

# Independent Telcos and FTTH

Our monthly summary of news of special interest to independent telephone companies

By Masha Zager ■ *Contributing Editor*

## News Roundup February 2006

**LaHarpe Telephone** (620-496-2291), in La Harpe, Kansas, is upgrading to a 100% fiber-to-the-home network, and plans to deliver triple-play voice, data and video to its widely dispersed customer base of about 500. LaHarpe has replaced its legacy Class 5 switching system with CopperCom's Converged Switching eXchange switch, and is installing a GPON fiber-to-the-home gateway from Calix.

**North Dakota Telephone Company** ([www.ndtel.com](http://www.ndtel.com)) in Devils Lake, North Dakota, is beginning a two-year program to bring high-speed broadband and telephone service to homes and business in Devils Lake and surrounding subdivisions via FTTP. The company has selected Allied Telesyn's integrated multiservice access platform and intelligent multiservice gateways, as well as APA Cables & Networks' fiber management and distribution solutions.

**Parker FiberNet** ([www.parkerfibernet.com](http://www.parkerfibernet.com)), a CLEC in Summerville, Georgia, is using Terawave Passive Optical Networking (PON) solutions to provide voice, data, and private line services to business customers in and around Athens, Georgia.

**Paxio** ([www.paxio.com](http://www.paxio.com)) and Pulte Homes Northern California have added Rose Garden, in the city of Brentwood, to their list of all-FTTH communities. Rose Garden follows three other Bay Area developments that Paxio has wired with fiber optic connections.

Paxio, a CLEC based in Anaheim, California, will provide voice and data services over the new network.

**Sigecom** ([www.sigecom.com](http://www.sigecom.com)), a CLEC in Evansville, Indiana that provides triple-play services over FTTP, has deployed Terawave's

broadband passive optical networking (BPON) optical access systems to provide Ethernet and DS1 services to small- and medium-sized businesses throughout its region. Sigecom's fiber-optic based network is available to more than 88,000 businesses and homes in greater Evansville and Newburgh. Sigecom is a joint venture between a telecommunications company and an electric and gas utility.

### Skyline Membership Corporation

([www.skyline.org](http://www.skyline.org)), a telephone cooperative in West Jefferson, North Carolina, is installing an FTTH solution consisting of Allied Telesyn's iMAP integrated Multiservice Access Platform and iMG intelligent Multiservice Gateway interoperating with Nortel's DMS-10. This new FTTH infrastructure will enable SkyLine to offer advanced IP video, in addition to a variety of voice and high-speed data services, to its largely residential subscriber base.

**Twin Valley Telephone** ([www.twinvalley.net](http://www.twinvalley.net)) of Miltonvale, Kansas, is acquiring 13 local exchanges from **Sprint**, which is spinning off its local telephone business. TVT will be upgrading much of the acquired plant to FTTH over the next three years, using both active Ethernet and passive GEAPON protocols. The company has chosen Allied Telesyn's iMAP integrated multiservice access platform to bring converged voice, video, and data service to more than 6,400 subscribers. The fiber infrastructure will replace an aging copper plant and its legacy air-core cabling.

**Yucca Telecom** ([www.rcrtc.com](http://www.rcrtc.com)), a telephone cooperative in Portales, New Mexico, has begun construction of a network that will make FTTP available to every household and business in Portales, a town of 11,000. The FTTP



# VENDOR SPOTLIGHT

- Allied Telesyn: ..... [www.alliedtelesyn.com](http://www.alliedtelesyn.com)
- Alloptic: ..... [www.alloptic.com](http://www.alloptic.com)
- APA Cables & Networks: ..... [www.apacn.com](http://www.apacn.com)
- Calix: ..... [www.calix.com](http://www.calix.com)
- CopperCom: ..... [www.coppercom.com](http://www.coppercom.com)
- Nortel Networks: ..... [www.nortel.com](http://www.nortel.com)
- Terawave Communications: ..... [www.terawave.com](http://www.terawave.com)

infrastructure, financed by a USDA Rural Development Broadband loan, will deliver voice and Internet to Portales residents this year; television services are planned for the future. The company, an ILEC, is overbuilding its own copper plant; customers will have the option of keeping their existing phone service or converting to fiber.

**Metro Ethernet Forum Certifies Telco Systems' T-Metro Ethernet**

**Foxboro, MA** – Telco Systems says its T-Metro Metro Ethernet access platform has been certified MEF 9 compliant by the Metro Ethernet Forum (MEF). The test was designed to streamline conformance testing for network operators seeking reliable Ethernet services for their user communities, and ensures 99.999 percent reliability.

The T-Metro can work as an edge device that interconnects with both a traditional PSTN TDM circuit-

switched network and an IP/MPLS core network, or as an integral part of the MPLS network. It supports a wide variety of interfaces that include both copper and fiber-based fast Ethernet, Gigabit Ethernet and T1/E1 Circuit Emulation interfaces. See [www.telco.com](http://www.telco.com) for more details.

There's an MPLS boom, thanks to VoIP and IPTV. MPLS-based metro Ethernet equipment investment doubled worldwide last year, according to a new report from Infonetics Research. The number of carriers investing in MPLS-based metro Ethernet equipment doubled last year, from 42 percent to 84 percent of companies Infonetics surveyed.

Infonetics says cellular base station backhaul has emerged as one of the hottest areas of investment. More than half of the carriers surveyed over some kind of mobile voice and data services, with 73 percent of those planning to build their own backhaul networks.

Columbus Telephone Company:

# Small Telco, Big Plans

CTC went fiber with only about 1,000 customers; jobs followed

By Masha Zager ■ *Contributing Editor*

At Columbus Telephone Company in Columbus, Kansas, general manager Jim Dahmen follows Andrew Carnegie's theory of management: Putting all his eggs into one basket and watching the basket very closely. With one of the smallest footprints of any U.S. telco – 2.4 square miles – the company can't afford to hedge its bets.

Right now, the basket holding all of CTC's eggs is an ambitious fiber-to-the-premises project that Dahmen hopes will draw new residents and businesses into the company's service area, a town of 3,000 in east Kansas soybean country. CTC has just completed a two-year effort to replace its entire copper and coax plant with buried fiber optic cable. Customers are being switched over to the new voice, video, and Internet services.

The new cable TV service offers more than 90 channels, compared to 40 for the old coax system, which CTC purchased from the municipality a few years ago. Signal quality has improved dramatically. Internet service, which previously topped out at 512 kbps, is now available up to 2 Mbps downstream/1 Mbps upstream. By the end of the year, Dahmen expects nearly all dialup Internet customers to have converted to broadband.

A cooperative company, CTC financed the plant replacement mainly from internal funds, along with a small amount of local bank financing. "We don't like debt," Dahmen says firmly, adding that he investigated RUS financing but decided it would delay the project. To implement FTTP, the company selected



*Columbus Telephone's service area is compact - only 2.5 square miles and about 1,000 premises.*

Wave7 electronics and a CopperCom softswitch for total ePON connectivity.

In choosing and deploying FTTP, CTC addressed the community's future needs rather than seeking to minimize current costs. The cable television system, which was obsolete, could have been upgraded for considerably less than the cost of FTTP, but the upgrade would have provided only a short-term fix. "In five or ten years, we'd be right back asking the same questions," Dahmen says. Fiber, on the other hand, can accommodate the community's needs for the foreseeable future.

Similarly, the low-cost solution would have been to string fiber cables along the town's utility poles, where the copper

phone wires once ran. However, CTC invested an extra half million dollars to bury the fiber under city streets, using an expensive directional-boring technique. Trenching, which is less expensive, would have been too disruptive.

Some of the additional costs should be recouped by lower maintenance, since underground cables won't be vulnerable to the winds, ice, and sleet that occasionally knocked out the aerial cables. The quality of service should also improve if cables aren't affected by winter weather. But even if Columbus is never hit by another ice storm, Dahmen says burying cables underground is the right solution. Fiber optic cables are large and unsightly, he says, adding that "we are making



MONTHLY CHARGE	RESIDENTAL	BUSINESS
1 MEGABIT DOWNLOAD/ 256K UPLOAD	\$30	\$35
2 MEGABIT DOWNLOAD/ 512K UPLOAD	\$45	\$55
2 MEGABIT DOWNLOAD /1.0M UPLOAD	\$75	\$95
2 MEGABIT DOWNLOAD/ 1.5M UPLOAD	\$100	\$195
<b>10% discount when combined with a FiberVision package:</b>		
53 channels	\$28	
80 channels	\$43	

*The fee for minimal broadband and cable would be about \$55 with discount; the most expensive home combo would be under \$140. The system is capable of much more bandwidth..*

extra efforts to make our community aesthetically attractive to businesses and residents who may be looking for a new place to reside.”

### Attracting New Business

CTC’s involvement with Columbus’s development is nothing new. When Dahmen arrived at the company 20 years ago, he had already had a long career as an economic development administrator, and he brought the development mindset with him. He serves as both the secretary of the Columbus Economic Development Corporation and the chair of a community improvement group. Because, Dahmen says, the health of the cooperative is closely intertwined with the health of the community connected, he has involved CTC in promoting the town’s retail, industrial, cultural, and residential development.

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Recently, Columbus suffered a serious blow when two major employers, an automotive aftermarket plant and a personal-aircraft plant, shut their doors, victims to international competition and regulatory changes. Dahmen and other advocates are trying to interest other employers in the community, citing the available labor force, unused manufacturing space, attractive residential areas,

local educational institutions, and, of course, the newly upgraded communications infrastructure.

A manufacturing company is currently negotiating to move 400 jobs into Columbus, and Dahmen says the new fiber infrastructure was a factor in the decision. The manufacturer depends on broadband Internet access to receive large engineering files from customers. Even more important, its managers were impressed by Columbus’s commitment to supporting its business sector with investments in cutting-edge technology.

Dahmen and his staff at CTC are also working with the town’s retail merchants to take advantage of their broadband capacity. In addition to marketing vacant retail stores as prime e-commerce locations, they have sponsored training sessions where retailers learn to use online auction sites like eBay and Overstock.com. Dahmen cites the example of a local merchant who was able to sell 50 excess poultry-lacing kits to a buyer in Sitka, Alaska.

“This opens up the entire world to the small-town retailer, craftsman, or entrepreneur,” he says. **BBP**

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### About the Author

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