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TELECOMMUNICATIONS GUIDE

Telcos Help Individuals, Businesses with 'Fiber to the Home'

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Staying ahead of the curve, "future-proofing" – whatever you call preparing for the future – many **Minnesota Telecom Alliance** member companies are looking ahead by installing fiber optic cables all the way to their customers' homes. While some telcos are definitely ahead of the curve on fiber to the home, the technology is only a means, not the end. The real point of fiber to the home is supplying customers with the modern products they want and need, and giving individuals and businesses the communications tools that are essential for competing in today's increasingly interconnected world.

Why now?

Fiber optic, whose cables contain thousands of glass "wires" that use light to simultaneously transmit voice, data and video – the "big three" – is not all that new. Telcos have installed fiber for decades because it carries far more information than the copper wires it replaces and because fiber is less affected by distance. But most telcos have installed fiber to "nodes" (switches in cabinets) that serve a particular area because it's expensive to replace cables of any kind and to connect fiber to every home and building, especially in rural areas with far fewer customers per square mile. It's also expensive to "abandon" copper wire that still has useful service life.

Recent technological developments have made it easier to take fiber the "last mile" to the home. But customer needs and competition are also big drivers in the adoption of fiber to the home. "The technology was not available to the home when we put

fiber to the node in the late '90s," says Tony Mayer, general manager of West Central Telephone Association, a Sebeka-based telco with a mostly rural service area covering approximately 600 square miles.

"But it's the natural next step to prepare for the future and for competition, especially when it comes to video," he adds. "We also don't know what the next big technology will be but we still need to be prepared for it. If we have fiber to the home, we can compete with whatever comes, whether it's wired or wireless."

West Central, which has begun extending fiber to the home, hopes to finish its entire service area in three to four years. The change will allow West Central to add video and faster Internet to the voice and high-speed data (including Internet service) it now offers, Mayer says.

As a cooperative, West Central returns anything beyond expenses to its 4,000 members or invests it back in the company. Mayer says the co-op's original fiber "rebuild" was financed with a USDA loan from its Rural Utilities Service. The decision to deploy fiber to the home, which was financed internally, happened because, as Mayer notes, "In rural areas, telcos tend to be the leaders in development."

John Lass, vice president of the central region (eight Midwestern states) for Frontier, which is based in Burnsville and owned by Citizen Communications Co. of Stamford, Conn., says his company hopes to complete some fiber-to-the-home projects in Minnesota by year-end.

Frontier already offers the big three (voice, data and video) to its customers in 161 Minnesota communities, but Lass says the company will make the change because installation and equipment costs have dropped and because customers want increased bandwidth and the products it makes possible. Among the communities that Frontier serves are Burnsville, Apple Valley, Lakeville and Rosemount, a sampling of the state communities Frontier serves includes Mound, Worthington, Byron, International Falls, Jordan and Wheaton.

Three other stories

Two other cooperatives have fiber-to-the-home stories, as do exchanges in Monticello and Winsted operated by TDS Telecom of Madison, Wis., which has over 100 telcos in 29 states, including companies in New London and Pequot Lakes.

Federated Telephone Cooperative – Federated, based in Chokio, started installing fiber to the home in 1997. While its original trial funded by an RUS loan didn't succeed, replacement equipment worked and the co-op has self-funded projects since 2000, according to general manager Kevin Beyer. Seven of the co-op's 10 communities have fiber to the home and the last rural home in Federated's service area should expect to be connected by 2010.

With a lot of copper that needed replacing and the difficulty of changing batteries at 62 nodes in a power outage after a big snowstorm, Federated decided fiber to the home was economically feasible. It also helped that fiber allows new-service activation without a visit by a company employee. The co-op expects to recoup costs for the new fiber in each community in just 10 years.

For Beyer, fiber's much greater bandwidth allows Federated to offer cable TV and bundled services for the first time. "We're already seeing cases with DSL (copper from the node) where there's not enough bandwidth for some customers," he says. In Federated's competitive local exchange operation in Morris, Beyer says he's received many thanks from businesses when they learn how easily and quickly they can add bandwidth.

Gardonville Cooperative Telephone Association – This Brandon-based co-op will complete its first fiber-to-the-home project to 40 city and 40 rural homes by the end of May using its own funds. "Fiber to the home offers far more capacity than copper and copper prices are up substantially," says Dave Wolf, Gardonville's manager, in explaining why his co-op adopted the technology. "It's also difficult to extend copper far into rural areas and still do broadband."

In Douglas County, the second-fastest growing county in the state because so many retirees are building new lake homes, Wolf says his co-op will wire new residential areas with a copper/fiber composite that allows easy activation of Internet and video when customers request the services. "All this new technology future-proofs us," he notes. "We have competition for every product we sell, but now we can stay up with or even ahead of things. If someone needs a 20-megabyte 'pipe,' we can do it."

Bridgewater Telephone Company (Monticello) and Winsted Telephone Company – Bridgewater offers fiber to the home in three Monticello neighborhoods, with seven "greenfields" (new developments) scheduled to receive it, too. A new 237-unit single-family development in Winsted gets the capability this spring. "Brownfields" (existing

neighborhoods) also receive consideration for fiber. "Anytime you're replacing copper, the first question you ask is whether to use fiber, especially when it's a big job," says Tom Ollig, marketing manager for the two companies.

The companies are doing fiber to the home as part of a TDS national strategy. "When do you get on the train?" is always the technology question," states Geoffrey Langlois, TDS' network architect. "The cost model needs to work and you need reliable equipment provided by reliable suppliers, as well as an understanding of what customers want. If you're smart, you get ahead so you're ready when 'blossom time' comes." High-speed Internet video, which TDS has in trials elsewhere, is one big reason the company is moving to fiber to the home.

Ollig says that TDS doesn't do fiber to the home just for the sake of it. "We provide services and solutions that customers need," he explains. "But developers are pleased when they hear we're doing it because that gives them an advantage when selling their new homes."

Giving people what they want while future-proofing: It seems to make sense on lots of levels.

Minnesota Telecom Alliance is a not-for-profit professional association representing more than 95 small, medium and large telecommunication companies providing voice, data, wireless, and high-speed broadband services to Minnesota's metropolitan and rural communities. More information about MTA can be found on the Internet at www.mnta.org