

Mahaska Communication Group Lights Iowa Towns

Frustrated with its connectivity options, a manufacturer built its own fiber connection. One step led to another, and now the company is changing lives throughout a rural Iowa county.

By Masha Zager / *Broadband Communities*

You could call Mahaska Communication Group (MCG) an accidental ISP – but even though it started building a fiber network by accident, it doubled down on its investment and is now bringing world-class broadband to rural residents in south-central Iowa.

Like several other competitive ISPs, MCG began as one company's effort to provide broadband for itself. Musco Lighting makes the equipment that illuminates everything from Little League fields and Olympic stadiums to the San Francisco Bay Bridge and Mount Rushmore. The company is a technology innovator whose lighting solutions reduce energy use and glare – and it executes complex projects worldwide from its corporate headquarters in Oskaloosa, Iowa, a town of 11,000 that Steve Burnett, assistant general manager of MCG, describes as “an hour away from anything.”

Musco Lighting needs to be in close contact with clients around the world, and it operates a remote facility management system for its clients. By the year 2000, it needed more bandwidth than it could obtain from the incumbent telephone provider. The owner of the company decided to build fiber to company headquarters, bypassing the incumbent. Stringing fiber, whether for direct connections

or wireless backhaul, is relatively easy for Musco because it is accustomed to erecting poles for lighting; putting up poles for broadband, if necessary, is all in a day's work.

When others in the community found out about Musco's fiber, they were eager to take advantage of it. Musco created a subsidiary, MCG, to serve customers, and over a period of several years, it connected a local college, schools, municipal offices and large businesses in Oskaloosa. Finally, between 2003 and 2005, it made fiber connections available to the entire town, less as a profit-making venture than to satisfy this underserved community. (This early FTTH deployment was featured in the September 2006 issue of **BROADBAND COMMUNITIES**.)

A MUNICIPAL PARTNERSHIP

In 2006, MCG partnered with the municipal broadband network in the nearby city of Indianola. Originally, MCG provided the fiber backhaul and internet services for Indianola Municipal Utilities' business customers. In 2010, the utility began an FTTH project that covered about a quarter of the city, and it opened its network to any service provider that wanted to lease fiber – but MCG was still the only ISP willing to deliver services. In 2016, the city commissioned a feasibility study, which recommended that the utility build out the



Oskaloosa, Iowa, was the first city MCG wired with fiber.

network citywide and, in the process, take over the ISP role. The city accepted these recommendations, and MCG is now in the process of transitioning out as the utility takes over.

According to Burnett, MCG's takeaway from its Indianola experience was that it prefers to "control the entire experience – building a network, supporting it and providing the customer service." In its original Oskaloosa network, the company performed all the deployment work itself, in part because there were few FTTH experts available to call on in 2003. "We learned on our own," Burnett says.

EXPANSION TO UNDERSERVED COMMUNITIES

Rather than look for other municipalities to partner with, therefore, MCG decided to build out fiber to underserved communities in Mahaska County – particularly communities that couldn't afford

to build their own fiber. In 2018, it launched gigabit services in Cedar, an unincorporated community outside Oskaloosa, and in New Sharon, a town of 1,300. This year, it began building fiber to the home in Montezuma (population 1,500) and Lake Ponderosa, a small lakeside community outside Montezuma.

This expansion is taking place as fast as MCG can manage internally so it can remain in control of the process. As Burnett puts it, "We do what we can do with the staff that we have at the rate we can do it."

The choice of where to build depends largely on how much a community wants service. "We like to go where we're wanted and needed," Burnett says. "They all say they want you to come, but will they actually sign up?" MCG surveys communities before making a decision. It conducts the surveys itself ("much less expensive than paying someone else to do it") and seeks a level of interest that will generate a 40 percent take rate after several years. So far, New

Sharon, the first expansion community, is beating expectations with a 20 percent take rate after six months.

In deeply rural parts of the county that have no population clusters, MCG has provided wireless service for more than a decade. In 2016, MCG began replacing obsolete wireless radios with new equipment that allows it to offer unlimited 40 Mbps/4 Mbps service, using both fiber and wireless backhaul. In 2018, it significantly expanded wireless coverage in Mahaska County, and in the next few years, it expects to expand into neighboring Poweshiek and Keokuk counties.

CONCERN FOR THE COMMUNITY

These fiber and wireless projects are financed internally by the parent company, Musco Lighting, which invested more than \$3 million in broadband in the last two years. Although the projects are expected to be profitable, ROI targets are lower than what a public company might

“We are here to help businesses start, grow and create jobs. We’re working hard to support the Oskaloosa area and the people living here. After all, we live here too.”

require. Burnett says the company’s owners are community minded and contribute to community events and local charities in the communities MCG serves. He adds that all these projects – including broadband – are motivated by one question: “How can we help these communities survive?” “This is one of the ways we feel we can help do that,” he says.

An important advantage for MCG is its emphasis on customer service. Service problems usually are resolved on the same day they are reported.

Live people, not machines, answer calls. “We refer to customers as family members,” Burnett says. “It’s kind of corny, but we act that way.” Customers appreciate the personalized service, which they had not received from incumbent providers, and MCG’s reputation precedes it as the company moves from one town to the next.

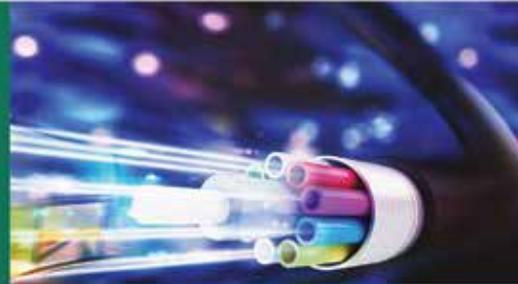
The projects are yielding other benefits for the communities as residents discover what they can do with the higher bandwidth available to them. Changes range from quality of

life – Burnett cites one customer who became a devotee of YouTube how-to videos after his wireless service was upgraded – to economic stability, as businesses decide to stay in town after experiencing the reliability of fiber broadband. Children can now do their homework without having to visit McDonald’s every evening.

Burnett concludes, “We are putting the residents and businesses of our community and county in position to be successful. Many factors drive economic development, and communication services are among them. We are here to help businesses start, grow and create jobs. We’re working hard to support the Oskaloosa area and the people living here. After all, we live here too.” ❖

*Masha Zager is the editor of **BROADBAND COMMUNITIES**. You can reach her at masha@bbcmag.com.*

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COST REDUCTION EXAMPLE

Different Cable Demand for Direct burying, Suspending, Submerging (Heavy Machinery Needed)

Civil Works 58 k US\$ / km
Cable cost 1 k US\$ / km
Manhole 4.8 k US\$ / km
Pipe 8 k US\$ / km



Not Applicable to Very Difficult Terrain

Same Cable for Ground’s Surface, Direct burying, suspending, submerging with everyday Tools

Civil Works 0.3 - 3 k US\$ / km
wages 1 - 10 US\$ / km
Progress 300m/day by 10 workers
Cable cost > 1 k US\$ / km
Manhole Not Needed
Pipe Not Needed



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