

# Seeking the Broadband Light

## Business Progress Slows Due to Dark Fiber

“**D**ark fiber.” It’s not a new reality television show about the horrors of wearing the wrong clothes or a key element, combined with bran and roughage, in a healthy diet. Dark fiber, for business and residential customers hungering for high-speed Internet access, however, carries its own scary tale. The fiber – as in fiber optics that can deliver

the broadband services so desperately needed – is dark because it doesn’t go the proverbial last mile to reach consumers.

But Indiana is the crossroads of America. Its current highways and former railways have served as transportation hubs. Its central location makes it a centerpiece for national and regional distributors. How could the state not be home to the fiber that frequently follows the lines of those transportation arteries?

“Indiana is criss-crossed by a lot of long haul fiber,” says Jennifer Kurtz, e-commerce director for the Indiana Department of Commerce and one of the partners in the INdiana INterconnect project to assess and improve the state’s advanced telecommunications infrastructure. “But we have fewer access points than one would want there to be. There is a fair amount of dark fiber, and we don’t know where it all is.”

Jim Dauby is president/CEO of the Perry Spencer Rural Telephone Cooperative in southwestern Indiana. Fiber glut and underutilization of fiber are common terms that he hears.

“If you have fiber to bring services from Point A to Point B, you then have to get to that end user,” Dauby explains. “That’s what’s not being done. There is a lot of fiber out there that companies are riding.”

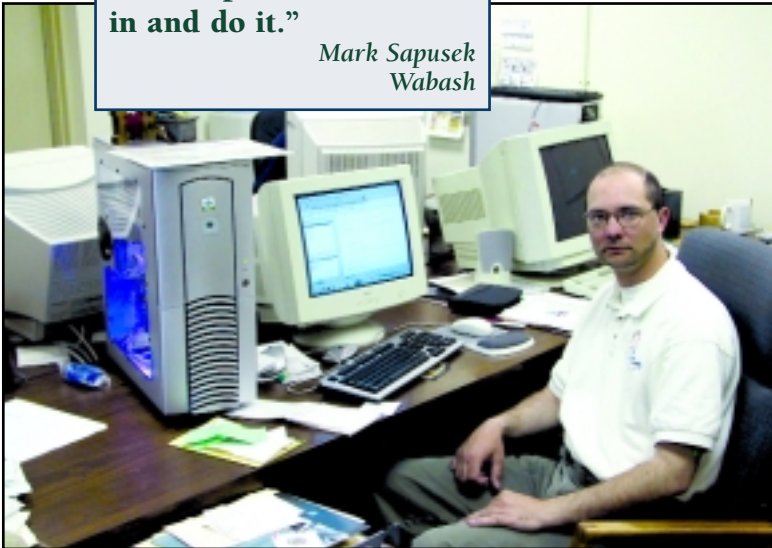
Fiber owners don’t want to disclose locations for competitive reasons. They sometimes fail to make that “last mile” connection themselves due to an anticipated poor return on the investment. Suffering the consequences are businesses and residents in small towns and rural areas across the state.

Just ask Mark Sapusek, founder and CEO of Visionary Web Design in Wabash and co-chair of the Wabash County Broadband Vision effort.

“Businesses are clamoring for this,” Sapusek reports. “Some just want service period. Others, who have service now, want options. We’ve got people threatening to move (their businesses), and we had a company that bought land north of town, but decided not to build (because of the lack of broadband service).”

**“We either have to run our own network or try to provide support to an outside provider to come in and do it.”**

*Mark Sapusek  
Wabash*



### Defining the problem

Dial-up is an Internet connection made over a telephone line using a 56K (kilobits-per-second) modem. High-speed Internet access is loosely defined as any data link faster than the 56K. Broadband refers to the wider electronic bandwidth that allows faster data transfer.

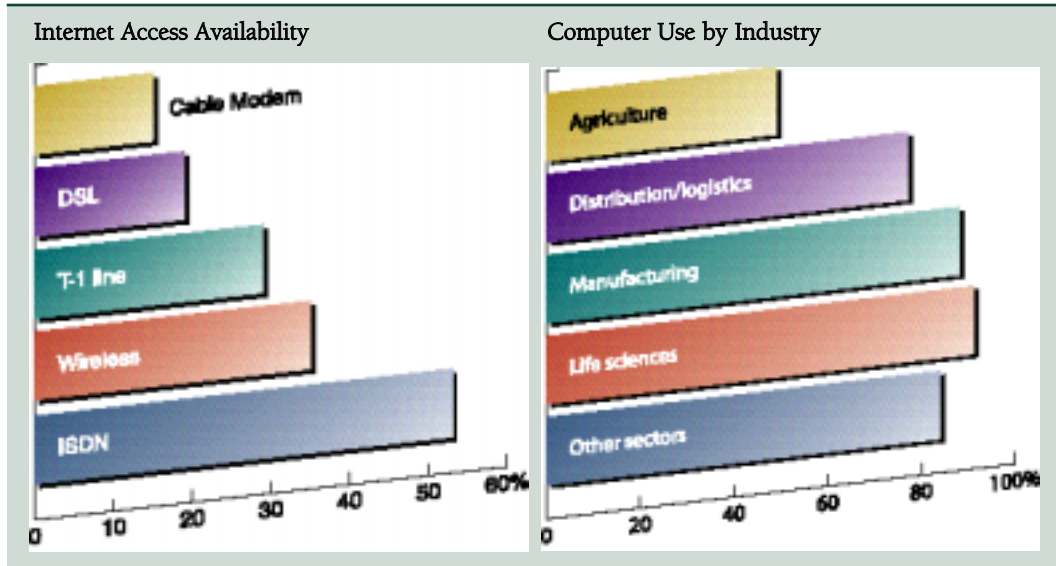
As of March 2003, 30 million people were utilizing high-speed Internet connections at home. That’s 31% of Internet users (compared to 21% a year earlier) and 16% of all Americans. A federal government study predicts 60% broadband adoption by the end of 2005.

**By Tom Schuman**

Cable companies, among the first to jump into the high-speed market by using the same wires that bring cable television into the home, garnered 67% of U.S. residential broadband users through March. Digital subscriber lines (DSL) utilized by telephone companies controlled 28% of the market.

In Indiana, the suddenly revived Indiana Economic Development Council is teaming with the Department of Commerce and Central Indiana Corporate Partnership on the INterconnect initiative.

## Connecting Indiana



Source: Indiana INterconnect study

Survey results, released in June, provided some surprising, and disappointing, numbers.

- **53% of Indiana businesses still use dial-up services.** Broadband comes in the form of DSL (14%), cable (10%), T1 (10%), ISDN (4%) and wireless (3%). T1 generally refers to dedicated fiber optic lines that are more expensive than other options. ISDN stands for Integrated Services Digital Network, a slower version of broadband
- **On the residential side, 78% in Indiana still use dial-up modems,** 12% cable and 6% DSL
- Internet access speed is judged “acceptable” or “very fast” by 81% of users, despite 75% experiencing service interruptions and 56% having such problems at least once a month
- Just 10% of business survey respondents believe their company’s performance is negatively affected by the current level of Internet access and speed

“Residents are generally pretty complacent about the quality of service,” Kurtz summarizes. With the high numbers accepting the speed and performance of their 56K modems, she adds, “It looks like people don’t know what they’re missing.”

Mark Lawrance, Indiana Chamber vice president for corporate development and implementation leader of the organization’s *Economic Vision 2010* plan, says the business reality tells a different story.

“Broadband access and options are at the heart of doing business in today’s competitive economic climate. Whether it’s communicating across town or around the globe,” he offers, “doing so with speed and efficiency is critical to business success. Companies in all industries are impacted by the lack of adequate broadband infrastructure.”

### Communities in need

Sapusek and others in Wabash County are among those that realize the scope of the problem. When the countywide effort started less than two years ago, there was no broadband service available. Today, Sapusek estimates that maybe a quarter of the 45,000 people in the county can receive some type of

broadband signal (typically cable or DSL).

“Our infrastructure is not very good. There is a limit on what they can offer, on the amount of bandwidth they can push through,” Sapusek says. “The cable company wouldn’t serve our (Visionary Web Design) bandwidth (regular daily downloads of up to 5 gigabytes a day), and we had to choose our location based on whether we could get DSL services.”

Most manufacturers in Wabash and North Manchester are not within the broadband service areas. The industrial park in Wabash is not served by high-speed Internet access. The dilemma is even greater in other communities in the county where companies have no options.

“Urbana has a fairly large manufacturer that can’t get service at all,” Sapusek asserts. “We have seed companies that really need

### Economic Vision 2010 Report Card

Of the 18 driver and sub-driver grades recorded on the *Economic Vision 2010 Report Card* in 2002, Indiana’s poorest mark came in digital infrastructure (D-). The commentary included as part of the report notes that “productivity and digital infrastructure, both critical attributes of a knowledge economy, are weaknesses” and that “our digital infrastructure must be improved significantly.”

The three digital benchmarks and Indiana’s rank among the 50 states in each:

- Internet2 – 19th
- Online agriculture – 33rd
- Broadband (total number of broadband lines per 1,000 people) – 41st

Midwest competitor grades in digital infrastructure for 2002 were: Michigan, B+; Ohio, B; Illinois, B; Wisconsin, C; and Kentucky, F.

**Resource: Complete Economic Vision 2010 and report card information is available at [www.indianachamber.com](http://www.indianachamber.com)**

## Senator Seeks Stronger Public Sector Service

Indiana Sen. David Ford (R-Hartford City) hears the same stories as others about companies struggling due to the lack of high-speed Internet access. He also sees public sector entities suffer from the same problem and is determined to do something about it.

Ford, as chairman of the Senate Economic Development and Technology Committee, spearheaded a number of major initiatives through the 2003 General Assembly. Among the accomplishments was securing \$10 million over the next two years for extension of the I-Light Fiber Optic Network.

"I feel like we're sitting here and watching technology go by," asserts Ford, adding that he has little patience for the economic arguments against completing private or public broadband service. "I don't care who wins. I tell companies that if you can't do it, we'll find somebody else who can. If the public sector can't do it, we'll do it ourselves."

I-Light will seek to connect major outlying cities by buying or entering long-term leases for the "distressed dark fiber" that is already in place. The goal is to build on earlier efforts to connect schools and libraries, adding hospitals and other entities to the mix. Indiana and Purdue universities, the Indiana Higher Education Telecommunications System and Intelnet will manage the effort. Ford has no doubts about the basic fiber infrastructure being in place.

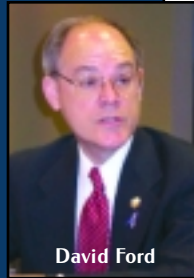
"I've seen it with my own two eyes. You can drive down the highways and into the countryside and see fiber sticking out by the utility poles," he claims. "My impression is that pieces of fiber are there, but there is no real net."

Ford says he has been approached by some of the smaller telecommunications companies, which claim they have the capabilities to support I-Light-type projects. When he inquires about where the fiber is actually located, "it always breaks down."

The senator says that even a technologically sophisticated campus such as Ball State University has trouble getting the bandwidth it needs. Despite such problems and discussions about the issues, he believes an education process remains.

"No, people don't (understand the importance). Any technology you're not using, it's hard to see the relevance of it. It's the equivalent of what we went through with rural mail delivery," Ford adds. "It's more profitable where the concentration is higher, but from a public standpoint we can't neglect rural areas. At some point the public sector has to step in and get that last mile of service to people."

**Resource: Sen. David Ford at (317) 232-9807**



it. They may have 2, 3, 4 offices around the county, and they can't communicate with each other. We have the same problems as any rural county."

One less than ideal solution, he says, would be to "scream, yell and stomp our feet. Five to 10 years later we might get the same services everyone else has, but then they're 5 to 10 years old."

The alternative has been a proactive effort to seek out new services and/or providers. Sparked by the business community, the endeavor is supported by the Wabash and North Manchester chambers and Wabash Economic

Development Corporation. Survey results and feasibility analysis will be taken to city council members, county commissioners, potential private investors and larger businesses.

"I don't think (the answer) is in working with existing providers. They're tapped out in what they can do in a small community," Sapusek reasons. "We either have to run our own network or try to provide support to an outside provider to come in and do it. It really needs to be a countywide solution."

## A changing business

Large telecommunications providers typically point to the high costs of extending the existing fiber into existing businesses and maintaining the networks.

A limited amount of potential customers limits the ability to recoup that investment.

Sapusek: "What we heard is that most providers put their money where the people are.

People we talk to in other areas get the same answer. Providers don't believe the interest is here, but that's a fallacy."

Dauby says the 1996 Telecommunications Act changed the way small independent companies such as Perry Spencer do business.

Formed 50 years ago to provide rural telephone service, Perry Spencer Rural Telephone Cooperative primarily serves Perry, Spencer and Dubois counties with limited numbers of customers in Pike, Warrick and Crawford counties. Its subsidiary, Perry Spencer Communications Inc., has expanded beyond the traditional service area and is providing Internet, long distance and other services to people in Jasper, Huntingburg, Tell City, Rockport and other cities and towns.

Gone are the access charges that were the revenue mainstay.

"We've gone through a multitude of changes because we've had to," Dauby recalls. "We had to be able to look outside and expand our current offerings and our co-op base. We really have two mindsets. With our co-op, we understand the mission to bring the latest services and technologies to our customers (more than



**Infrastructure, from repairing cut cable (as Rick Kleaving of Perry Spencer Rural Telephone Cooperative works on here) to completing "last mile" connections, is crucial for Indiana business growth.**

7,000 access lines, along with Internet and long distance service).

"The subsidiary is for-profit, where we want to expand the customer base and leverage our assets. There is an enormous cry from both residential and business. People want high speed and they don't want to be tying up their telephone lines. But no one is wanting to go to the expense of doing it."

A "more than \$10 million investment" has resulted in 100% DSL service within the co-op area. Wireless high-speed Internet is being introduced to subsidiary customers.

The investment was possible due to the accumulation of access charge revenues over the years, minimal debt and strategic investments that included the sale of a cellular partnership. Other independent providers, both Dauby and Kurtz say, are doing similar and even more advanced projects.

"We were able to do a five-year project to build out our broadband network," Dauby notes. "We've not gone into communities and deployed land lines or done a true overbuild. To engineer those types of networks is pretty expensive."

### **Gaining momentum**

Wireless Internet connections in the U.S. have increased from 50,000 in 2000 to 300,000 a year later and 810,000 in 2002, according to industry statistics. Shorter turnarounds to initiate service and lower initial company investments make them a popular alternative to no high-speed access at all.

"Wireless is attractive for now, but it's probably not the ultimate answer for triple play (telephone access, high-speed Internet and cable/video services)," according to Dauby.

The short-term answer in Wabash County will likely involve wireless technology.

"We're talking about some type of wireless solution to cover 70% to 80% of the county," Sapusek says. "If we can help bring one provider in, hopefully others will come and provide more services."

No matter the source, someone has to make the investment, Dauby contends, to enhance the quality of life for community residents and provide the high-speed data services that are becoming a basic for economic development.

"Someone has to put the dollars on the line to build out in those

communities that have POTS – Plain Old Telephone Service. The way our industry works is changing every day. We just want to do our part and let the market plans and surveys dictate what else we can do."

### **Team effort**

The Department of Commerce's Kurtz believes it will take a multi-faceted approach for the state to move forward. Geography,

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## Broadband

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current infrastructure and the business climate combine to present different challenges in various areas.

“There’s not going to be a single solution, no single template to solve the problem,” she says. “The particular technology is a local issue. We’re looking at not only getting service, but multiple providers and multiple technologies.”

The state can provide much of the background information for communities in the early stages of trying to increase their broadband options. A statewide summit is planned in July with a focus on removing obstacles and identifying funding sources. Smaller regional workshops will follow, allowing for more specific community-tailored approaches.

While the answers are not easy, the consequences are tremendous. Just as Indiana’s inventory tax (see story on Page 26) often prevented the state from seriously competing for some business investments or expansions, the lack of broadband can be an equally debilitating factor.

“Site selection consultants are looking much more closely at infrastructure,” Kurtz asserts. “There are certainly times when we don’t know we’re being looked at and not making the first cut.”

### INFORMATION LINK

**Resources:** Mark Sapusek at (260) 569-0260 or [www.visionaryweb.com](http://www.visionaryweb.com)

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