

Published: September 9, 2004

Business: Economy

City wants to take over dormant fiber-optic ring

▪ Network touted as way to attract business

By ANNA VOELKER, *Rockford Register Star*

ROCKFORD — Rock River Valley business people soon may be able to communicate with companies thousands of miles away without leaving their factory floors or boardrooms.

In an instant, for example, two fastener-makers an ocean apart could analyze shared drawings of a product they're jointly manufacturing. They could see one another in real time on their monitors.

The product that allows them to do this is no thicker than the screws coming off their assembly lines: fiber-optic cable.

Snaking beneath northeast Rockford streets is 22 miles of the cable — actually a bundled collection of several hair-thin glass fiber-optic tubes — that can move thousands of bits of information that make up medical images, design drawings and other applications — almost instantaneously.

“That’s the thing that needs to be available to manufacturers with the global market we’re involved in,” said Judy Pike, owner of Production & Tool Supply Co. in Rockford. “You can talk to the guy in Germany in no time. The bigger companies out there already have this capability. Small businesses need this access to stay competitive.”

This fiber-optic ring has been dormant for most of the past decade after telecommunications companies installed it but never brought it online. This inactivity happened across the country, said Jeff Stewart at Trekk Cross-Media, one of several speakers at a news conference Wednesday updating the progress of the fiber-ring initiative.

In fact, Stewart said, 95 percent of all the fiber optics installed in the United States in the 1990s remains unused.

In Rockford, that could change.

Comparing download speeds

Fiber optics are much faster than other types of communication networks, especially when it comes to downloading information. Here’s an idea of how long it would take to download a DVD using different types of connections:

* Dial-up modem: 50 hours

* ISDN (integrated services digital network) or digital dial-up: 20 hours

* DSL (digital subscriber lines), a faster, on-all-the-time version of ISDN:

Rockford Mayor Doug Scott and several technology companies said they hope to activate the 22-mile fiber-optic ring, although they provided no timetable as to when that would happen.

The city plans to buy the lease of the fiber-optics network for \$3.5 million from Metropolitan Fiber Solutions, a private firm that tracked down the owners of the fiber ring and negotiated to lease it.

The city would run the system in partnership with cable and phone companies, and Internet providers, among others.

The fiber-optic plan dates back to 2002, when Scott formed a telecommunications task force that later suggested the stagnant fiber network be resuscitated. Since then, eight technology businesses formed Rock River Valley Technology Partners and contributed more than \$1.5 million of their money toward the research, planning and organization of the project. There also are shorter stretches of fiber optics in Rockford from four other companies — McLeodUSA, Insight Communications, Choice One Communications and Ameritech — that eventually could connect to the longer fiber-optic ring, which could eventually be more than 100 miles long, Stewart said.

City and business leaders hope to connect Rockford with other municipalities and universities in the region that already have fiber-optic capabilities. Already, SwedishAmerican Hospital is connected to the network. City Hall and Rockford Memorial Hospital will be the next major organizations to sign on.

Conceivably, the entire region could be linked, noted Ken Wise, the former economic development director in Rochelle, a city that's been working on its fiber-optic network since 1996.

Wise, who was integral in getting the \$181 million Union Pacific hub to Rochelle, said a healthy fiber-optic network may be even more valuable than the hub in the long run.

"I think this is more important than anything we've ever done. Schools, education, businesses, telemedicine right to your bed — it goes on and on," he said.

And fiber optics have helped Rochelle retain its businesses and attract new ones, Wise said. The same could happen in Rockford.

"Anything that lowers cost and increases productivity is going to help," said Bob Levin, president of the Rockford Area Council of 100, an economic development group. "It allows us to market that we provide the latest technology."

Scott said: "It portrays the image that this is the place where your business needs to be. And it's not just about us. This will help link us to others."

However, the cost may keep some small businesses from signing up. While fiber optics have higher capacity and much faster speeds compared with other Internet alternatives, these advantages come at a cost: Fiber-optic packages range from \$400 to \$1,500 a month.

At the other end of the spectrum is a simple dial-up connection over phone lines. That costs on average about \$20 a month. A digital subscriber line, faster than a dial-up but also working over a phone line, is about \$80 a month. A T1 line carries much more data than the dial-up models. This can cost businesses

Three hours

* Cable modem: One hour

* Fiber optics: Four seconds

Source: Rock River Valley Technology Partners



Gary L. Carlson/Register Star
Rockford Mayor Doug Scott talks about progress on the Rocknet fiber-optic loop during a news conference Wednesday at City Hall.

anywhere from \$600 to \$900.

The fiber-optics option is not cost-effective — at least for now — for people such as Pete Gustafson, a partner at Rockford I.D. Shop. He can access a Web-based program that allows him to do business through a Rock Valley College program. That cost him \$150 for the license and \$50 every year he uses the service.

“The quote that was put in front of me is pretty pricey compared to other options I have,” Gustafson said. “It certainly is a lot faster, and it’s a benefit that I may have to take advantage of in the future. Right now, I can do business effectively even though it’s slower.”

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Information

To learn more about getting your business connected to the fiber-optic network, call Tammy Eighmy at 877-443-8462.

NIUNet

Northern Illinois University plans to create a fiber-optic communications network that would connect the school’s main campus in DeKalb with its three satellite locations in Naperville, Hoffman Estates and Rockford.

NIUNet, a three-year project, is a 175-mile fiber-optic loop that eventually would link to municipalities, schools, hospitals and research facilities.

The university expects to invest \$1.5 million over the next three years to complete the NIUNet ring. The completed network will consist of both constructed segments and long stretches of leased fiber cable currently lying unused underground.

NIU plans to reduce costs by establishing agreements with a number of cities along the route who would donate right-of-way or easement rights. The university also has applied for state funds and grant money to help pay for some of the project.

Development of the first phase is already under way and includes links from NIU’s main campus in DeKalb to its Naperville campus and the Fermi National Accelerator Laboratory in Batavia.

Source: Northern Illinois University

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Fiber optics Q&A

QUESTION: What is fiber optics?

ANSWER: Fiber optics describes technology that uses glass threads to transmit data. A fiber-optic cable consists of a bundle of threads, each capable of transmitting light signals that carry information. Because light travels in straight lines, optical fibers reflect the light and allow it to travel long distances quickly.

Q: What are the advantages of fiber optics over traditional copper lines?

A: Fiber-optic cables have a much greater bandwidth than metal cables. This means that they can carry more data. Fiber-optic cables are also less susceptible than metal cables to interference. Also, fibers have more than 10,000 times the data capacity of copper. That's why they are used in applications involving huge amounts of data, such as detailed medical drawings and video conferencing.

Q: Regarding Rockford's fiber-optic network, why is the city teaming with private businesses to get this done?

A: Rockford has a fiber ring that's not being used. Companies in the 1990s invested billions of dollars in building this fiber infrastructure but failed to bring the networks to the users who were not directly located on the ring. The private companies can get the network going as the city looks for funding to buy the ring.

Q: How much is this going to cost the city of Rockford?

A: Estimates range from \$3 million to \$3.5 million. City officials expect to pay for the network by selling bonds.

Q: What is Rock River Valley Technology Partners?

A: This group is a coalition of local business owners in the Rock River Valley who studied the need for a fiber network in the region. The group is comprised of Global Enterprise Technologies, Entre Computer Solutions, Trekk Cross-Media Communications, Kelso-Burnett Co., Crescent Electric, Lexxon Networks, Ticomix and Montel Technologies.

Q: So what's next?

A: The plan is to spread the fiber-optics system throughout the Rock River Valley

with Rockford as the hub.

Sources: *Webopedia.com*, *Howstuffworks.com*, *Rock River Valley Technology Partners* and the city of Rockford