

# Closing the Digital Divide In Indiana

When small providers band together, they can increase their clout and boost regional economies. That's why the Intelligent Fiber Network, a partnership of small telephone companies, is expanding and upgrading its statewide infrastructure.

By Masha Zager / *Broadband Communities*

**I**ndependent rural telephone companies are one of the great – and often overlooked – broadband success stories. Hundreds of these small companies, all of which have deep roots in their communities, have built out high-quality broadband, often fiber to the home. Most of them have been assisted in their efforts by the federal universal service high-cost program and many by loans from the Rural Utilities Service.

But even with dedication and access to federal support, there are limits to what they can accomplish individually. For one thing, they cover only about one-third of U.S. rural areas. And though many of them “edge out” beyond their territories to provide (unsubsidized) competitive services, they are limited by access to capital, lack of name recognition and small scale.

Another problem is that, because their territories are small and remote, their costs of accessing the internet are high. Traditionally, they have depended on large operators for connectivity to the outside world – and that connectivity comes at a high price. It isn't unusual to see a rural telco offer fiber-to-the-home internet services with DSL-type speeds, even though its access network is robust.

One strategy many telcos have adopted is forming statewide or regional partnerships to provide the services they must otherwise purchase from third parties. In 2002, 20 independent telcos in Indiana joined to create

the Indiana Fiber Network (IFN), recently rebranded as the Intelligent Fiber Network; since that time, IFN has deployed more than 4,500 route miles of fiber optic cable as well as multiple internet points of presence. This middle-mile network provides transport for its member-owners and other operators, reducing their costs for internet access. Other services include capacity leasing and wholesale access.

As time went on, IFN expanded beyond its original mission. Today, about half its revenues come from providing competitive fiber access, co-location and transport services in the 80 percent of the state outside its member-owners' territories. In these areas, it serves cell towers, health care providers, educational campuses and large enterprises, among others. More than 4,000 buildings are now on-net, receiving Ethernet service speeds of up to 100 Gbps.

Though IFN itself isn't eligible for USF funding, some of its customers, such as rural health care systems, are, and Jim Turner, IFN's CEO, says that funding “helps make some projects more realistic.” However, those customers can use their USF funds to pay any provider, so that doesn't put IFN on any different footing from its competitors, such as Comcast, Zayo or AT&T.

## A GREAT LEAP FORWARD

In April, IFN announced that it had begun a multiyear, multimillion-dollar network upgrade

to increase capacity, improve stability and increase efficiency – all of which should enhance customers’ service experience. By the time of the announcement, the company had already invested \$20 million in rural and urban areas, according to Turner, and it expects to spend a total of about \$50 million in the short term.

“This is a significant upgrade to IFN’s packet network,” says Darryl Smith, IFN vice president of operations. “This is a multiphased project, scheduled to be completed in late 2019, leveraging the latest technology. The platform upgrades and architectural changes IFN is implementing will position our network to handle the capacity and demands created by new protocols, such as 5G, as they become more widely available.”

Turner says the upgrades fall into two principal categories: upgrading the core network to ensure that it has the stability and reliability that customers demand and expanding the network to allow it to acquire new customers. He explains that “IFN was built to the locations where customers asked us to build, but now we’re stepping back and looking strategically at where we want to be. We’ll build in those places and offer more commodity-type products.”

Now that it isn’t selling only “what’s right in front of us,” Turner says, the company is gearing up its marketing department to help identify potential customers and product offerings. More important, it is revamping its operations to “make sure we can deliver on what we’re selling.”

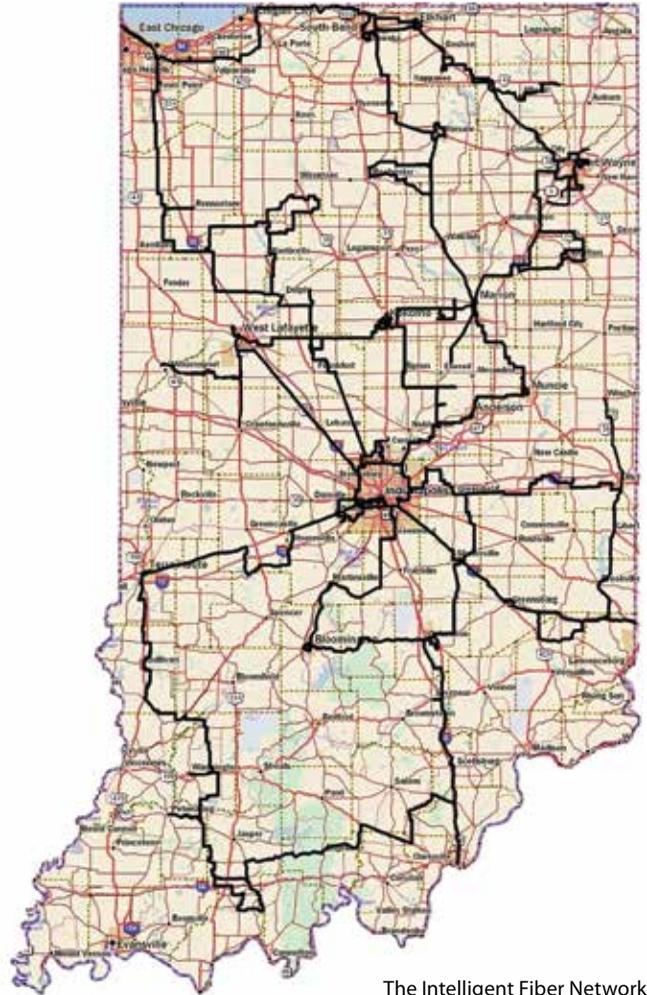
## A LONG-TERM VISION

The current expansion is only the beginning of Turner’s vision – the network could keep growing for a long time. IFN’s board recently approved a five-year growth forecast that may call for a total investment of between \$100 and \$125 million.

IFN’s funding comes from equity invested by the member-owners and from a debt facility with CoBank, a member-owned financial institution that serves cooperatives, agribusinesses and rural public utilities. Turner says, “We probably will both increase our debt and seek additional equity from our members. We’re even exploring bringing on new member-owners. ... There may be other incumbent local exchange carriers that want to join. We’re even looking at an interesting idea of bringing in investment from a wholesale electric generation and transmission company and some rural electric cooperatives. A few rural electric membership cooperatives have shown interest in doing fiber-to-the-home plays in their service territories. Rather than trying to fight them, can we partner with them and help find more creative ways to get fiber into every nook and cranny of Indiana?”

## THE PARK 30 PROJECT

In May, IFN announced a contract with Whitley County, Indiana, to serve the Park 30 Business Center, a new industrial park developed by a electric cooperative, as well as additional businesses nearby. IFN is also constructing facilities in and around the industrial park to service area businesses along the fiber route. It started providing lit fiber services in the park in July.



The Intelligent Fiber Network

“We have come to realize that for businesses to flourish in Whitley County, broadband internet infrastructure is just as important as other services like water, sewer and roads,” says George Schrupf, president of the Whitley County Commissioners. “Expanding the county’s fiber footprint will grow the businesses all along the U.S. 30 corridor.”

August Zehner, IFN’s vice president for sales and marketing, says that as part of a buildout for a large customer, IFN built fiber through several small towns in the northeastern corner of Indiana. That made Park 30 and some other nearby business parks accessible for a reasonable cost, and the local economic development agency jumped at the chance to extend the fiber.

From a financial standpoint, the Park 30 project was a big investment for IFN (Whitley County also contributed to the project), and Turner says the company is very happy with the initial response from business tenants. “It really enabled the park,” he adds. “Tenants have multiple options for fiber.”

Recently, a number of local governments and economic development agencies throughout Indiana have become more interested in bringing fiber into their communities, Zehner

IFN, as a middle-mile network operator, can serve business customers and industrial parks that its member telcos can't reach.

says. To justify extending fiber to a community, IFN often works with such organizations to line up potential customers in advance. If enough health care providers, schools and large businesses want high-bandwidth fiber or redundant fiber paths, IFN knows a project has a good chance of succeeding financially.

### THE FINAL FRONTIER

Turner is optimistic about the prospect of working with electric cooperatives, whether or not they become members of IFN. Residents and small businesses in the rural areas of Indiana outside

the small telcos' territories are still poorly served, and many are turning to their electric providers for help. "These electric co-ops will tell you their No. 1 issue at meetings is broadband," he says.

However, in addition to the significant hurdles involved in building and operating broadband networks, electric co-ops also face problems connecting to the internet. "A lot of carriers won't interconnect with them," Zehner explains. Because IFN follows telecom integration standards, it can serve as a buffer between the co-ops and the larger internet. If the co-ops can use IFN's core network and wholesale

distribution services or if they partner with the telcos that are IFN's members, their customers will have new opportunities for better broadband.

In addition, Turner says, if IFN can work with its counterparts in the electricity world – the wholesale generation and transmission companies – it could use the utility poles and fiber that these companies have already installed, which would save money for everyone. "It's a great natural opportunity," he says.

IFN, in short, hopes to play the role of matchmaker, facilitating win-win-win partnerships that can bring high-speed fiber connectivity to rural businesses and homes. Ultimately, as Zehner points out, the real winners will be rural Indiana consumers. ❖

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