crucial to its selection process was a platform that would allow it to pace capital equipment deployment at the rate it was turning on revenue-generating units.

Scott Barber, vice president of network operations at SureWest, explains: “We needed a product that was scalable. We had limited funds to invest up front, so the hardware needed to expand at the same pace as our customer base.”

APACN was chosen for the first rounds of deployment, dating back to 2002 and 2003. Using fiber management panels of the APACN Fiber Distribution System (FDS) platform, SureWest was able to deploy a cross-connect fiber management scheme that built the foundation for its network. The core building block of the APACN FDS is the 144-port panel. This panel uses a six-inch footprint on a standard 23-inch frame. In a patch-only configuration, the mainframe supports twelve high-density modules for a 1728-port solution.

