

## Michigan's Allband Communications Cooperative:

# Fiber to All the Homes

This rural ILEC leveraged an RUS loan and state aid to serve 177 square miles

By Masha Zager ■ *Contributing Editor*

For a brand-new company, Allband Communications Cooperative has already racked up an impressive string of firsts: First provider to bring telephone and Internet service to its Northern Michigan service area; first new telephone cooperative formed in decades; first telecommunications company whose business plan was developed as a graduate school class exercise.

Allband also seems poised to become the first ILEC to install fiber to the home throughout its entire service area.

Granted, Allband doesn't have a lot of customers to serve – its subscribers, mostly households and hunt clubs, will number only about 300. But its service area stretches over an impressive 177 square miles. This heavily forested area, previously one of about 30 unserved territories in Michigan, contains isolated houses but no towns, and Verizon, whose service area surrounds it, had always refused to extend phone lines into it.

Allband is the brainchild of John Reigle, a local resident who now serves as the company's president, and Ron Choura, a telecommunications professor at Michigan State University. When Reigle built a house in the area in 1998, he was distressed to learn that GTE, Verizon's precursor in the state, would not provide him with telephone service. He filed a complaint with the Michigan Public Service Commission, saying that he had relied on GTE's assurance of service before he built the house.

Michigan prohibits utilities from being forced to provide service. MPSC couldn't or wouldn't force GTE to pro-



*Celebrating the RUS funds. From left to right: Ron Siegel, Operations Manager, Allband Communications Cooperative; Dale Sherwin, State of Michigan Director, USDA Rural Development; Paul Hartman, General Manager, Allband; Jerry McBride, Secretary, Allband; Ron Choura, Michigan State University Department of Telecommunication, Information Studies and Media; John Reigle, President, Allband; Curtis Anderson, Program Director, USDA Rural Development (in D.C.); Allyn Kaercher, Board Member, Allband Communications Cooperative; Tom Muth, Michigan State University Department of Telecommunication, Information Studies, and Media; Vivian Kus, Treasurer, Allband; Bob Hastings, Vice President, Allband.*

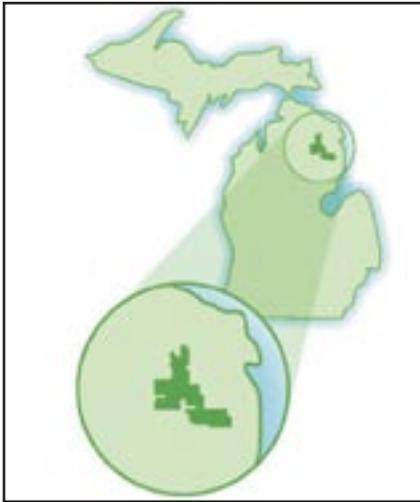
vide Reigle with phone service, even though an ordinary company's assurance would be a binding contract under the Uniform Commercial Code. But it put him in touch with Ron Choura at Michigan State. Choura said he would teach Reigle how to start his own telephone company. Neither of them expected that getting the company up and running would take seven years.

Reigle began taking classes with Choura, commuting several hours each way

to East Lansing and learning the basics of telecommunications management. Over the next few semesters, he and his classmates put together a business plan for a new telephone company. The plan predicted that the company could be cash positive within three years of starting operations.

### Finding the Funds

Choura and the MSU telecommunications department remained involved



*Allband's service area.*

with Allband during its long journey from business plan to operating company. Seed capital came from part of a \$212 thousand state economic development grant to MSU (see box). Choura helped Reigle set up the company, educate board members, obtain state and federal licenses, select infrastructure, and recruit the general manager, Paul Hartman, and operations manager, Ron Siegel (Siegel is a former graduate student of Choura's).

The process proved long and arduous, in large part because laws, regulations, and financial institutions all assume that any new telephone company will be a CLEC rather than an ILEC. At every step of the way, Allband had to obtain a waiver or exception from normal procedures.

In October, 2005, all the pieces were in place – licenses, approvals, and, most important, up to \$8 million in loans and interim financing from the Rural Utilities Service Rural Development– and construction began on the infrastructure, starting with the central office and the cable to the proposed interconnection point. By the end of this year, between 20 and 30 subscribers will be connected to the system, and to the outside world. The cold Michigan winter may slow down or even halt construction for several months, but by next spring or summer, the remaining infrastructure will be installed and the rest of the subscribers added to the system.

As far back as 1999, they selected fiber to the home as the preferred infrastructure. Part of the reason was cost: Because there was no existing infrastructure of any kind, fiber was (and is) the least expensive way to provide subscribers with high-quality telephone, broadband, and video services. Any other solution would have required installing both copper and cable.

The working group calculated that with FTTH, for an investment of about \$3000 per home, Allband could provide triple-play services with Internet speeds of 1.5 or 2 Mbps, and could charge customers between \$70 and \$100 per month. (In fact, the initial offering will consist only of telephone and Internet service; video won't be added until after all subscribers have been connected, probably in 2007.)

Maintenance costs will be lower with fiber, too, because cables are being buried four feet below ground, with no protruding pedestals for snowmobilers to collide with.

Another reason for selecting FTTH was that it offered possibilities for economic development. Without telephone service, operating a business in the Allband area was impossible. "Even the Amish up here have phones," Reigle says.

With telephone service and ultra-high-speed Internet access, the area should become attractive for home-based businesses. A radiologist, for example, has expressed interest in moving to the area and reading X-ray films from home. The area might also become attractive for communications-intensive businesses such as call centers.

Thus, FTTH may attract new residents to the area. Because of the new service, some homeowners are considering subdividing their lots and building new houses, and weekenders are considering becoming full-time residents. Security services provided through FTTH may make the area more attractive as a location for summer homes.

Finally, up-to-date communications facilities will improve the quality of life for current residents, who have lived for so long in near-isolation. By far the most important addition will be access to emergency services. While the area has excellent emergency services, summoning a fire truck or ambulance has



*Deep trenching to lay fiber deep enough to keep weather, animals, and snowmobilers away.*

always been difficult. "You'd have to drive through a forest fire to call the fire department," Reigle says.

Residents in some parts of the area have had access to wireless telephone service, but pine trees, snow storms, and lack of circuits often obstruct wireless calls. For the first time, all residents will have reliable 911 service, and first responders themselves will have secure, high-quality communications. Some day, Reigle hopes to add antennas to houses in order to broadcast preprogrammed information about residents' medical conditions to emergency workers.

Reigle has plans for still more amenities. Once the FTTH infrastructure is in place, he says starting a local public radio or public television station could be feasible. He'd also like to help local residents improve their educational opportunities through the Internet. Children in the area travel an hour or more to school and have difficulty today getting help with their homework. Telemedicine, too, could bring sophisticated medical services to local clinics.

How will a community-based company with a full-time staff of two manage to undertake all these ambitious projects? Reigle was so impressed by the MSU telecommunications program that helped him start his company that he decided to make Allband an "open-platform educational telephone company." Allband's partnership with educational institutions, he says, will be the key to transforming the area's economy.

Students from MSU and elsewhere will be welcome to use Allband as a research site. "Our central office is a place where people can come in and work on projects," Reigle says. Ron Choura's students at MSU are already researching telemedicine and distance learning, and looking for grants that could help Allband put these services in place.

Unlike most telephone companies, which cite security concerns as a reason to keep outsiders away from their infrastructure, Allband will welcome college interns. The interns will spend summers learning to use up-to-date fiber optic technology (Allband has the only GPON system in Michigan) so they can become vendor-certified by

the time they graduate. MBA students might visit Allband to study the finances of telephone cooperatives or the effect of phone companies on the local economy.

Vendors, too, will be welcome to test new products and services. "If Metaswitch wants to test their switch against a competitor's, years down the road, we want to provide that service," Reigle says.

Allband's status as a cooperative, a type of not-for-profit corporation that is focused on community service rather than stockholder returns, made it easier for the board to see education as a major part of the company's mission. "The idea just stuck with a lot of people," Reigle says.

With its commitment to implementing leading-edge technology and providing a venue for telecommunications research, Allband can look forward to adding many more "firsts" to its list. **BBP**

#### About the Author

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# Major Vendors

**Optical Solutions**  
Electronics and system  
integration

**Metaswitch**  
Switchgear

**MasTec**  
Construction

**Lucent**  
Interface with SONET

## Funding Rural Service

Original seed money was carved out of a \$212,000 LinkMichigan grant from the Michigan Economic Development Corporation to Michigan State University. About half of that covered the engineering, legal, and accounting work needed to set up Allband.

Allband is heavily subsidized, as almost all rural carriers are. It expects to get about \$1 million per year over the next few years from the USF. This will decrease after that. At the beginning, it represents about 80 percent of Allband's revenues.

Interim financing, about \$1 million, came from the Rural Telephone Finance Cooperative (RTFC; [www.rtfc.net](http://www.rtfc.net)) for working capital.

The Rural Utility Service (RUS) granted Allband interim financing not to exceed \$4.85 million to build an all fiber, passive optical network. Final approval was for first phase investment (the 300 residential customers) of \$5.74 million plus \$0.5 million of organizational and operational costs for a total of \$6.24 million. There is a second phase for an additional investment of \$1.808 million to serve approximately 300 gas wells. This is contingent upon receiving letters of intent from the two gas well companies. If this contingency is met, the total loan amount would be \$8.048 million.