Smithville Blankets Jasper, Indiana, With Gigabit Broadband

A citywide fiber network helps drive diversity and enable new broadband options for existing and incoming residents and businesses in a city known for furniture manufacturing.

By Sean Buckley / *Broadband Communities*

As a regional center in southwestern Indiana, Jasper is known for its heavily German Catholic roots and as the "Wood Capital of the World." It's the location of several furniture manufacturing companies, including Kimball International and Masterbrand Cabinets, that target the hotel and hospitality industries.

Jasper is also home to the Southern Indiana Education Center (SIEC), Jasper Engines & Transmissions (the largest re-manufacturer in the market) and a satellite campus of Vincennes University.

Thanks to Smithville Communications, the city now boasts a fiber network that offers access to full symmetrical gigabit service for every resident and business. Smithville's new fiber-to-the-home (FTTH) network was made possible through a newly completed $15 million contract to overbuild the entire city with fiber.

Smithville has invested more than $10 million to build 100-gigabit, fiber-based core networks in Jasper, Ellettsville (a town 75 miles away) and the WestGate@Crane Technology Park in the town of Odon. Such core networks usually are found only in major urban areas.

Former Jasper mayor Terry Seitz spearheaded the genesis of the fiber network. He made the bold move nearly a decade ago to get Smithville to build out the entire city with fiber.

In 2013, Seitz's staff issued a request for proposals (RFP) to connect nine city buildings

with fiber and a network to run them. The provider would then have to agree to run the fiber network for five years.

"We knew there was a lot of fiber that ran between businesses in our city," Seitz says. "Jasper has one of the largest micropolitan economies in the country and has multiple billion-dollar companies, but we had phone systems independent for each building, and I wanted one citywide system."
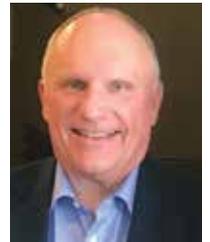
Terry Seitz

A BOLD PROPOSAL

Jasper got seven responses to its RFP, four of which it deemed viable. At that point, Seitz asked the city attorney if Jasper could change the terms of the proposal. The original RFP asked respondents to bid on building out city offices, but Seitz wanted to amend it to include bids to equip the entire city with fiber broadband.

"It was a one-time shot," he says. "This was probably one of the boldest, if not the boldest, move I made in my time as mayor."

Only two of the original seven respondents to the RFP met the terms of the new scope, one of which was Smithville. "Smithville said it was interested in building out the whole city, but asked if we could extend the engineering

time proposal," Seitz says." "It thought it could do the buildout in X number of years, but it needed a full year to engineer it."

OVERCOMING IMPEDIMENTS

After Jasper city officials approved Smithville's proposal, the city decided to provide a sole-source permit structure to help keep the build on track. "Though Jasper did not require Smithville to have a permit for every hole or right of way it needed to be in, we did have weekly communications with Smithville and vendors in the engineering department," Seitz says. "It went relatively smoothly, until [Smithville] found out there was more rock underground in Jasper than previously thought."

Jasper also waived pole attachments for five years on existing utility poles. The city runs its own municipal power utility.

Seitz says giving Smithville a flexible pole attachment and permitting process enabled Jasper residents and businesses to benefit from a fiber-based broadband network. "For single-source permits and a waiver of pole attachments for five years, Jasper ended up with a full gigabit fiber network for the entire city," he notes.

Smithville bore the costs of the network build. "The city of Jasper did not spend a dime, which is why it took a little longer," says Cullen McCarty, executive vice president of Smithville. "We hit some rock that we did not see in any of the surveys we had done, which put us back, but we completed the job at the end of 2020."

Cullen McCarty

SIMPLE SERVICE DEFINITION

Before Smithville came to Jasper, internet options were limited to cable, a mix of copper-based solutions, and some satellite. Smithville offers 1 Gbps FTTH service for one price: $70 a month.

"One of the best decisions Smithville made was not going with

Smithville technician Devon Harrell splices fiber.

tiered pricing," Seitz says. "People have a gigabit connection, and they can use it as they like. It's theirs to use when it's in their homes."

Excitement about the speed Smithville's network offers drove the city to tell the company to accelerate the build because "people could not wait," Seitz says.

Smithville worked to keep up with demand, particularly when COVID-19 forced more people and students to work remotely. "Like every other place that offers fiber, [Smithville] worked hard to get the orders done because there were so many," McCarty says. "People could not stay on coax or copper anymore."

The benefits of fiber-based broadband, including the usefulness of a 1 Gbps connection, are increasingly recognized, but it still takes time for people to understand what it is. The city continues to educate residents about fiber's perks.

"The term broadband is so loosely defined, and people were confused when we talked fiber, then talked gigabit," Seitz says. "We still have to explain it, [but people are realizing] what a tool we have for the residential, educational and business communities."

Smithville technician AJ Pittman checks commercial fiber connectivity during an install for the Smithville fiber overbuild in Jasper.

DIVERSIFYING AND DEVELOPING

Smithville's fiber network will be attractive to the large companies in the Indiana areas it serves. Previously, Jasper was using barely 100 Mbps connecting its buildings with hundreds of endpoints in the city. Seitz says the new fiber network will accommodate needs for current and future businesses as they arise.

Jasper continues to attract residents from other countries. "Jasper is a traditional German town, and many immigrants work in the city's factories," McCarty says. "The population is diversifying, and Smithville is part of that."

He adds that although Jasper has "had a reputation of being closed off, the presence of the fiber network has helped it and given it great visibility."

In 2019, USA Today named Jasper one of the "Best U.S. Cities to Live."

Smithville has become a part of the city's ongoing evolution by providing its fiber service. "Whether it's Jasper or other towns, such as Ellettsville, once broadband is there and you see growth occur, you know [Smithville is] a major part of it," McCarty says. "It's very satisfying, especially in a

Before Smithville's 1 Gbps connection, Jasper was using barely 100 Mbps connecting its buildings with hundreds of endpoints in the city.

community such as Jasper that is expanding its economy."

Though Jasper's economy relies on heavy manufacturing, including building hotel furniture sets, the community wants to diversify. "Jasper wants to pull in new families and open up the community," McCarty says. "The city is aware of what it is and where it wants to go."

A COMMUNITY PARTNER

As Jasper sees it, Smithville works with the city as a community partner. Smithville completed the fiber build, but it continues to have a presence in the community. The provider has provided funding for community events such as food truck days, festivals and parks concerts.

"I don't know how Smithville

picks communities to build out its fiber, but I will underscore that it's not just about burying cable or stringing it on poles and walking away," Seitz says. "Smithville, through the Jasper Chamber of Commerce, has been an investor in community relations."

He adds that "it's important to me to see the Smithville logo and know it still cares." McCarty agrees that "by working on events and with local organizations, Jasper sees that Smithville is serious about its commitment to be part of the community."

SETTING A FIBER DESTINY

Smithville initially used copper-based connectivity but, over the decades,

SMITHVILLE TURNS 100

Initially launched as a rural telephone exchange, family-owned Smithville Telephone Company (STC) expanded over the years to become the first commercial telecom company to offer fiber-based connectivity to schools and retail companies.

Smithville executive vice president Cullen McCarty's family has been a part of Smithville since 1922, when it became an investor in the company. Initially, the goal of the telephone provider was to connect three stone quarries in Stanford, Smithville and Clear Creek, Indiana.


THE ORIGINAL SMITHVILLE TELEPHONE OFFICE

"The industry was ramping up production coming out of the war, and many building designs called for limestone," McCarty says. The area had a rail connection with Illinois Central, and it needed telephone service. The telephone company that had previously served Smithville went bankrupt.

"A Bell Systems engineer was hired to build telephone service to the quarry communities," McCarty says. "Smithville then spread out its telephone service footprint to the residential areas."

In 1933, McCarty's grandfather, Guy Draper, acquired a majority interest in the company. Like other independent telcos, Smithville expanded its reach through acquisitions and organic builds. The company acquired assets in several other communities and, during the 1940s, expanded into 14 central and southern Indiana counties. It also acquired the Gosport exchange in Owen County, extending Smithville's primary incumbent local exchange carrier (ILEC) residential network and the French Lick exchange.

Between 1960 and 1969, Smithville further expanded its ILEC residential services by acquiring exchanges in Greene County and central and southern Indiana. It completed its ILEC acquisitions in 1969, forming the basis of Smithville's current residential service.

"There were two phases to Smithville's development," McCarty says. "The first phase was driven by my great grandfather, who started acquiring smaller farmer exchange companies and mutual exchange companies and then consolidated everything over time."
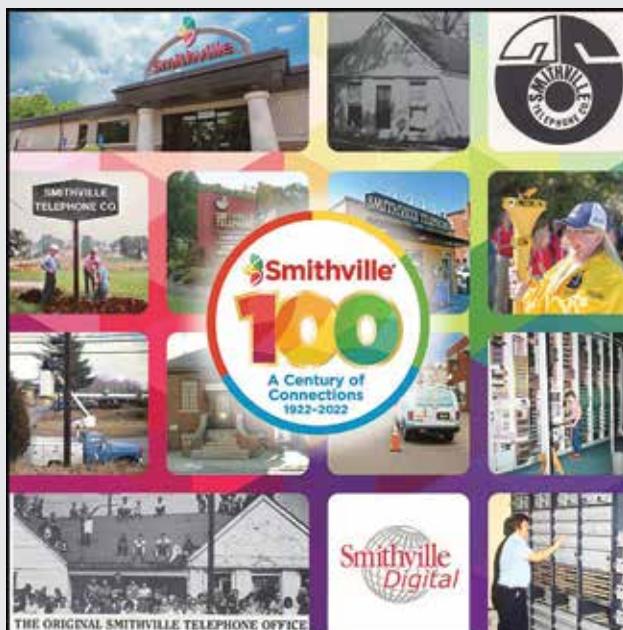
Smithville technician Logan Reel monitors fiber status.

> Smithville initially used copper-based connectivity but, over the decades, invested more than a quarter of a billion dollars to convert its network to fiber.

invested more than a quarter of a billion dollars to convert its network to fiber. Smithville's copper-to-fiber transition continues, with the company constantly upgrading its network. It has constructed more than 2,800 miles of fiber optics in Indiana, many in rough, rocky terrain where it costs more than $60,000 a mile.

Though Smithville is set on a fiber path today, offering FTTH services in several towns and cities within its traditional incumbent local exchange carrier (ILEC) network and in new markets, the origins of the telco's fiber drive can be traced back to the early 1990s.

Similar to other traditional ILECs, Smithville's initial fiber strategy centered on supporting standard voice traffic. "Our initial fiber ring carried voice traffic more effectively and cost-effectively than copper," McCarty says. "The maintenance was much lower because we were digitizing the switches at the time in the '80s and '90s."

The service provider found that local schools were an excellent target to enable new applications such as distance learning – a concept still nascent at the time. In July 1993, Smithville created a fiber network to serve K–12 schools in rural Indiana areas. The telco invested more than $1 million in private funds for equipment and construction.

To make this pre-commercial internet connectivity happen, Smithville partnered with Indiana Bell and the Ford Motor Company, which operated a large manufacturing plant in Bedford, Indiana. The partners implemented a DS3 (45 Mbps) connection to enable the distance learning application.

McCarty's grandfather, Bill Earles, who served as Smithville's president from 1998 until 2003, envisioned a fiber future. At that time, he also led the telco's efforts to offer long-distance services and broadband.

"My grandfather was an educator originally, so he had a special place in his heart for supplying schools with fiber and giving them the ability to have their phone system and whatever data may come," McCarty says. "We also knew video was on its way and did not realize how much it would impact us."

Building the fiber network to schools enabled Smithville to create a distance learning pilot program: a German course, offered at the Eastern Green School in Salisbury, Indiana, was taught from the Edgewood School in Ellettsville.

The fiber connection also featured live video links – split screens on 1990s-era monitors between schools and students in West Germany and, later, Japan.

Smithville launched the fiber-based Indiana Digital Gateway in 2001, and plans to begin an overall conversion of legacy copper-based systems to fiber. The company received a $90 million loan in 2008 to begin the project. Leveraging a RUS loan, Smithville built out Ellettsville's incumbent area in 2018–2019 with fiber.

But McCarty admits the migration to fiber was never that easy. "Before my grandfather died in 2003, he debated whether to replace a major air-core cable going south of town with fiber," he says. "At the time, the price variants between copper and fiber still favored copper, but he was looking ahead, and lo and behold, we got it done."

FIBER DRIVES COMMUNITY GROWTH

Completing the fiber network has come as Smithville sees remarkable growth in the communities it serves. As more people move out of larger areas, such as Bloomington, they recognize what Smithville can offer. Builders are advertising the fiber in the houses they sell.

"With all of the units coming up by the end of the year, including single-family homes, condos and apartments, we should have 300 new units in Ellettsville," McCarty says. "We're about to crack the 7,000 population mark, so there's tremendous growth."

Smithville also will extend fiber to Stinesville this year. "Stinesville has tried hard to build itself up," McCarty says. "It's an old limestone town, but since the railroad left and the elementary school left, bringing in fiber will be a help." ❖

Sean Buckley is the editor-in-chief of BROADBAND COMMUNITIES. He can be reached at sean@bbcmag.com.